

Water Supply

Water Supply: Activities, Rationale and Negative Effects

Activities included in Water Supply

Water supply (including water conservation)

Water Supply contributes to these community outcomes

- The Council's water supplies meet the public's reasonable needs;⁵⁵
- Christchurch has clean, safe drinking water;
- Injuries and risks to public health are minimised;
- Statutory obligations are met by the Council;
- Stream and river flows are maintained;
- Water is used efficiently and sustainably;
- City assets, financial resources and infrastructure are well managed, now and in the future; and
- Energy is used more efficiently.

Water Supply has these negative effects:

Effect	Council's Mitigation Measure
Effects of water abstraction on the environment.	Network maintenance and water conservation measures to minimise wastage. Annual leak detection programme to monitor water loss. Maintain resource consent compliance and avoid over abstraction
Land use compromises aquifer security and/or quality.	Ensure land use documents at City and Regional level recognise virtue of water supply. Work with Canterbury Water Forum to improve risk understanding in land use.
Over extraction limits water available for growth of the City.	Maintain network in good condition to reduce leaks. Operate within consents.
Salt-water intrusion in coastal regions compromises water quality.	Monitor well takes in coastal areas for salinity (conductivity) and investigate any changes. Long term strategy to move wells away from coast if possible.

Water Supply Statement of Service Provision

Activity	Services provided	Performance Measures	Performance Targets				
			Current	2015-16	2016-17	2017-18	2018-2025
Water supply (including water conservation)	Supplying potable water to properties	Supply continuous potable water to all customers	New measure	Median response time for attendance for urgent call-outs following notification: ≤ 1 hour [1]	Median response time for attendance for urgent call-outs following notification: ≤ 1 hour	Median response time for attendance for urgent call-outs following notification: ≤ 1 hour	Median response time for attendance for urgent call-outs following notification: ≤ 1 hour
			New measure	Median time to resolve urgent call-outs following notification: ≤ 5 hours [1]	Median time to resolve urgent call-outs following notification: ≤ 5 hours	Median time to resolve urgent call-outs following notification: ≤ 5 hours	Median time to resolve urgent call-outs following notification: ≤ 5 hours
			New measure	Median response time for attendance for non-urgent call-outs following notification: ≤ 3 days [1]	Median response time for attendance for non-urgent call-outs following notification: ≤ 3 days	Median response time for attendance for non-urgent call-outs following notification: ≤ 3 days	Median response time for attendance for non-urgent call-outs following notification: ≤ 3 days
			New measure	Median time to resolve non-urgent call-outs following notification: ≤ 4 days [1]	Median time to resolve non-urgent call-outs following notification: ≤ 4 days	Median time to resolve non-urgent call-outs following notification: ≤ 4 days	Median time to resolve non-urgent call-outs following notification: ≤ 4 days
			New measure	Number of continuity of supply complaints per 1,000 customers per year: ≤ 2.5 [2]	Number of continuity of supply complaints per 1,000 customers per year: ≤ 2.5	Number of continuity of supply complaints per 1,000 customers per year: ≤ 3	Number of continuity of supply complaints per 1,000 customers per year: ≤ 4
			New measure	Number of pressure or flow complaints per 1000 connections per year: ≤ 2 [2]	Number of pressure or flow complaints per 1000 connections per year: ≤ 2	Number of pressure or flow complaints per 1000 connections per year: ≤ 3	Number of pressure or flow complaints per 1000 connections per year: ≤ 4
			Ensure potable water is supplied in accordance with the Drinking Water Standards for New Zealand	'Ba' grading for all City supplies, excluding the Northwest supply zone	MoH risk grading of the urban water supplies (excluding NW zone): Ba	MoH risk grading of the urban water supplies (excluding NW zone): Ba	MoH risk grading of the urban water supplies (excluding NW zone): Ba
		Move 'Da' to 'Ba' grading for the Northwest supply zone by December 2015	MoH risk grading of the NW water supply zone: Da [3]	MoH risk grading of the NW water supply zone: Da	MoH risk grading of the NW water supply zone: Ba	MoH risk grading of the NW water supply zone: Ba	

Activity	Services provided	Performance Measures	Performance Targets				
			Current	2015-16	2016-17	2017-18	2018-2025
Water supply (including water conservation) (continued)	Supplying potable water to properties (continued)	Ensure potable water is supplied in accordance with the Drinking Water Standards for New Zealand (continued)	Undertake improvements to achieve 'Cc', or better, risk grading from the Ministry of Health for all rural area water supplies by December 2014	MoH grading of rural water supplies: Uu	MoH grading of rural water supplies: Uu	MoH grading of rural water supplies: Cc	MoH grading of rural water supplies: Cc
			New target	Number of water clarity complaints per 1,000 customers per year: ≤ 1.5 [2]	Number of water clarity complaints per 1,000 customers per year: ≤ 1.5	Number of water clarity complaints per 1,000 customers per year: ≤ 1	Number of water clarity complaints per 1,000 customers per year: ≤ 1
			New target	Number of water taste complaints per 1,000 customers per year: ≤ 1 [2]	Number of water taste complaints per 1,000 customers per year: ≤ 1	Number of water taste complaints per 1,000 customers per year: ≤ 1	Number of water taste complaints per 1,000 customers per year: ≤ 1
			New target	Number of water odour complaints per 1,000 customers per year: ≤ 0.5 [2]	Number of water odour complaints per 1,000 customers per year: ≤ 0.5	Number of water odour complaints per 1,000 customers per year: ≤ 0.5	Number of water odour complaints per 1,000 customers per year: ≤ 0.5
			New target	Number of drinking water pressure or flow complaints per 1,000 customers per year: ≤ 2 [2]	Number of drinking water pressure or flow complaints per 1,000 customers per year: ≤ 2	Number of drinking water pressure or flow complaints per 1,000 customers per year: ≤ 3	Number of drinking water pressure or flow complaints per 1,000 customers per year: ≤ 4
			New target	Number of continuity of supply complaints per 1,000 customers per year: ≤ 2.5 [2]	Number of continuity of supply complaints per 1,000 customers per year: ≤ 2.5	Number of continuity of supply complaints per 1,000 customers per year: ≤ 3	Number of continuity of supply complaints per 1,000 customers per year: ≤ 4
			New target	Proportion of complaints remediated to the customers' satisfaction: ≥95% [2]	Proportion of complaints remediated to the customers' satisfaction: ≥95%	Proportion of complaints remediated to the customers' satisfaction: ≥95%	Proportion of complaints remediated to the customers' satisfaction: ≥95%

Activity	Services provided	Performance Measures	Performance Targets				
			Current	2015-16	2016-17	2017-18	2018-2025
Water supply (including water conservation) (continued)	Supplying potable water to properties (continued)	Ensure potable water is supplied in accordance with the Drinking Water Standards for New Zealand (continued)	Microbiological and health significant chemical water quality meets current NZ Drinking Water Standards within the City each year as assessed by Community and Public Health	Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$	Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$	Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$	Proportion of urban residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$
				Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.5\%$	Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$	Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$	Proportion of rural residents supplied water compliant with the DWSNZ bacterial compliance criteria: $\geq 99.8\%$
			Microbiological and health significant chemical water quality meets current NZ Drinking Water Standards within the City each year as assessed by Community and Public Health	Proportion of urban residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 79\%$	Proportion of urban residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 79\%$	Proportion of urban residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 99.8\%$	Proportion of urban residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 99.8\%$
				Proportion of rural residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 80\%$ (subject to Akaroa treatment plant successfully completed on time)	Proportion of rural residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 99.8\%$	Proportion of rural residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 99.8\%$	Proportion of rural residents supplied water compliant with the DWSNZ protozoan compliance criteria: $\geq 99.8\%$

Activity	Services provided	Performance Measures	Performance Targets				
			Current	2015-16	2016-17	2017-18	2018-2025
Water supply (including water conservation) (continued)	Supplying potable water to properties (continued)	Ensure consent compliance	No major or persistent breaches of resource consents regarding the operation of the water supply network each year, as reported by ECAN or the Council	Number of infringement notices for major or persistent breaches of resource consents regarding water supply network operation as reported by ECAN or CCC: Zero	Number of infringement notices for major or persistent breaches of resource consents regarding water supply network operation as reported by ECAN or CCC: Zero	Number of infringement notices for major or persistent breaches of resource consents regarding water supply network operation as reported by ECAN or CCC: Zero	Number of infringement notices for major or persistent breaches of resource consents regarding water supply network operation as reported by ECAN or CCC: Zero
		Maintenance of the reticulation network - Reduce the percentage of real water loss from the local authority's networked reticulation system	New measure	≤ 15% water loss	≤ 15.2% water loss	≤ 15.4% water loss	≤ 20% water loss
		Demand Management -Manage the average consumption of drinking water per day, per residents	New measure	Average 298 litres per day, per resident	Average 298 litres per day, per resident	Average 298 litres per day, per resident	Average 298 litres per day, per resident

Proposed Changes for water supply (including water conservation)	Rationale
[1] Measures for response times	Mandatory measures pursuant to the Local Government Act 2002
[2] Measure for complaints	Mandatory measures pursuant to the Local Government Act 2002
[3] Moving the northwest zone to Ba has been delayed by two years	Funds / contractors stretched because of the rebuild

Water supply

Plan 2014/15		Plan 2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
		\$000									
	Cost of proposed services										
107	Water Conservation	106	109	111	114	118	121	124	128	132	136
31,440	Water Supply	45,845	46,442	47,363	50,025	52,739	55,121	57,575	60,061	60,410	62,198
31,547		45,951	46,551	47,474	50,139	52,857	55,242	57,699	60,189	60,542	62,334
	Operating revenue from proposed services										
-	Water Conservation	-	-	-	-	-	-	-	-	-	-
2,139	Water Supply	1,579	884	617	363	373	384	395	406	419	432
2,139		1,579	884	617	363	373	384	395	406	419	432
11,781	Capital revenues	10,663	2,234	3,122	3,622	3,802	4,011	4,106	3,838	3,827	3,810
210	Vested assets	10,210	215	220	226	232	238	245	252	260	269
17,417	Net cost of services	23,499	43,218	43,515	45,928	48,450	50,609	52,953	55,693	56,036	57,823

Water supply funding impact statement

Plan 2014/15		Plan 2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
		\$000									
	Sources of operating funding										
(7,267)	General rates, uniform annual general charges, rates penalties	-	-	-	-	-	-	-	-	-	-
28,162	Targeted rates	34,063	35,117	36,549	38,971	41,138	42,942	44,736	46,640	47,955	49,572
-	Subsidies and grants for operating purposes	-	-	-	-	-	-	-	-	-	-
339	Fees, charges	589	603	617	363	373	384	395	406	419	432
-	Internal charges and overheads recovered	-	-	-	-	-	-	-	-	-	-
	Earthquake recoveries										
1,800	Local authorities fuel tax, fines, infringement fees, and other receipts (a)	990	281	-	-	-	-	-	-	-	-
23,034	Total operating funding	35,642	36,001	37,166	39,334	41,511	43,326	45,131	47,046	48,374	50,004
	Applications of operating funding										
17,239	Payments to staff and suppliers	16,238	15,922	15,410	15,852	16,348	16,821	17,362	18,040	18,698	19,472
2,082	Finance costs	2,736	2,799	3,407	4,699	5,750	6,713	7,398	7,859	8,064	8,201
1,336	Internal charges and overheads applied	1,512	1,661	1,579	1,595	1,778	1,679	1,734	1,950	1,802	1,848
4	Other operating funding applications	4	4	4	4	4	5	5	5	5	5
20,661	Total applications of operating funding	20,490	20,386	20,400	22,150	23,880	25,218	26,499	27,854	28,569	29,526
2,373	Surplus (deficit) of operating funding	15,152	15,615	16,766	17,184	17,631	18,108	18,632	19,192	19,805	20,478

Sources of capital funding											
-	Subsidies and grants for capital expenditure	-	-	-	-	-	-	-	-	-	-
1,833	Development and financial contributions	1,590	1,439	2,308	2,789	2,947	3,133	3,203	2,907	2,868	2,819
20,119	Increase (decrease) in debt	19,062	7,962	1,573	3,477	3,327	7,173	3,413	442	1,669	985
-	Gross proceeds from sale of assets	-	-	-	-	-	-	-	-	-	-
-	Lump sum contributions	-	-	-	-	-	-	-	-	-	-
9,948	Other dedicated capital funding	9,073	795	814	834	855	878	903	931	959	992
31,900	Total sources of capital funding	29,725	10,196	4,695	7,100	7,129	11,184	7,519	4,280	5,496	4,796
Applications of capital funding											
Capital expenditure											
18,683	- to replace existing assets (b)	31,552	16,327	14,704	17,446	18,553	19,453	19,908	19,677	20,612	21,226
	- earthquake rebuild										
9,756	- to improve the level of service	4,463	2,751	2,204	2,203	2,260	3,205	268	276	285	294
5,834	- to meet additional demand	8,862	6,733	4,553	4,635	3,947	6,634	5,975	3,519	4,404	3,754
-	Increase (decrease) in reserves	-	-	-	-	-	-	-	-	-	-
-	Increase (decrease) of investments	-	-	-	-	-	-	-	-	-	-
34,273	Total applications of capital funding	44,877	25,811	21,461	24,284	24,760	29,292	26,151	23,472	25,301	25,274
(2,373)	Surplus (deficit) of capital funding	(15,152)	(15,615)	(16,766)	(17,184)	(17,631)	(18,108)	(18,632)	(19,192)	(19,805)	(20,478)
-	Funding balance	-	-	-	-	-	-	-	-	-	-
Reconciliation to net cost of services											
2,373	Surplus (deficit) of operating funding from funding impact statement	15,152	15,615	16,766	17,184	17,631	18,108	18,632	19,192	19,805	20,478
(20,895)	Remove rates funding	(34,063)	(35,117)	(36,549)	(38,971)	(41,138)	(42,942)	(44,736)	(46,640)	(47,955)	(49,572)
(10,886)	Deduct depreciation expense	(25,461)	(26,165)	(27,074)	(27,990)	(28,977)	(30,024)	(31,200)	(32,335)	(31,973)	(32,809)
11,781	Add capital revenues	10,663	2,234	3,122	3,623	3,802	4,011	4,106	3,838	3,827	3,811
210	Add vested assets / non cash revenue	10,210	215	220	226	232	238	245	252	260	269
(17,417)	Net cost of services per activity statement surplus/(deficit)	(23,499)	(43,218)	(43,515)	(45,928)	(48,450)	(50,609)	(52,953)	(55,693)	(56,036)	(57,823)
Footnotes											
1,800	(a) Earthquake related operating recoveries	990	281	-	-	-	-	-	-	-	-
15,066	(b) Earthquake rebuild application of capital funding	16,676	1,595	-	-	-	-	-	-	-	-