THE WELLINGTON REGIONAL COUNCIL WATER GROUP

Financial and Water Supply Performance Report 2001/02

This report is a companion to the Water Group Report of Business Activity 2001/02

October 2002 WRC/SA-T-02/47

THE REGIONAL COUNCIL

caring about you & your environment

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FINANCIAL OVERVIEW

The financial results for the reporting period ended 30 June 2002, reflect another successful year of operational performance for the Water Group, with costs continuing to fall when compared to the corresponding 2000/2001 reporting period. An operating surplus of $3.14 million was achieved, which was $1.78 million ahead of that budgeted, before accounting for one off abnormal items. All cash surpluses generated during the course of operational activities were applied to accelerating the ongoing rate of debt principle repayment.

These results incorporate the June 2001 decision to reduce the wholesale water levy by 2.0 percent to $22.78 million for the 2001/2002 financial year. Consequently, by June 2002 the cumulative water levy reductions over the three preceding financial years represented a 10 percent reduction in total and equated to a levy level last applied in 1992/1993. In the meantime, the Water Group's debt level has fallen by a further $5.0 million since June 2001 and by $20.5 million since June 1997.

Total operating expenditure has fallen by 2.6 percent, from $22.18 million to $21.60 million, which compares favourably to a 2.1 percent reduction in 2000/2001. Savings of 14.8 percent in contractor and consultant costs and 1.4 percent in electricity costs have been realised. These savings reflect a modern water network infrastructure which is in very good shape and operating well, with reduced ongoing maintenance requirements. The wet summer and autumn of 2002 contributed substantially to the 2.2 percent decrease in water supplied during 2001/2002, (54,760 ML), compared to 2000/2001, (55,963 ML). Net financial costs also continue to fall, being 8.2 percent lower than for the corresponding reporting period last year.

The financial information presented below and in the following five pages relates to the wholesale water supply activities of the Water Group. All results exclude the Network section, which managed water supply within Wellington under contract to Wellington City Council until November 2001. The Network ceased operating after losing its contract.

Financial Summary

	Actual June 1997 $000	*Actual June 1998 $000*	*Actual June 1999 $000*	*Actual June 2000 $000*	*Actual June 2001 $000*	*Actual June 2002 $000*
Operating revenue	**28,640**	**27,535**	**27,403**	**26,206**	**25,252**	**24,437**
Depreciation	4,028	4,193	4,335	5,009	5,117	5,320
Financial costs	8,243	6,909	6,166	5,399	4,943	4,497
All other operating expenditure	14,340	12,695	11,862	12,264	12,251	11,481
Surplus before abnormal items	**2,029**	**3,738**	**5,040**	**3,534**	**2,941**	**3,139**
Abnormal items						
Karori land asset write down	-	-	(1,590)	-	-	-
Distribution stock write up	-	-	1,111	-	132	-
Interest – buy back of debt	-	-	(455)	-	-	-
Petone de-fluoridation	-	-	-	-	205	-
Wainui pipeline easement revenue	-	-	-	-	-	500
Infrastructure asset w/o – 1999/2002	-	-	-	-	-	(307)
Operating surplus	**2,029**	**3,738**	**4,106**	**3,534**	**3,278**	**3,332**

FINANCIAL STATEMENTS

Statement of Financial Performance

For the year ended 30 June

	Notes	2002 Actual $000's	2002 Budget $000's	2001 Actual $000's
OPERATING REVENUE				
Water supply levies		22,777	22,777	23,241
Internal revenue		744	614	687
Other revenue (interest & external)		1,416	897	1,528
Total operating revenue		**24,937**	**24,288**	**25,456**
OPERATING EXPENDITURE				
Personnel costs		3,476	3,749	3,631
Contractor & consultant costs		1,438	1,894	1,687
Internal consultant costs		699	702	716
Interest costs		4,497	4,897	4,943
Depreciation		5,320	5,220	5,117
Loss / (gain) on sale		263	(32)	(14)
Movement in doubtful debt provision		(1)	-	-
WRC overhead charge		767	767	766
Operating expenditure	1	5,146	5,732	5,333
Total operating expenditure		**21,605**	**22,929**	**22,179**
NET SURPLUS FOR THE YEAR		**3,332**	**1,359**	**3,277**

Statement of Movements in Equity

For the year ended 30 June

	2002 Actual $000's	2001 Actual $000's
Equity as at 1 July	198,755	198,240
Net surplus for the year	3,332	3,277
Total recognised revenues and expenses for the year	**3,332**	**3,277**
Revaluation reserve movement	-	(2,776)
Other reserve & equity movements	-	14
Equity as at 30 June	**202,087**	**198,755**

The accompanying notes and accounting policies should be read in conjunction with these financial statements

Statement of Financial Position
As at 30 June

	Notes	2002 Actual $000's	2001 Actual $000's
EQUITY			
Accumulated funds, including appropriations		66,297	62,622
Asset revaluation reserve		135,083	135,083
Departmental reserve	2	707	1,050
Total equity		**202,087**	**198,755**
Represented by:			
NON CURRENT LIABILITIES			
Public debt	3	52,241	57,201
Total non current liabilities		**52,241**	**57,201**
CURRENT LIABILITIES			
Accounts payable		2,357	2,351
Employee entitlements		644	696
Treasury payables		653	806
Total current liabilities		**3,654**	**3,853**
Total liabilities		**55,895**	**61,054**
NON CURRENT ASSETS			
Fixed assets	4	249,311	251,251
Investments	5	5,017	4,705
Total non current assets		**254,328**	**255,956**
CURRENT ASSETS			
Accounts receivable		2,151	2,378
Stocks	6	1,434	1,463
Accrued revenue		69	12
Total current assets		**3,654**	**3,853**
Total assets		**257,982**	**259,809**
Total net assets		**202,087**	**198,755**

The accompanying notes and accounting policies should be read in conjunction with these financial statements

Statement of Funds
For the year ended 30 June

	Notes	2002 Actual $000's	2001 Actual $000's
FUNDS FROM OPERATING ACTIVITIES			
Funds were provided from:			
Levies received		22,777	23,241
Interest received		277	349
Other revenue		1,883	1,867
		24,937	**25,457**
Funds were applied to:			
Payments to suppliers and employees		11,525	12,134
Interest paid on public debt		4,497	4,943
		16,022	**17,077**
Net funds from operating activities		**8,915**	**8,380**
FUNDS FROM INVESTING ACTIVITIES			
Funds were provided from:			
Proceeds from sale of fixed assets		58	31
		58	**31**
Funds were applied to:			
Purchase of fixed assets		186	246
Capital projects		3,515	3,998
		3,701	**4,244**
Net funds from investing activities		**(3,643)**	**(4,213)**
FUNDS FROM FINANCING ACTIVITIES			
Funds were provided from:			
Appropriations / new loans		2,080	1,481
Transfer from reserves		1,435	2,500
		3,515	**3,981**
Funds were applied to:			
Repayment of public debt		7,040	6,415
Transfer to reserves		1,092	1,022
Investment additions		655	712
		8,787	**8,149**
Net funds from financing activities		**(5,272)**	**(4,168)**
Net increase in funds held		0	0
Add opening funds brought forward		0	0
Ending funds carried forward		**0**	**0**

The accompanying notes and accounting policies should be read in conjunction with these financial statements

1. OPERATING EXPENDITURE

Operating expenditure is made up of payments for transportation costs, plus materials and supplies, such as chemicals and power.

2. DEPARTMENTAL RESERVE

	2002 Actual $000's	*2001 Actual $000's*
Balance at 1 July	1,050	2,528
Transfer to reserves	1,092	1,022
Transfer from reserves	(1,435)	(2,500)
Balance at 30 June	**707**	**1,050**

3. PUBLIC DEBT

	2002 Actual $000's	*2001 Actual $000's*
Long term debt	57,201	62,135
Operating cash surplus applied to debt repayment	(4,690)	(4,934)
Balance at 30 June	**52,241**	**57,201**

The public debt obligations are fully secured against the rateable property of the Region. The interest rate paid for the year ended 30 June 2002 was 8.11%. (8.23% to 30 June 2001). Operating cash surpluses are applied to repaying debt.

4. FIXED ASSETS

2002	*Deemed cost $000's*	*Revaluation reserve $000's*	*Accumulated depreciation $000's*	*Net book value $000's*
Land	2,896	-	-	2,896
Water supply infrastructure	122,030	135,083	14,305	242,808
Office equipment	188	-	131	57
Plant & equipment	1,529	-	1,035	494
Motor vehicles	1,064	-	662	402
Work in progress	2,654	-	-	2,654
	130,361	**135,083**	**16,133**	**249,311**

4. FIXED ASSETS (continued)

2001	Deemed cost $000's	Revaluation reserve $000's	Accumulated depreciation $000's	Net book value $000's
Land	2,820	-	-	2,820
Water supply infrastructure	120,607	135,083	9,388	246,302
Office equipment	178	-	136	42
Plant & equipment	1,282	-	916	366
Motor vehicles	1,122	-	672	450
Work in progress	1,271	-	-	1,271
	127,280	**135,083**	**11,112**	**251,251**

The last valuation of land, buildings and water supply infrastructure assets was performed in 1999, by the appointed registered valuers, Rolle Hilliers. These valuations were stated at either the 1999 rating values prepared by Quotable Value NZ or the depreciated replacement cost as at 1 July 1999. The next asset revaluation will be carried out by June 2004 at the latest, and thereafter will occur on a regular cyclical basis. Those assets that contribute directly to the supply and distribution of water are classified as Water Supply Infrastructure and valued at component level. Detailed valuation information is held in the Water Group's asset information system.

5. INVESTMENTS

	2002 Actual $000's	2001 Actual $000's
Chemical contingency	562	520
Insurance investment	4,310	3,655
Capital reserve	-	530
General reserve	145	-
	5,017	**4,705**

The chemical contingency was established to cover the potential cost of additional chemicals, required as a result of an extreme event occurring within one of the surface water catchment areas. The insurance investment is held as self-insurance for the Stuart Macaskill Lakes (Te Marua) and pipe network. The capital reserve was an asset refurbishment reserve that was used to fund capital expenditure incurred to rehabilitate our assets, but has now been permanently exhausted. The general reserve balance consists of funds now reallocated for use in 2002/03, being $85,000 and $60,000 for the purchase of 1080 poisoned bait and laboratory equipment respectively. The interest rate paid by the WRC Internal Treasury to the Water Group for the year ended by 30 June 2002 was 8.00%.

6. STOCKS

	2002 Actual $000's	2001 Actual $000's
Chemicals	95	124
Capital spares	1,339	1,339
	1,434	**1,463**

7. CONTINGENCIES

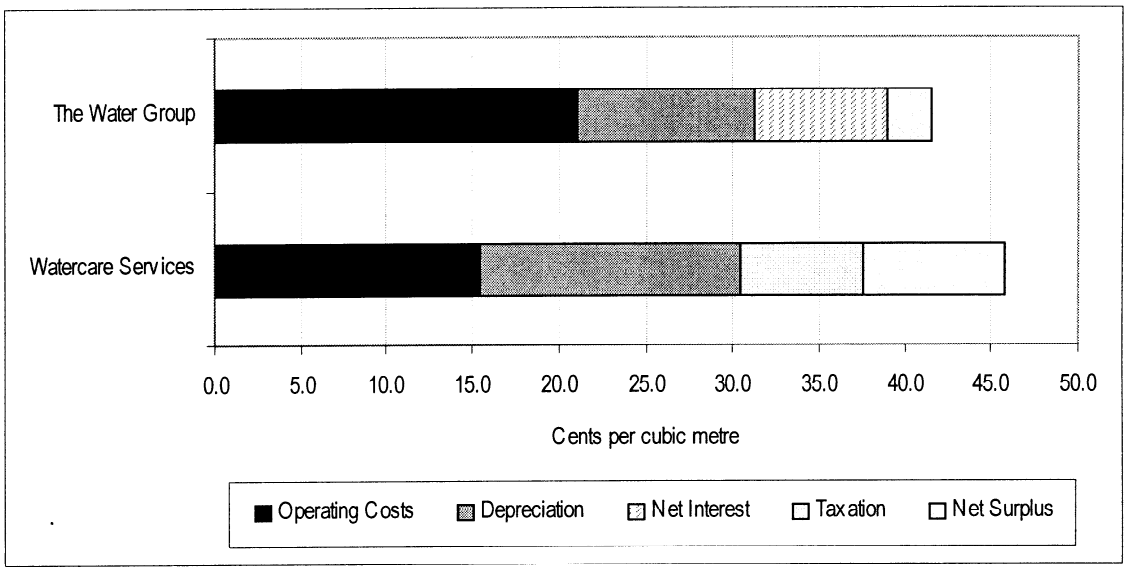
The Water Group has no contingent liabilities as at 30 June 2002.

INDUSTRY BENCHMARKING

The Water Group's performance has been compared with that of Watercare Services Limited (Auckland), the only other water supplier in New Zealand that sells water to territorial authorities for on-sale, rather than selling to consumers directly. Although the two organisations work under substantially different conditions, Watercare provides the most meaningful performance comparison currently available.

Potable Water Supply Costs

For the year ended 30 June 2002



WATER SOURCES

For the year ended 30 June

Source	Annual					Maximum Week			Maximum Day		
	Total Ml			Average day ML			Average day ML			Day ML	
			Percent			Date			Date		
	2002	2001	2002	2002	2001	2002	2002	2001	2002	2002	2001
River and stream abstraction											
Kaitoke/Te Marua	27,102	24,612	46.1%	74.3	67.4	9/1/02	127.7	82.9	2/2/02	132.5	106.2
Wainuiomata	6,270	4,100	10.7%	17.2	11.2	29/8/01	31.5	21.5	25/8/01	37.2	35.9
Orongorongo	2,062	3,027	3.5%	5.6	8.3	13/3/02	18.3	21.1	6/5/02	29.6	22.2
George Creek	1,379	1,090	2.3%	3.8	3.0	27/2/02	6.9	5.8	23/3/02	10.2	9.3
Big Huia Creek[1]	792	n/a	1.3%	2.2	n/a	30/1/02	6.5	n/a	3/12/01	8.5	n/a
Total - Rivers	37,605	32,829	64.0%	103.0	89.9	13/3/02	164.0	110.1	9/2/02	178.4	142.2
Public artesian abstraction											
Waterloo	21,095	24,672	35.9%	57.8	67.6	30/1/02	73.0	85.1	11/10/01	88.1	97.5
Gear Island	86	208	0.1%	0.2	0.6	27/3/02	0.8	4.9	21/2/02	2.7	14.7
Total - Artesian	21,185	24,880	36.0%	58.0	68.2	30/1/02	73.2	85.1	11/10/02	88.1	97.5
Total Public Abstraction	**58,785**	**57,709**	**100.0%**	**161.1**	**158.1**	30/1/02	225.8	187.3	30/1/02	251.7	226.7

1: Abstraction at Big Huia was recorded as part of the combined Orongorongo flow up until 21/9/01

Rainfall Levels

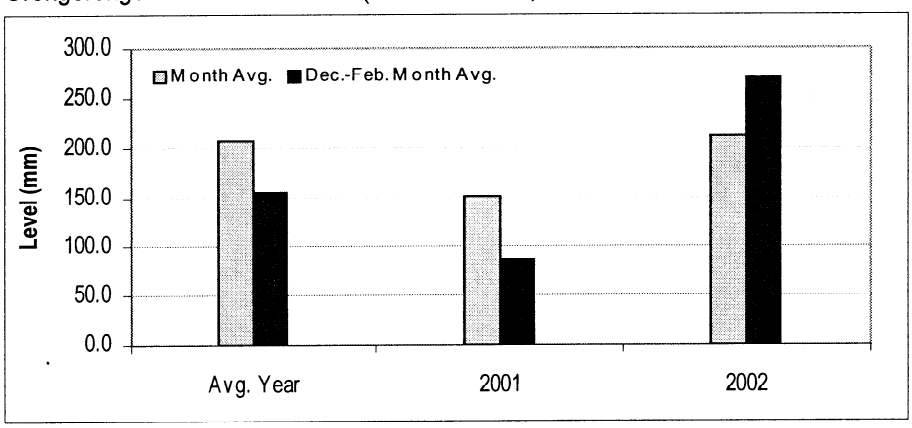
For the year ended 30 June

	Kaitoke[1]	Karori[2]	Orongorongo[3]	Wainuiomata[4]
2001/02	2,821	1,401	2,543	2,054
2000/01	2,184	578	1,814	1,178
% change	+29%	+142%	+40%	+74%

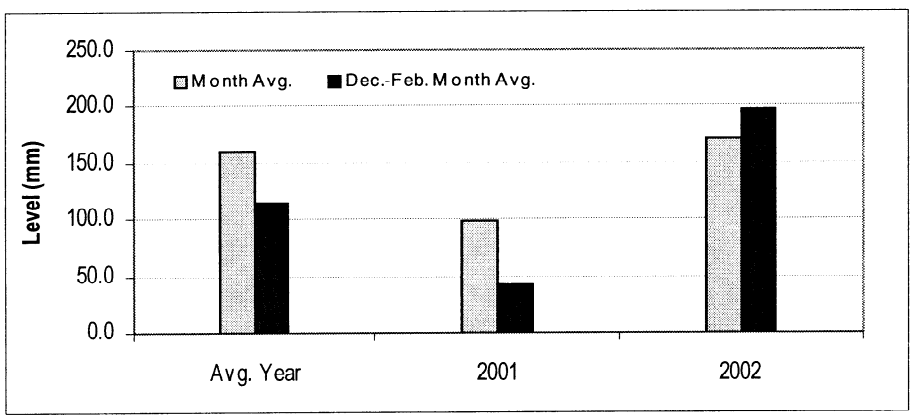
1: Phillips rain gauge. 2: Karori Sanctuary rain gauge (missing data for September, May and June has been estimated based on readings at Kelburn). 3: Orongorongo Swamp rain gauge. 4: Skull Gully rain gauge.

The following graphs show average rainfall per month in our surface water catchments. They compare annual and summer (December-February) data for each of the last two years with the mean of the full data record for each site.

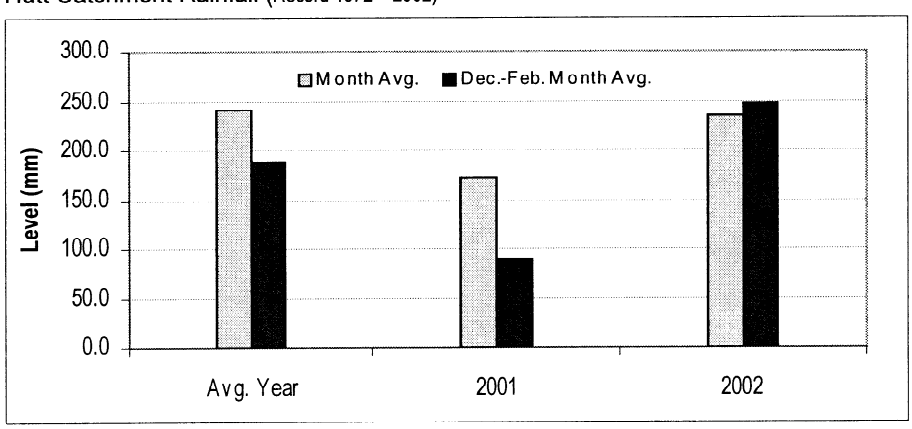
Orongorongo Catchment Rainfall (Record 1980 – 2002)



Wainuiomata Catchment Rainfall (Record 1890 – 2002)



Hutt Catchment Rainfall (Record 1972 – 2002)

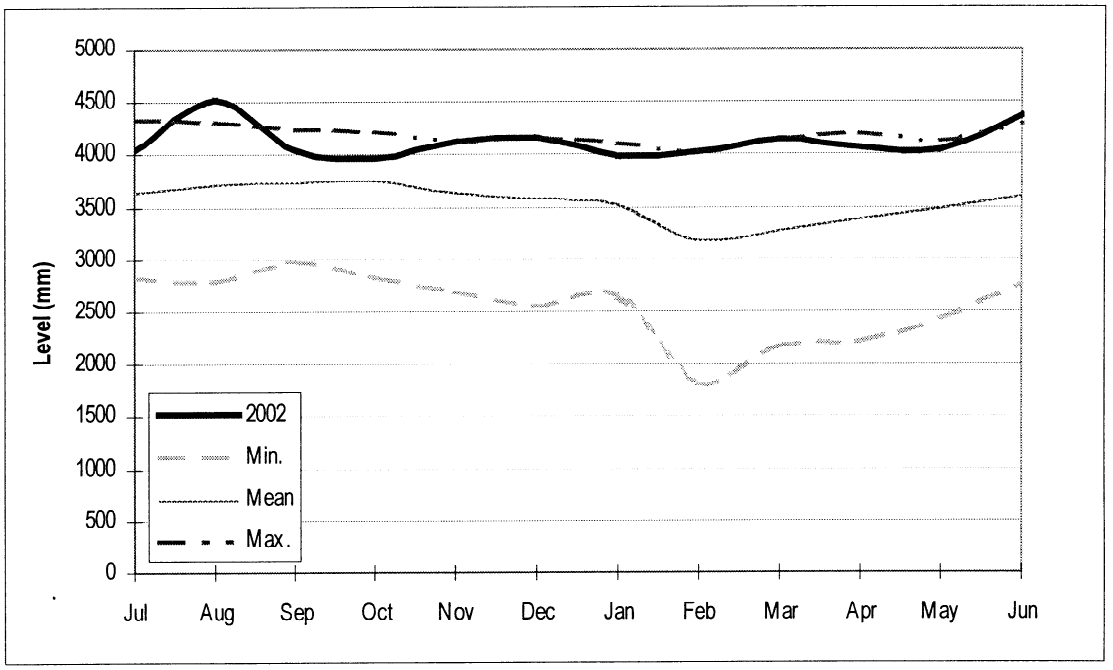


Levels and flows from water sources

The following three graphs show the historical high, low and average from the main water sources used to supply greater Wellington, compared with data for the 12 months to 30 June 2002.

Waiwhetu Aquifer

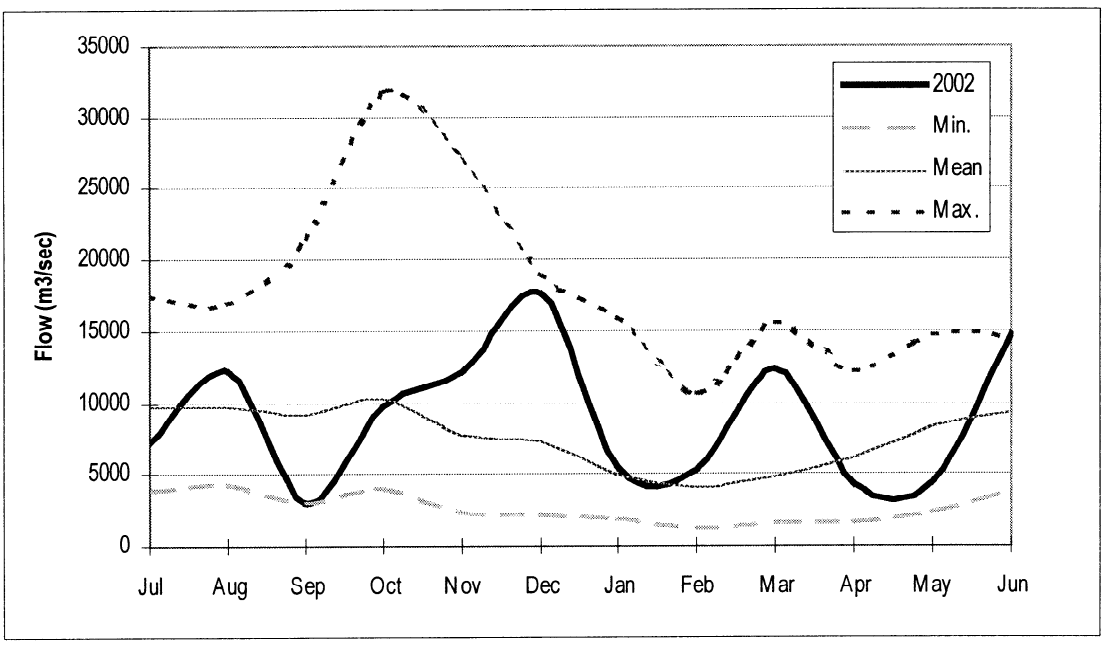
Average monthly level for the year ended 30 June



Data record from McEwan Park 1971-2002

Hutt River

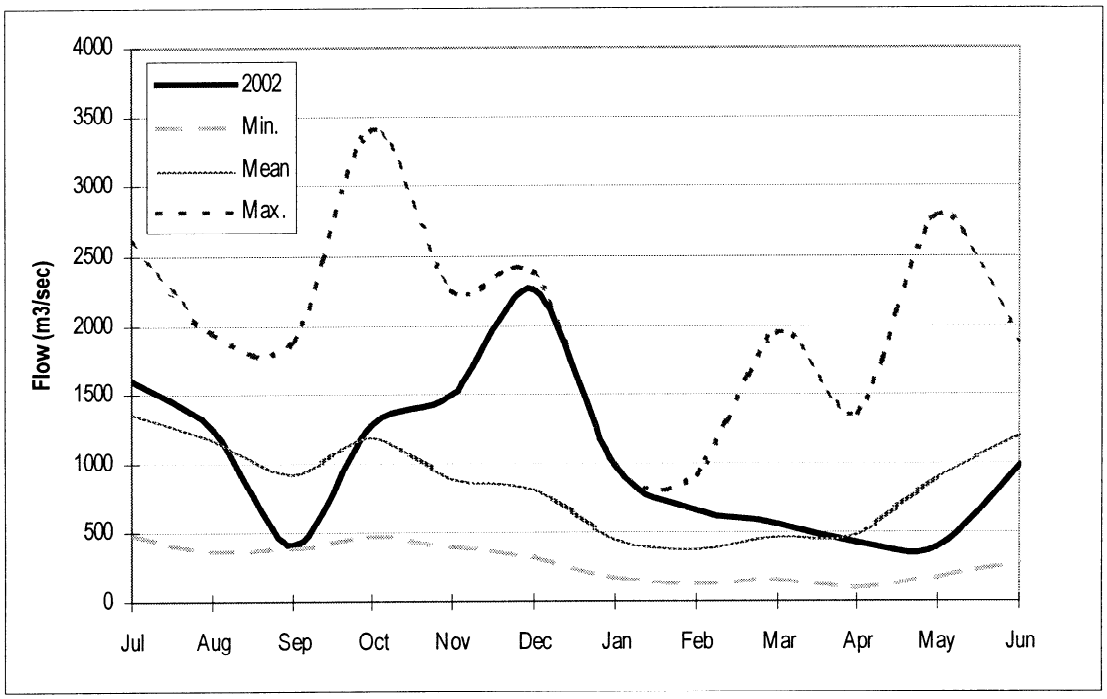
Average monthly flow rate for the year ended 30 June



Data record from Kaitoke 1968 - 2002

Wainuiomata River

Average monthly flow rate for the year ended 30 June



Data record from Manuka Track 1982 - 2002

Distribution pipeline shutdowns

There were 66 shutdowns on the Water Group's regional water supply mains; no loss of pressure or supply to customers resulted.

33 shutdowns were unscheduled, for the repair of leaking or burst mains, or to repack leaking valves, compared with 16 and 17 in the two prior years. The increase was due to a more proactive programme of checking valves for leakage. All shutdowns were completed reinstated within eight hours.

The remaining 33 shutdowns were scheduled. This work was required to install new or refurbished pipes and valves (24), remove redundant distribution assets (2) and do routine maintenance on distribution assets (7). All scheduled shutdowns were reinstated in less than eight hours.

RESOURCE CONSENTS

Resource consents held as at 30 June 2002

Water-Take	Water Diversion	Land Use	Discharge	TOTAL
11	4	30	20	**65**

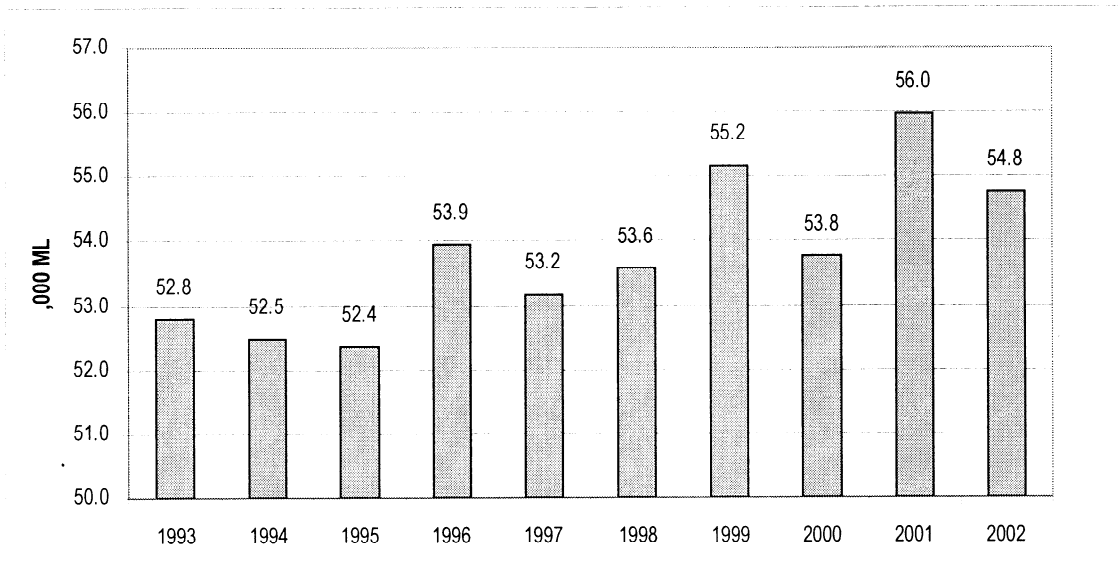
For the year to 30 June there were two 'non compliance' issues relating to these consents. Supernatant (treatment process by-product) discharge from Wainuiomata treatment plant to the Wainuiomata River did not comply with consented conditions for rate of discharge. This occurred because our discharge pumps were not thought capable of a flow rate that would breach the consent. Corrective measures were put in place once this error was identified. A 'non compliance' was also received for a land use consent relating to a pipeline upgrade between Randwick and the Hutt Road. An additional scour outlet was included in the contract after the consent was issued, making it a non-consented activity.

WATER SUPPLIED TO CUSTOMERS

Water supply figures are recorded weekly at the supply points to our customers. In previous annual reports, annual figures have been the sum of all readings between 1 July and 30 June - either 52 or 53 weekly readings. This year supply figures have been calculated to represent 365/366 day years, so as to make the data more directly comparable between years and consistent with abstraction and production figures, which are recorded daily. The years ended 30 June 1996 and 2000 are based on 366 days.

Water supplied (millions of litres)

For the year ended 30 June



	Hutt City		Porirua City		Upper Hutt City		Wellington City		SUPPLY REGION	
	Total	Avg. day	Total	Avg. day	Total	Avg. day	Total	Avg. day	Total	Avg. day
2002	14,177	38.8	5,908	16.2	5,774	15.8	28,902	79.2	54,760	150.0
2001	14,441	39.6	5,987	16.4	5,807	15.9	29,729	81.4	55,962	153.3
% Change	*-1.8%*		*-1.3%*		*-0.6%*		*-2.8%*		*-2.2%*	
2000	13,989	38.2	5,536	15.1	5,496	15.1	28,729	78.5	53,750	146.9
1999	14,986	41.1	5,777	15.8	5,741	15.7	28,661	78.5	55,165	151.1
1998	14,679	40.2	5,499	15.1	5,111	14.0	28,296	77.5	53,585	146.8
1997	14,310	39.2	5,138	14.1	5,167	14.2	28,571	78.3	53,186	145.7
1996	14,398	39.3	5,096	13.9	5,064	13.8	29,383	80.3	53,941	147.4
1995	14,537	39.8	5,333	14.6	4,817	13.2	27,668	75.0	52,354	143.4
1994	14,934	40.9	5,571	15.3	5,166	14.2	26,828	72.7	52,500	143.8
1993	14,702	40.3	5,907	16.2	4,939	13.5	27,248	73.8	52,796	144.6

Average daily supply (litres)

For the year ended 30 June 2002

	Hutt City	Porirua City	Upper Hutt City	Wellington City	TOTAL
Population[1]	98,600	49,400	35,800	170,200	354,000
Households[2]	34,659	14,925	13,236	62,733	125,553
Litre/head/day	394	328	442	465	424
Litres/household/day	1,121	1,085	1,195	1,262	1,195

1: Usually resident population – estimated at 30 June 2001 following 2001 Census. 2: Occupied dwellings – 2001 Census

Supply – maximum week

For the year ended 30 June

	Hutt City	Porirua City	Upper Hutt City	Wellington City	TOTAL
Maximum week 2002	30/1/02	30/1/02	30/1/02	30/1/02	30/1/02
Total of max. wk (ML)					
2002	324.0	141.6	140.0	610.9	1,216.4
2001	337.7	150.4	144.4	678.5	1,295.5
Avg. day of max. wk (ML)					
2002	46.3	20.2	20.0	87.3	173.8
2001	48.2	21.5	20.6	96.9	185.1

Chemical monitoring of the wholesale water supply

The health risk due to toxic chemicals in drinking water differs to that caused by microbiological contaminants. It is unlikely that any one substance could result in an acute health problem except under exceptional circumstances, such as significant contamination of the supply. Moreover, experience has shown that the water usually becomes undesirable after such incidents[A] for obvious reasons such as taste, odour and appearance. The problems associated with chemical constituents arise primarily from their ability to cause adverse effects after prolonged periods of exposure.

Mean values of chemical analysis at treatment plants

For the year ended 30 June 2002

	DWS NZ 2000	Te Marua		Wainuiomata		Waterloo		Gear Island	
Parameter	GV or MAV[(A)]	No. of samples	Value	No. of samples	Value	No. of samples	Value	No. of samples	Value
Alkalinity (total), mg/L $CaCO_3$	-	246	45	51	45	52	63	46	65
Aluminium (acid soluble), mg/L	0.15	23	<0.02	14	0.04	-	-	-	-
Arsenic (total), mg/L	0.01	2	<0.001	2	<0.001	4	<0.001	4	<0.001
Boron, mg/L	1.4	2	<0.03	2	<0.03	4	<0.03	4	<0.03
Cadmium (total), mg/L	0.003	2	0.0005	2	0.0004	4	<0.0003	4	<0.0003
Calcium (total), mg/L	[(B)]	4	12	4	18	4	20	4	9.7
Chloride, mg/L	250	4	7.9	4	23	4	14	4	16
Chromium (total), mg/L	0.05	2	<0.002	2	0.002	4	<0.002	4	<0.002
Colour (true), PtCo units	10	64	<5	63	<5	-	-	-	-
Conductivity, µS/cm @ 25°C	-	12	138	12	184	12	194	12	203
Copper (total), mg/L	1	2	<0.01	2	<0.01	4	<0.01	4	<0.01
Cyanide (total), mg/L	0.08	2	<0.008	2	<0.008	4	<0.008	4	<0.008
Fluoride, mg/L	1.5[(C)]	249	0.80	247	0.80	497	0.79	77	0.69
Hardness (total), mg/L $CaCO_3$	200	12	36	12	54	12	66	12	40
Iron (total), mg/L	0.2	12	<0.03	12	0.07	12	0.14	12	0.11
Langelier saturation index	≥0	12	-1.1	12	-1.2	12	-0.8	12	-1.4
Lead (total), mg/L	0.01	2	<0.0005	2	0.0012	4	<0.0005	4	<0.0005
Magnesium (total), mg/L	[(B)]	2	1.4	2	2.0	4	2.6	4	3.8
Manganese (total), mg/L	0.5	2	<0.03	2	<0.03	4	<0.03	4	<0.03
Mercury (total), mg/L	0.002	2	<0.0002	2	<0.0002	4	<0.0002	4	<0.0002
Nickel (total), mg/L	0.02	2	<0.001	2	<0.001	4	<0.001	4	<0.001
Nitrate, mg/L -N	50	2	0.04	2	0.08	4	0.64	4	0.94
pH	7.0-8.5	259	7.8	63	7.6	52	7.8	47	7.5
Selenium (total), mg/L	0.01	2	<0.001	2	<0.001	4	<0.001	4	0.001
Silica (molybdate-reactive), mg/L	-	2	9.6	2	14	4	15	4	16
Sodium (total), mg/L	200	4	13	4	13	4	11	4	25
Solids (total dissolved), mg/L	1000	12	89	12	120	12	120	12	130
Sulphate, mg/L	250	4	7.6	4	5.5	4	6.1	4	7.4
Turbidity, NTU	2.5	64	0.08	63	0.44	52	0.72	-	-
Zinc (total), mg/L	3	2	<0.03	2	<0.02	4	<0.03	4	<0.03

Notes: (A) Drinking Water Standards for New Zealand 2000, Guideline Values (GV) or Maximum Allowable Values (MAV). A dash in the 'GV or MAV' column indicates that there is no applicable guideline or maximum allowable value. (B) See Hardness. (C) The fluoride content recommended for drinking water by the Ministry of Health for oral health is 0.7 to 1.0 mg/L.

Microbiological monitoring of the wholesale water supply

Microbiological contamination of a water supply has the potential to cause sickness within the community. Microbiological monitoring of potable water is carried out in order to determine the safety of the water in relation to the possibility of transmission of waterborne disease. The coliform group of bacteria has been used much more than any other indicator group for monitoring potable water. This group consists of *Escherichia (E.) col,* which usually comes from faecal material, plus other bacteria derived from non-faecal sources.

Production

At our surface water treatment plants (Te Marua and Wainuiomata) compliance to the *E.coli* criteria of the Drinking Water Standards for New Zealand 2000 (DWSNZ) is demonstrated by continuously monitoring turbidity on each filter, and free available chlorine (FAC) and pH in drinking water leaving the treatment plants. Turbidity should not exceed 0.5 NTU for more than 5% of any 24-hour period, or ever increase by more than 0.2 NTU in any 10-minute period. The FAC concentration must not fall below a concentration that is equivalent to a minimum of 0.2mg/L of FAC at pH 8.0 and turbidity less than 0.5 NTU.

Although the Waiwhetu aquifer is a secure water source, free from microbiological contamination, faecal coliforms are tested for in the water leaving our aquifer source water treatment plants (Waterloo and Gear Island), to demonstrate compliance to the *E.coli* criteria of the DWSNZ. No faecal coliforms were detected in daily testing of water leaving Waterloo treatment plant, or in water leaving Gear Island treatment plant.

The Ministry of Health assesses microbiological compliance to the DWSNZ annually, on a calendar year basis. Te Marua Waterloo and Gear Island treatment plants received microbiological compliance for the year to 31 December 2001. Wainuiomata treatment plant did not comply, due to the rare occurrence of turbidity change greater than 0.2 NTU in 10 minutes on single filters.

The following tables show a summary of the percentage of time that Te Marua and Wainuiomata treatment plants met the compliance criteria for turbidity (for each filter) and free available chlorine/pH (for treated water) for the 2002 compliance year to date. (January-June).

Turbidity (NTU) and FAC/pH Compliance

For the 2002 compliance year to date (1 January to 30 June 2002)

Te Marua treatment plant		January	February	March	April	May	June
Filter 1	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.96%	99.99%	100.00%	99.99%	100.00%	100.00%
Filter 2	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.98%	100.00%	100.00%	100.00%	100.00%	100.00%
Filter 3	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.99%	99.99%	100.00%	99.99%	100.00%	100.00%
Filter 4	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.96%	100.00%	99.99%	99.99%	100.00%	100.00%
Filter 5	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.96%	99.99%	99.99%	100.00%	100.00%	100.00%
Filter 6	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.98%	100.00%	99.99%	100.00%	99.99%	100.00%
Treated	FAC-pH	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Wainuiomata treatment plant		January	February	March	April	May	June
Filter 1	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	96.67%
	0.2 NTU Change	99.96%	99.95%	100.00%	100.00%	100.00%	99.98%
Filter 2	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.97%	100.00%	99.93%	100.00%	100.00%	100.00%
Filter 3	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	100.00%	99.97%	99.97%	100.00%	100.00%	100.00%
Filter 4	0.5 NTU	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	0.2 NTU Change	99.91%	99.99%	99.98%	100.00%	100.00%	100.00%
Filter 5	0.5 NTU	100.00%	100.00%	100.00%	93.33%	100.00%	100.00%
	0.2 NTU Change	99.96%	100.00%	100.00%	99.98%	100.00%	100.00%
Treated	FAC-pH	99.42%	97.43%	97.82%	100.00%	94.95%	99.75%

Distribution

Heterotrophic bacteria counts are used as a means of estimating the number of live heterotrophic bacteria in water. Changes that occur in the bacteriological quality of the treated water from the time it enters the distribution system until it reaches the customer can be determined using the HPC methods. Bacterial numbers tend to increase during distribution and the density reached is influenced by the number of factors, including the bacterial quality of the finished water entering the system, temperature, residence time, presence or absence of disinfectant residual, construction materials and the availability of nutrients for growth. At present there is no New Zealand guideline limit for heterotrophic bacteria in potable water.

Although not presently required under the DWSNZ, Wellington Regional Council's Laboratory monitors the microbiological quality of water in its distribution system after treatment. Under certain circumstances some coliforms can be found in water distribution systems. Any such incidents must be treated as indicating the presence of *E.coli* and followed up in accordance with the DWSNZ.

A summary of results for the twelve months from 1 July 2001 to 30 June 2002 is given below.

Total coliform and heterotrophic plate count results – summary of samples collected
For the year ended 30 June 2002

	Total coliforms (CFU/100mL)					Heterotrophic plate count @ 35°C (CFU/mL)			
	DWSNZ MAV[D]	No. of Samples	Max.[E]	Min.	Median	No. of Samples	Max.	Min.	Median
Stokes Valley charthouse	<1	248	0	0	0	-	-	-	-
Pukerua Bay	<1	244	0	0	0	245	1500	0	0
Johnsonville pumping station	<1	249	0	0	0	-	-	-	-
Karori (end of Kaitoke main)	<1	248	0	0	0	248	400	0	0
Hutt Park bridge	<1	250	0	0	0	-	-	-	-
Thorndon pumping station	<1	249	0	0	0	249	27	0	0
Rahui reservoir	<1	248	1	0	0	248	1200	0	0

(D) Drinking Water Standards for New Zealand 2000, Maximum Allowable Value (MAV). There are no guideline values for heterotrophic plate count. (E) Although a single test showed a positive total coliform presence, further sampling and testing proved an absence of faecal coliforms, as required by the DWSNZ.

WATER SUPPLY STANDARDS

Water Quality

The quality of water supplied will continually meet the Ministry of Health's Drinking-Water Standards. The related water supply infrastructure will be maintained and improved to meet the standards specified in the Regional Water Supply Asset Management Plan. The water supplied from the water treatment plants will continue to meet the Ministry of Health's Drinking-Water Standards following changes to be introduced in 2005; the changes will make the Standards more demanding than those introduced in 2001.

Current Status

- The Regional Council has a policy to target an A-grade from the Ministry of Health for each of its water treatment plants, where this is consistent with the requirements of its water supply customers. The water supplied to its customers is completely satisfactory, with minimal levels of health risk.
- Compliance to the Drinking Water Standards was confirmed for Te Marua, Waterloo and Gear Island treatment plants following the most recent assessment, for the 2001 calendar year.
- Waterloo and Gear Island Treatment Plants are graded B. This would be upgraded to A if chlorine were added to the treated water, although Hutt City Council has requested that this should not occur.
- Te Marua Water Treatment Plant is currently graded A. Wainuiomata Water Treatment Plant is graded C. Recent significant change to the requirements for microbiological compliance to the Drinking Water Standards proved more difficult to achieve continuously than was anticipated and delayed progress towards applying for re-grading for Wainuiomata. However, the plant is now close to consistently producing water to the required standard and it is expected that Wainuiomata will comply with the requirements for A-grade during the 2002/03 year.
- The Water Group holds certification to ISO 9002 for its wholesale water supply operations.

Specific objective to be achieved by 30 June 2003

- The collection, treatment and delivery of water will be managed to ensure the quality of water supplied complies with the Ministry of Health's Drinking-Water Standards for New Zealand 2000.
- Water testing will be carried out by an International Accreditation New Zealand (IANZ) registered laboratory at sampling points defined by the Quality Assurance Section of the Water Group, not less than five days out of every seven. Expenditure will not exceed the budget of $465,000.
- Wainuiomata Water Treatment Plant will be re-graded to an A or A1 grading by 30 June 2003.
- Vegetation management measures will be carried out in the Council's water supply catchments, in accordance with the Council's Forestry Management Plan and within a budget of $180,000, so that the treatment plants receive good quality water.
- A ranger service for the Wainuiomata-Orongorongo Water Supply Catchment will be obtained from the Landcare Division at a cost not exceeding $116,000.

Security of Supply

Sufficient water will be available on a daily basis to meet the 1-in-50 year return-period drought situation. The related water supply infrastructure will be maintained and improved to meet the standards specified in the Regional Water Supply Asset Management Plan. Appropriate contingency plans will be in place to cover a major emergency.

Current Status

- Projections using a computer based sustainable yield model show that the Council's water supply infrastructure is sufficient to meet a 1-in-50 year return-period event until at least 2020, at current

growth rates. A 1-in-50 year drought strategy has been adopted after consultation with our customers. This is less than that of Auckland's 1-in-200 year strategy, though their system is less dynamic in its raw water supply.

- The Council manages water supply assets in accordance with a planned programme of maintenance. Council policy is that there is no deferred maintenance. The Asset Management Plan was prepared in accordance with the National Asset Management Steering Group guidelines.
- The Council has an "n-1" policy for security of water supply. This means that either Te Marua or Waterloo water treatment plant could be out of commission and the daily base water requirement of 145 ML still met.

Specific objective to be achieved by 30 June 2003

- The Orongorongo intakes will be refurbished to accepted engineering standards at a cost not exceeding $200,000 by 30 June 2003.
- The standby generator at Waterloo Water Treatment Plant will be upgraded within a budget of $150,000 by 30 June 2003.
- Karori Pumping Station equipment will be refurbished to accepted engineering standards at a cost not exceeding $420,000 by 30 June 2003.

Environmental Management

All water supply activities will be undertaken in an environmentally sympathetic manner according to the principles of the Resource Management Act 1991.

Current status

- The Council acquires and seeks to comply with all appropriate resource consents. Abstraction consents govern the quantity of water that can be drawn from each source and how much must remain. Consents are also sought for any discharges from the treatment plants. Most by-products from the plants are processed through wastewater recovery plants and removed off-site.
- The Council holds certification to ISO 14001 (the International Standard Organisation's environmental management benchmark) for its wholesale water supply activities.

Specific objective to be achieved by 30 June 2003

- All appropriate resource consent conditions will be complied with, within a monitoring budget of $65,000.
- Resource consent compliance will be demonstrated to an auditable standard and a report on compliance for 2001/02 will be prepared by 30 November 2002.
- Water conservation will be promoted by way of an education campaign during the 2002/03 summer, at a cost not exceeding $70,000.
- Power factor correction equipment will be installed as part of the Karori Pumping Station refurbishment by 30 June 2003.

Health and Safety

The manner in which we carry out our operations will comply with the Health and Safety in Employment Act 1992, Health and Safety Regulations 1995, relevant Codes of Practice and current legislation.

Current status

- A hazard identification programme will be undertaken at all work locations in order to eliminate, isolate or minimise the effect of risk to all Water Group staff and contractors working at those locations. These hazards will be entered on a hazard register, which will be continually updated.

Specific objective to be achieved by 30 June 2003

- The Hazard Register will be reviewed on a six-monthly basis. We will assess the effectiveness of the measures taken to eliminate, isolate or minimise risk to all Water Group employees and contractors.
- The health and safety plans of all contractors employed by the Water Group will be reviewed prior to their employment. Their activities should comply with the Health and Safety in Employment Act 1992, the Health and Safety Regulations 1995, relevant Codes of Practice and current legislation, and meet or exceed the methods of operation as determined within the Utility Services Water Group Health and Safety Plan. Their activities will be monitored on a regular basis, to ensure that any risk to their employees, employees of subcontractors, Wellington Regional Council staff or the general public is eliminated, isolated or minimised.

Customer Service

The Group is committed to delivering excellent value to its customers. This value can be demonstrated in many ways. The Group will show that its staff:

- Are easy to do business with.
- Respond to queries, proposals, suggestions and recommendations in a prompt and open manner.
- Are prepared to negotiate to obtain the optimum result for all.
- Will offer value for money by driving costs down and the quality of their service up.
- Will benchmark their actions against those of other water organisations in this country and abroad.
- Will be honest and open minded in all their negotiations.

Current status

- The Council will continue to demonstrate that it has a high standard of customer service. It will provide customers with up-to-date and relevant information, as well as listening and responding to their needs.

Specific objective to be achieved by 30 June 2003

Customers will be provided with a business report by 30 November 2002 which will include the following information:

- Financial results for the 2001/02 year.
- Actual quality compared with targeted performance.
- A list of incidents where supply has been interrupted, together with the time taken to respond and repair.
- A report on compliance with resource consent requirements.

Business Efficiency

To demonstrate a reduction in the operational costs of collecting, treating and delivering wholesale water over time, while maintaining levels of service agreed externally and internally.

Specific objective to be achieved by 30 June 2003

- Direct operating costs for the wholesale water supply for 2002/03 will be minimised and not exceed the budget of $13,700,000.