

Sewerage & Stormwater

Sub Activities:

Sewerage
Stormwater

Goal

To protect the health of the district's residents and environment by providing an efficient and effective means of collecting, treating and disposing of sewage effluent and stormwater.

Nature and Scope of Activity

Sewerage





Currently only those properties within the urban area (including Ocean Ridge) have access to a sewer reticulation system consisting of 54km of pipes and 10 pump stations. The sewage is treated in oxidation ponds before being discharged into the ground.

Major upgrading of the sewerage system commenced in 2005, with the replacement of the filtration beds at the oxidation ponds, and in 2006 further screening and desludging was done at the oxidation ponds, and in 2007 a new sewer main has been constructed from the Fords Reservoir above Churchill Street through to Hawthorne Road, plus a new pump station at Ludstone Road. This will increase the capacity of the sewer reticulation, and restore the oxidation pond capacity, in anticipation of a potential doubling of resident population within the next ten years.

Stormwater

The stormwater system consists of approximately 17km of pipe network, plus 40km of un piped ditches. In 2006/2007, Council has been working towards obtaining a global consent for its stormwater system, which would alleviate the current requirement for several discharge consents at various locations.

Effects on the Community

Economic		Safe and sanitary wastewater treatment and disposal systems are critical for any community to function, and Kaikoura relies on its clean green image for its tourism ventures
Environmental		The effective treatment and disposal of wastewater is there to protect not only people, but the environment as well. By upgrading the sewerage reticulation, pump stations, and installing bio-filters, Council has reduced the risk of overflow and excessive odours
Social		Safe and sanitary wastewater treatment and disposal is fundamental to the health and safety of the whole community
Cultural		The provision of sewerage systems protects the cultural wellbeing of the community by efficiently disposing of offensive matter

Community Outcomes

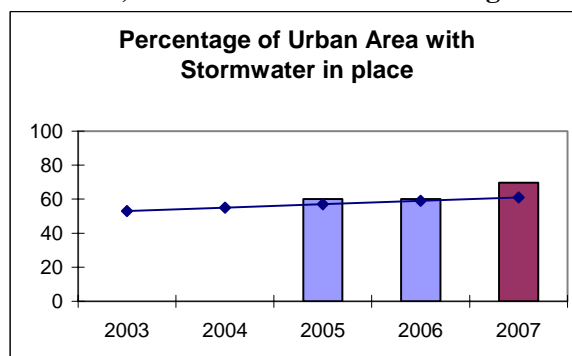
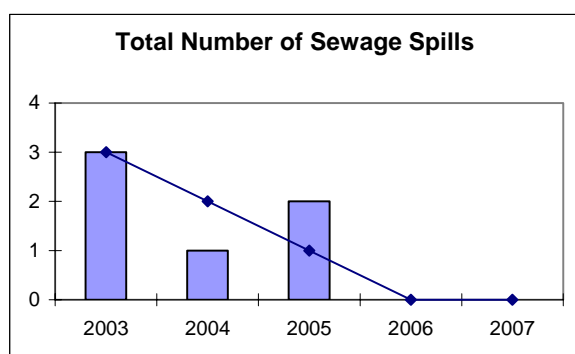
The following table highlights how Sewerage and Stormwater contributes to the achievement of our Community Outcomes.

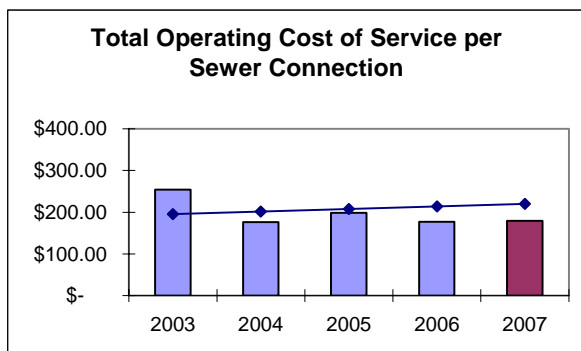
Community Outcome	How the Sewerage & Stormwater Activity Contributes	Performance Measure
Sustainable Development	By providing adequate water and wastewater infrastructure, appropriately funded to meet future development needs.	Complete the development of the oxidation ponds and mainline to support growth and residential expansion
Quality Water and Wastewater Services	Ensure that sewage is disposed of efficiently.	Tests taken at the oxidation pond confirm that levels of dissolved oxygen exceed 2mg/l
		Oxidation pond effluent tests show the level of nitrogen is maintained within the World Health Organisation Standards (less than 10 milligrams per litre)
	Provide for further stormwater development throughout the urban area, with particular focus on Beach Road and South Bay.	Percentage of the urban area with stormwater infrastructure in place.
A Quality Standard of Affordable Housing	Ensure that all urban properties have access to a sewerage system that is efficient and affordable.	Total operating cost of service per connection (Kaikoura township)
Environmental Protection and Enhancement	Ensure that sewage is disposed of with minimum environmental impact.	No sewage spills from pump stations or manholes

Report on Performance

Performance Measure	Last Year	Target 2007-2009	Actual Result 2007
Complete the development of the oxidation ponds and mainline to support growth and residential expansion	N/A	Mainline from Churchill St to Hawthorne Rd, and Mill Rd to ponds, pump station at Ludstone Rd, inlet screens and desludge at ponds	The mainline from Fords to Hawthorne Rd has been completed, and also the Ludstone Rd pump station. The section of main from Churchill St to Fords is yet to be constructed, along with the line from Hawthorne Rd to Mill Rd and on to the ponds. Inlet screens have been installed and the pond has been desludged.
Tests taken at the oxidation pond confirm that levels of dissolved oxygen exceed 2mg/l	N/A	100% of tests exceed 2 milligrams per litre	142 tests were done, 42 of these tests fell below 2mg/l. Almost all of the failure can be attributed to the desludging process.
Oxidation pond effluent tests show the level of nitrogen is maintained within the World Health Organisation Standards (less than 10 milligrams per litre)	N/A	95% of tests do not exceed 10 milligrams per litre	100% of tests were well below 10 milligrams per litre

KEY: The line in each graph indicates the Councils desired trend, and for 2007 the Actual Target





Level of Achievement

Significant progress has been made on upgrading of the sewerage system, largely thanks to funding from the Ministry of Tourism, which has been approved to \$1.6 million. This has enabled Council to upgrade the system with confidence, and has ensured the safe and effective disposal of effluent; the one area of failure in this area (being the levels of dissolved oxygen at the oxidation ponds), is deemed to be due to the desludging process rather than inefficiency of the system.

Council has essentially achieved or exceeded all of the targets set in 2006/2007, and it is pleasing to note that this has been achieved while maintaining minimal impact on the operating costs per connection.

Operating Cost of Service Statement: Sewerage & Stormwater

FOR THE YEAR ENDED 30 JUNE 2007

	2007 BUDGET \$	2007 ACTUAL \$	2006 ACTUAL \$
Operating Expenses			
<u>Sewerage</u>			
Operations	197,314	207,658	194,857
Loan Interest	35,905	22,064	26,953
Depreciation	147,362	147,603	120,357
	350,582	377,325	342,167
<u>Stormwater</u>			
Operations	48,493	40,893	49,002
Loan Interest	10,042	10,229	10,228
Depreciation	20,839	28,479	27,774
	79,374	79,601	87,004
Total Operating Expenses	459,956	456,926	429,171
Funded by:			
Targeted Rates & Charges	446,956	459,750	406,986
User Fees & Charges	23,000	20,926	2,813
Subsidies	953,320	484,510	-
Development Contributions	247,360	501,646	467,023
	1,670,636	1,466,832	876,822
Operating Surplus/(Deficit)	1,210,680	1,009,906	447,651

Council has been granted a Ministry of Tourism subsidy of \$1.4 million (plus GST), to assist with upgrading of its sewerage infrastructure in recognition of the impact of tourism on our district. In preparing its budgets for 2006/2007, Council had assumed that \$953k would have been received in that financial year. However, the timing of funding for the project had been agreed after the preparation of the budgets, and Council has only claimed approximately \$484k of this subsidy to date.

Capital Cost of Service Statement: Sewerage & Stormwater

FOR THE YEAR ENDED 30 JUNE 2007

	2007 BUDGET \$	2007 ACTUAL \$	2006 ACTUAL \$
Capital Expenditure			
<u>Sewerage</u>			
New/Upgrade Assets	1,322,000	1,031,704	467,139
Renewals	-	-	39,488
Increasing Levels of Service	-	-	-
	1,322,000	1,031,704	506,627
<u>Stormwater</u>			
New/Upgrade Assets	5,000	21,599	28,497
Renewals	4,814	-	2,494
Increasing Levels of Service	-	-	-
	9,814	21,599	30,991
<u>Capital Debt Servicing</u>			
Loan Principal	32,066	25,036	14,561
Total Capital Expenditure	1,363,880	1,078,339	552,179
Funded by:			
Transfer from/(to) Reserves	(15,000)	(107,109)	(43,603)
Loans	-	-	-
Depreciation	168,200	175,542	148,131
Operating Surplus/(Deficit)	1,210,680	1,009,906	447,651
	1,363,880	1,078,339	552,179

Capital Expenditure: Acquisition of Assets

A new sewer trunk main has been installed from Fords Reservoir, on Churchill St, to a new pump station on Ludstone Road, and then a further new mainline has been installed from Ludstone Rd to Hawthorne Road. This development is in response to significant urban development in the Seaview and Ocean Ridge subdivisions, and the increase in the number of visitors to the district. Further mainline work is programmed for 2007/2008 to extend the new mainline to Mill Road and on to the oxidation ponds. Sewer upgrades were less than budget simply due to the timing of works on this major project.

By installing inlet screens and desludging the oxidation ponds, the capacity of the ponds has been restored to cope with a permanent population of up to 4,000 residential population equivalent.

While no physical upgrading has been made to the stormwater infrastructure, an application has been made for a global consent for the discharge of stormwater, which will direct improvement requirements in the system over the next 10 years. The cost of that consent has been capitalised.