

Water Services

Sub Activities:

**Kaikoura Urban Water Supply,
East Coast Rural Water Supply,
Kincaid Rural Water Supply,
Fernleigh Rural Water Supply,
Oaro Rural Water Supply,
Peketa Rural Water Supply**

Goal





To provide water infrastructure that meets the needs of the community, ensures a healthy standard of living, and minimises effects on the environment.

Nature and Scope of Activity

With the development of the new Ocean Ridge urban water supply, there are now seven public water supply systems in the Kaikoura district. Of these water supplies, East Coast and Fernleigh are essentially supplies for stock and irrigation, although these do also supply domestic households. Kincaid is becoming more and more a domestic supply, due to intensive growth and subdivision over that area. The remainder service domestic households and commercial activities.

The Kaikoura township now has a secure ground water source of exceptional quality and reliable quantity, which should provide Kaikoura with sufficient water to meet expected demands for the foreseeable future. This ground water source began supplying the town, taking over from the previous Waimangarara river intake gallery, in September 2006.

Effects on the Community

Economic		Council has managed to secure funding assistance from the Ministry of Health to undertake upgrading works on the Kincaid, Oaro, East Coast and Peketa water supplies.
Environmental		Water use for irrigation enhances the vitality and splendour of our environment, and Council has continued its leak detection programme to eliminate wastage of this precious resource.
Social		Clean, pure, potable water is fundamental to the health and safety of all residents and visitors. The upgrading work on each of our public water supplies has ensured high quality drinking water to our communities.
Cultural		In Kaikoura, much of what is ingrained in our culture is water based, including swimming at the local pool.

Measuring our Contribution to Community Outcomes

KEY: The line in each graph indicates the Councils desired trend, and for 2009 the Actual Target

<i>Outcome 1: Sustainable Development</i>														
	Target 2008/2009	Actual Result												
Water services contribute to sustainable development by providing adequate water and wastewater infrastructure, appropriately funded to meet future development needs.	Asset Management Plans (AMPs) include 10 year projections of growth.	Asset Management Plans were reviewed in 2008/2009 and include 10 year projections.												
<i>Outcome 2: Quality Water & Wastewater</i>														
Water services will contribute to this outcome by improving water supply quality and reliability, improving alternate supply sources, and increasing storage capacity, to meet the reasonable requirements of each community.														
Kaikoura Township:														
	Target 2008/2009	Actual Result												
Ministry of Health grading for water source, treatment and reticulation.	Bb ¹	Bc ²												
Reticulation provides sufficient quantity and pressure for fire fighting purposes.	<div style="text-align: center;"> <p>Kaikoura: Reticulation Provides Sufficient Quantity and Pressure for Fire Fighting Purposes</p> <table border="1"> <caption>Kaikoura: Reticulation Provides Sufficient Quantity and Pressure for Fire Fighting Purposes</caption> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>88%</td> </tr> <tr> <td>2006</td> <td>90%</td> </tr> <tr> <td>2007</td> <td>95%</td> </tr> <tr> <td>2008</td> <td>95%</td> </tr> <tr> <td>2009</td> <td>98%</td> </tr> </tbody> </table> </div>		Year	Percentage	2005	88%	2006	90%	2007	95%	2008	95%	2009	98%
Year	Percentage													
2005	88%													
2006	90%													
2007	95%													
2008	95%													
2009	98%													
Reservoirs provide sufficient storage. The Annual Plan for 2008/2009 had provided for the construction of an additional water reservoir, which would have increased the hours of water storage for the township. This has been deferred to 2009/2010, and funding from central government has now been secured to assist with this project	<div style="text-align: center;"> <p>Kaikoura: Hours of Water Storage</p> <table border="1"> <caption>Kaikoura: Hours of Water Storage</caption> <thead> <tr> <th>Year</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>11</td> </tr> <tr> <td>2006</td> <td>11</td> </tr> <tr> <td>2007</td> <td>11</td> </tr> <tr> <td>2008</td> <td>11</td> </tr> <tr> <td>2009</td> <td>11</td> </tr> </tbody> </table> </div>		Year	Hours	2005	11	2006	11	2007	11	2008	11	2009	11
Year	Hours													
2005	11													
2006	11													
2007	11													
2008	11													
2009	11													

¹ The first letter is the grade for the water source and treatment, the second letter is the grade for the reticulation.

² Councils Asset Managers are confident the Kaikoura supply would have achieved an "Ac" grading from the Ministry of Health, except that it did not meet minimum advertising requirements relating to notification of plumbosolvency (the potential for minute traces of metal to accumulate within some domestic plumbing fittings) and ensuring backflow devices are installed at critical connections.

Kincaid:														
	Target 2008/2009	Actual Result												
Ministry of Health grading for water source, treatment and reticulation.	Bb	Ec see p102 for explanation												
<p>Reservoirs provide sufficient storage.</p> <p>This year a system of 20 reservoirs, each with 30m³ capacity, has been installed for the Kincaid water scheme. As a result, Kincaid has sufficient water storage to maintain uncompromised supply for 27 hours at peak demand.</p>	<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Kincaid: Hours of Water Storage</p> <table border="1" style="display: none;"> <caption>Kincaid: Hours of Water Storage Data</caption> <thead> <tr> <th>Year</th> <th>Hours of Water Storage</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>4</td> </tr> <tr> <td>2006</td> <td>4</td> </tr> <tr> <td>2007</td> <td>4</td> </tr> <tr> <td>2008</td> <td>4</td> </tr> <tr> <td>2009</td> <td>27</td> </tr> </tbody> </table> </div>		Year	Hours of Water Storage	2005	4	2006	4	2007	4	2008	4	2009	27
Year	Hours of Water Storage													
2005	4													
2006	4													
2007	4													
2008	4													
2009	27													
East Coast, Oaro and Peketa:														
	Target 2008/2009	Actual Result												
Ministry of Health grading for water source, treatment and reticulation.	East Coast: Ungraded Oaro: Ungraded Peketa: Ungraded	Ungraded ³ Ungraded Bb												
Provide for the improvement of infrastructural services in small communities, by investigating the provision of water supply systems where the community requests it or the legislation requires it.	Implement practical recommendations from Councils assessment of water services.	<p>East Coast: the pump system was upgraded and security status has been applied for from the Ministry for the water source.</p> <p>Fernleigh: the treatment system was upgraded and the pump shed secured.</p> <p>Peketa: the treatment system was upgraded and the system was integrated into the telemetry system.</p>												

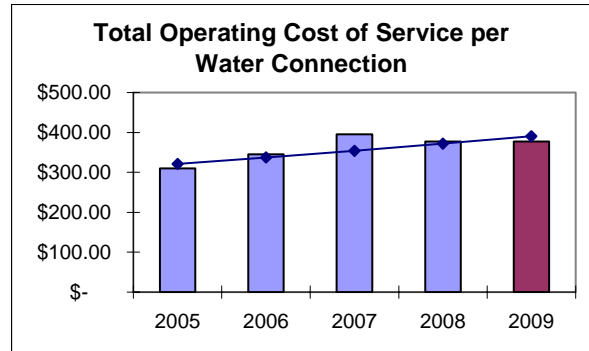
³ An ungraded supply means the Ministry of Health is yet to make a formal assessment of the supply. It does not mean the supply is of a poor standard. The target grading for each scheme is an indication of Council's expectations as to what these supplies should achieve once the formal assessment has been undertaken by the Ministry of Health.

Outcome 5: A Quality Standard of Affordable Housing

Water Services contribute to this outcome by ensuring that new dwellings have access to a potable water supply, which is provided at an affordable cost.

The operating cost of service should increase at a rate that is less than 5% per annum.

Pleasingly, this operating cost of service per water connection has been decreasing annually for the last three years.



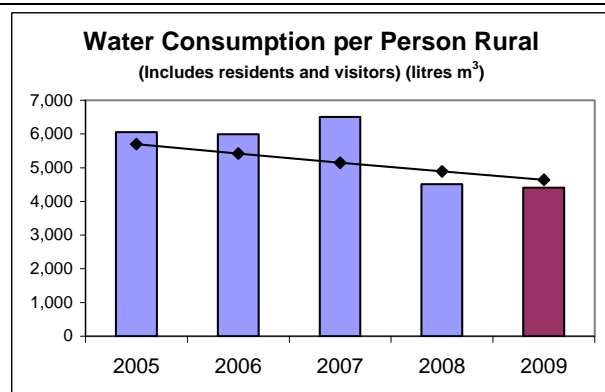
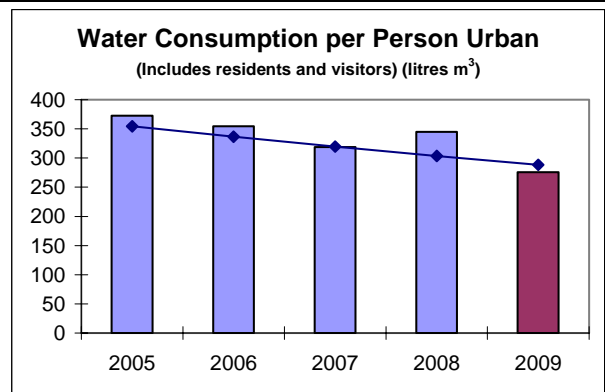
Outcome 6: Environmental Protection & Enhancement

Water services contribution to environmental protection and enhancement by ensuring the sustainable management of resources by promoting water conservation.

Council has set the target that water consumption per resident and visitor reduce by 5% per annum, and continues to show that our community takes water conservation seriously.

Leak detection programmes, water conservation promotion, and regulation via water metering, has assisted in continual reduction in water consumption per resident and visitor since first entering the Green Globe programme in 2004.

In its water consumption practices, the Kaikoura community has achieved better than the global best practice, in terms of the Green Globe benchmarking standard.



Service Delivery Standards

In addition to the performance measures used to assess our progress towards the achievement of community outcomes, we also measure our performance against our service delivery standards.

Kaikoura Urban Water Supply

System Pressure														
<p>Minimum water pressure at the property boundary should be > 20 metres and < 50 metres (i.e. if there were a burst pipe at the boundary, the resulting height of the water column should be higher than 20 metres, but not higher than 50 metres) – this means that a domestic property will have sufficient water pressure to enjoy a comfortable shower, water the garden, and use a washing machine, without the pressure being so great as to damage plumbing and fittings.</p>	<table border="1"> <caption>Kaikoura; Minimum Water Pressure greater than 20m and less than 50m</caption> <thead> <tr> <th>Year</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>2005</td> <td>100%</td> </tr> <tr> <td>2006</td> <td>100%</td> </tr> <tr> <td>2007</td> <td>~85%</td> </tr> <tr> <td>2008</td> <td>~90%</td> </tr> <tr> <td>2009</td> <td>100%</td> </tr> </tbody> </table>		Year	Percentage	2005	100%	2006	100%	2007	~85%	2008	~90%	2009	100%
Year	Percentage													
2005	100%													
2006	100%													
2007	~85%													
2008	~90%													
2009	100%													
Continuity of Supply	Target	Currently Achieving												
<p>Unscheduled disruptions shall not exceed:</p> <ul style="list-style-type: none"> • 8 hours • 12 hours <p>The maximum duration of any scheduled disruption shall not exceed 24 hours</p> <p>The maximum total disruption in any 5 day period shall not exceed 48 hours</p>	<p>< 3 per year</p> <p>< 2 per year</p> <p>< 24 hours</p> <p>< 48 hours</p>	<p>No disruption exceeded 4 hours</p>												
Legislative Requirements	Target	Currently Achieving												
<ul style="list-style-type: none"> • Comply with legislative requirements • Fire hydrants shall be in accordance with the Fire Service code of practice • The water intake and underground water source shall be operated in compliance with the relevant resource consent conditions 	<p>100% of the time</p> <p>100% of reticulation</p> <p>100% of the time</p>	<p>100% of the time</p> <p>99% of reticulation</p> <p>100% of the time</p>												
System Records	Target	Currently Achieving												
<p>The water supply system shall be properly documented by</p> <ul style="list-style-type: none"> • Maintaining accurate as-built records • Making as-built records available to the public 	<p>100% of system</p> <p>< 2 working days</p>	<p>100% of system</p> <p>Records are available at the council office</p>												

Public and Emergency Response	Target	Currently Achieving
An 8 hour public inquiry system shall be operated. Written complaints shall be responded to by: <ul style="list-style-type: none"> • Acknowledgement • Substantive Reply 	< 2 working days < 10 working days	< 2 working days < 10 working days
A 24 hour system failure unit shall be operated. In the event of a service failure report, the service shall be restored, or alternative services provided, for: <ul style="list-style-type: none"> • Low priority works • High priority works 	< 24 hours < 4 hours	Not measured

Kincaid Rural Water Supply

Water Quality	Target	Currently Achieving
Achieve a minimum MoH B grade for the water source and treatment	B	E
Reticulation Network	Target	Currently Achieving
Achieve a MoH B grade for the reticulation system	b	c
Deliver a minimum flow as per restrictor requirement per property	100% of reticulation	100% of reticulation
Legislative Requirements	Target	Currently Achieving
The water intake shall be operated in compliance with the relevant resource consent conditions	100% of the time	100% of the time
Continuity of Supply	Target	Currently Achieving
Unscheduled disruptions shall not exceed: <ul style="list-style-type: none"> • 8 hours • 12 hours 	< 3 per year < 2 per year	No disruption exceeded 4 hours
The maximum duration of any scheduled disruption shall not exceed 24 hours	< 24 hours	
The maximum total disruption in any 5 day period shall not exceed 48 hours	< 48 hours	

System Records	Target	Currently Achieving
<p>The water supply system shall be properly documented by</p> <ul style="list-style-type: none"> • Maintaining accurate as-built records • Making as-built records available to the public 	<p>100% of system</p> <p>< 5 working days</p>	<p>100% of system</p> <p>No requests</p>
Public and Emergency Response	Target	Currently Achieving
<p>An 8 hour public inquiry system shall be operated. Written complaints shall be responded to by:</p> <ul style="list-style-type: none"> • Acknowledgement • Substantive Reply <p>A 24 hour system failure unit shall be operated. In the event of a service failure report, the service shall be restored, or alternative services provided, for:</p> <ul style="list-style-type: none"> • Low priority works • High priority works 	<p>< 2 working days</p> <p>< 10 working days</p> <p>< 24 hours</p> <p>< 4 hours</p>	<p>< 2 working days</p> <p>< 10 working days</p> <p>Not measured</p>

Level of Achievement

The Kaikoura district is in the enviable position of having public water supplies of very good quality, and sufficient quantity, for its consumers for the foreseeable future. Of particular note is the Kaikoura township supply, which provides water of exceptional quality to the town; this water would not need any treatment at all, except for the need to treat residual contaminants in the infrastructure. As a result, the quantity of chlorine added to the water is around one-tenth of what had been required two years ago.

Kincaid

The Kincaid system is not protozoa compliant, and residual chlorine levels have not met minimum standards at all times. Protozoa compliance can be achieved by installing a cartridge filtration and UV system; this is planned for the 2009/2010 financial year. This scheme should then achieve a Bc grade, as it will be both protozoa and bacteriological compliant.

Peketa

The UV system for the Peketa supply has been upgraded, the well head has been capped, and a telemetry system installed to now monitor turbidity. In terms of capacity and treatment system this supply meets all the standards recommended by the Ministry of Health.

Those supplies that are yet to be graded by the Ministry are expected to achieve good, or very good, grades appropriate to each supply. The East Coast rural water supply is in need of new pumps and some pipe infrastructure, and this work is planned for the next 12 months.

Operating Cost of Service Statement: Water Services

FOR THE YEAR ENDED 30 JUNE 2009

	2008/2009 BUDGET \$	2008/2009 ACTUAL \$	2007/2008 ACTUAL \$
Operating Expenses			
<u> Kaikoura Urban Water Supply</u>			
Operations	344,794	358,819	337,820
Loan Interest	91,913	65,916	67,511
Depreciation	193,906	171,122	169,733
	630,613	595,857	575,064
<u> Other Water Supplies</u>			
Ocean Ridge	-	4,257	-
East Coast	31,178	36,393	40,964
Kincaid	41,538	26,528	22,888
Fernleigh	-	6,343	413
Oaro	17,292	10,750	12,130
Peketa	4,065	4,813	3,972
Loan Interest	2,870	2,673	2,727
Depreciation	117,495	124,111	116,329
	214,438	215,868	199,423
Total Operating Expenses	845,051	811,725	774,487
Funded by:			
Targeted Rates & Charges	557,367	559,055	522,649
Water Meter Charges	130,000	124,172	137,840
User Fees & Charges	8,000	30,009	42,649
Grants & Subsidies	53,700	73,499	-
Development Contributions	92,580	24,354	115,676
	841,647	811,089	818,814
Operating Surplus/(Deficit)	(3,404)	636	44,327

Capital Cost of Service Statement: Water Services

FOR THE YEAR ENDED 30 JUNE 2009

	2008/2009 BUDGET \$	2008/2009 ACTUAL \$	2007/2008 ACTUAL \$
Capital Expenditure			
<u>Kaikoura Urban Water Supply</u>			
New/Upgrade Assets	243,900	-	60,966
Renewals	71,527	17,799	45,853
Increasing Levels of Service	-	-	-
	315,427	17,799	106,819
<u>Rural Water Supplies</u>			
New/Upgrade Assets	140,000	158,208	91,449
Renewals	16,449	9,010	14,344
Increasing Levels of Service	-	-	-
	156,449	167,218	105,793
<u>Capital Debt Servicing</u>			
Loan Principal	74,741	53,710	62,053
Total Capital Expenditure	546,617	238,727	274,665
Funded by:			
Transfers from/(to) Reserves	(5,280)	(57,142)	(55,724)
Loans	243,900	-	-
Depreciation	311,401	295,233	286,062
Operating Surplus/(Deficit)	(3,404)	636	44,327
	546,617	238,727	274,665

Capital Expenditure: Acquisition of Assets

The Kaikoura Township residents now benefit from a new secure ground water source, providing water of exceptional quality to the urban area. Only minimal renewal work was undertaken during 2008/2009, and as funding has now been secured from central government to construct the proposed new storage reservoir that project will now be undertaken in 2009/2010.

A system of 20 reservoirs has been developed for the Kincaid water supply, ultimately providing 27 hour storage for those consumers. Over the last two years upgrading works have also been carried out at East Coast, Fernleigh, Oaro and Peketa water supplies.