
Water Supply

June 2000

Operations Group
June 2000

Operations Group Review of Operations for the Period Ended 30 June 2000

1. Items of Note

- The final commissioning of the system optimiser was delayed until the beginning of June. The system is now operating well and staff members are beginning to realise the benefits of automatic predictions for the operation of Waterloo and Wainuiomata.

2. Water Quality

A total of 249 samples from trunk mains were tested for coliform organisms. None of these samples tested positive.

Secchi disc water clarity in the Te Marua north lake varied between 4.7 m and 7.8 m, and in the south lake between 5 m and 8 m. These are considered satisfactory.

The dominant phytoplankton were as follows:

- North Lake: *Oscillatoria*, *Synedra*, *Asterionella*.
- South Lake: *Synedra*, *Staurastrum*, and *Cosmarium*.

Oscillatoria is a filter clogging algae when present in high concentrations.

Synedra produces a musty smell and slick tongue sensation when abundant

Staurastrum produces a grassy smell when abundant.

Dissolved oxygen and pH readings are also satisfactory.

Giardia and *Cryptosporidium* results were as follows:

Te Marua

Lakes	) No <i>Giardia</i>
	) No <i>Cryptosporidium</i>
Intake	) No <i>Giardia</i>
	) No <i>Cryptosporidium</i>
Treated Water	) No <i>Giardia</i>
	) No <i>Cryptosporidium</i>

Wainuiomata

Treated Water	) No <i>Giardia</i>
	) No <i>Cryptosporidium</i>
Lower George Creek	) No <i>Giardia</i>
	) Low <i>Cryptosporidium</i>
Big Huia Intake	) Low <i>Giardia</i>
	) No <i>Cryptosporidium</i>
Intake	) Low <i>Giardia</i>
	) Low <i>Cryptosporidium</i>
George Creek South arm	) Low <i>Giardia</i>
	) Low <i>Cryptosporidium</i>

Orongorongo

Intake	) Low <i>Giardia</i>
	) Low <i>Cryptosporidium</i>

During June 2000 22 transgressions were notified:

- 8 low fluoride
- 10 chlorine
- 2 high turbidity
- 1 pH
- 1 alkalinity

3. Supply Situation

The two monthly seasonal forecast for July and August 2000 issued by the Meteorological Service is as follows:

Situation as at July 10

For Wellington:

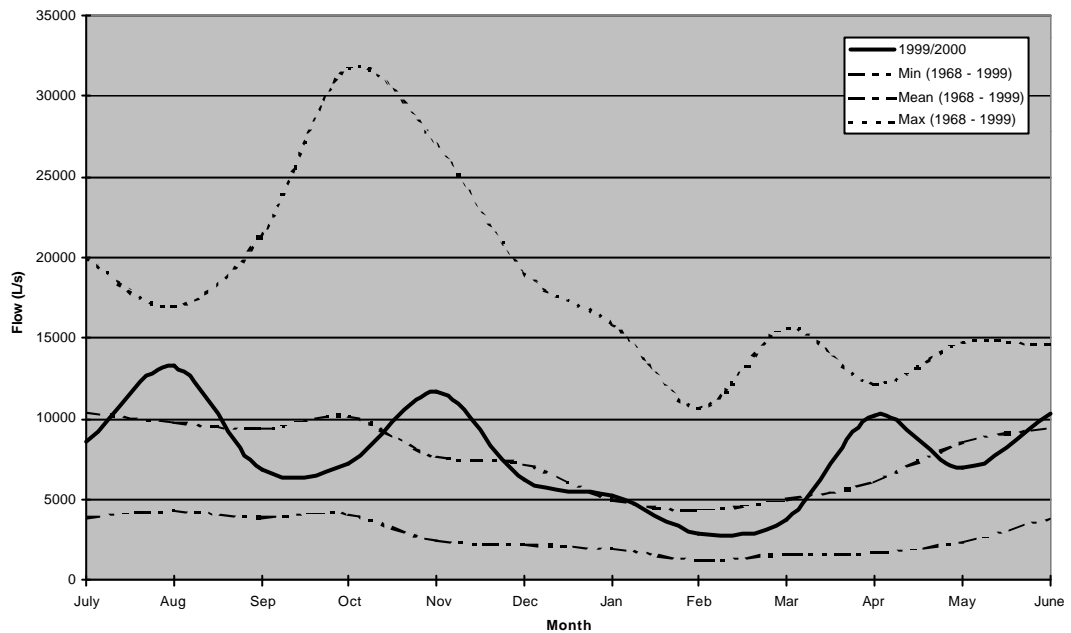
Rain:	About normal
Wind:	About normal
Temperature:	About normal to above normal
Sunshine:	Above average
Confidence:	Moderate

The wind is expected to continue on its winter roller coaster, swinging from northerly to southerly through Cook Strait, and blowing mostly as a westerly across Manawatu and Wanganui. Local sea surface temperatures are generally

acting like a background heater, taking a little off the chill of most of the southerlies. Keep an eye on the weather map for low pressure systems if they form over the northwest Tasman Sea they should bring a decent amount of rain, and if they deepen or linger near Chatham Islands they could well bring several days of chilling southerly conditions.

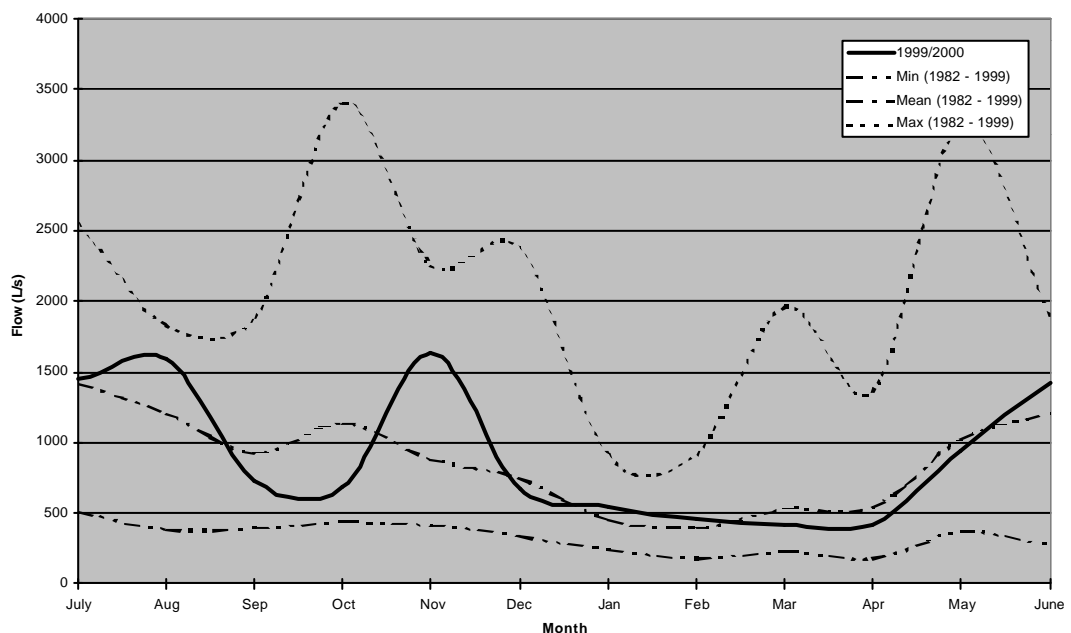
Hutt River Flows

The mean monthly river flow during May was slightly below average and for June was slightly above average.



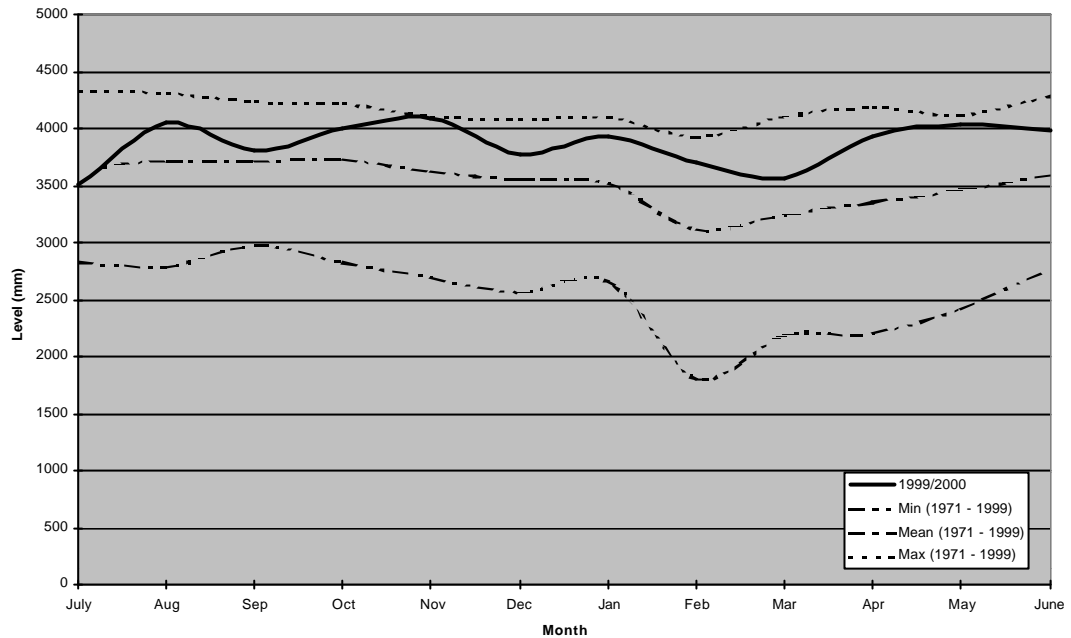
Wainuiomata River Flows

Flow in the Wainuiomata River during May was average and during June above average.



Aquifer Levels

The Waiwhetu aquifer level for May and June was above average.



4. Production

4.1 Wainuiomata

4.1.1 Safety

There are no accidents or incidents to report.

4.1.2 Operations

- The PLC software changes are progressing well.
- The slip between the two tunnels in the Orongorongo Valley has been cleared.
- The plant inlet sand trap scour has been modified so the grass area is no longer flooded each time a scour is carried out.
- The washwater recovery plant refurbishment has been completed.

4.2 Waterloo Water Treatment Plant

4.2.1 Safety

There are no accidents or incidents to report.

4.2.2 Operations

- Reservoir “A” had its annual clean.
- Wellington No. 3 variable speed drive has failed. Vectron Industries Ltd is repairing the drive and preparing a fault report.

4.3 Gear Island

4.3.1 Safety

There are no accidents or incidents to report.

4.3.2 General

- A chlorine boost pump motor and mechanical seal required replacing.

4.4 Te Marua

4.4.1 Quality

There are no quality transgressions to report.

4.4.2 Safety

There are no health and safety issues to report.

4.4.3 Operations

- | | |
|----------|--|
| 2 June: | Severe lightning storm damaged plant equipment, causing a slam-shut. |
| 10 June: | Sudden dip in process water level signal during electrical storm. This dip was caused by the normal operation of the lightning protection equipment. |
| 11 June: | Lightning damage to plant outlet flow meter. |
| 22 June: | High treated pH alarm caused by instrument fluctuation. Instrument calibration checked. |

4.4.4 Plant Tours

- | | |
|----------|--|
| 10 June: | Councillors’ millennium planting : 15 people |
|----------|--|

4.4.5 General

- Lightning damaged equipment has either been replaced or is being repaired. Recent electrical storms have been the worst experienced in the history of the Te Marua plant. Although some equipment was damaged, the plant output was only momentarily affected.
- The installation of lake telemetry is near completion. Commissioning should be completed in early July.
- The new outlet electromagnetic flow meter has been installed and commissioned.

5. Distribution

5.1 Pipeline Section

5.1.1 Maintenance

- Pipeline maintenance continued on the 1050 mm pipeline between the Ngauranga valve chamber and Thorndon Pumping Station.
- Scour valve exercising was carried out as per the schedule.

5.1.2 Haywards Optimisation

- Completion of stage 1 pipework with plug valve/flow meter.
- Fabrication of stage 2 pipework

5.1.3 ISO 9002

- Backflow prevention testing was carried out, as was parallel main testing.

5.2 Electrical Section

5.2.1 Karori Reservoir

- Two pressure transmitters were installed, one on the Kaitoke main and one on the Messines Road Reservoir rising main.
- The chlorine residual meter was relocated and recommissioned.
- A start has been made on rationalising the electrical and instrumentation equipment now that the pipework, etc., has been completed.

5.2.2 Haywards Reservoir

- A new inlet main with an electromagnetic flow meter, electrically controlled plug valve has been connected to the No. 2 Reservoir.
- A new telemetry unit and switchboard have been installed in the TDI hut.

5.2.3 Valve Chambers

- The electrical installations at Rocky Point valve chamber and Ngauranga valve chamber have been replaced.

6. Health and Safety : Total Injury/Illness/Incident Record

Production

There are no accidents or incidents to report.

Distribution

There are no accidents or incidents to report.

Network

There was one minor incident reported during the month.

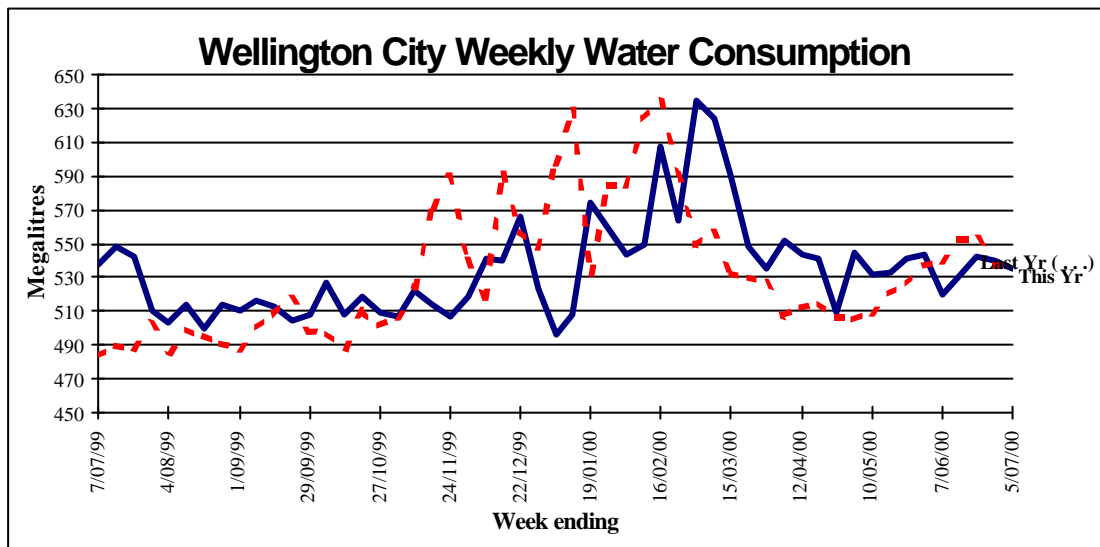
Operations Network

Review of Operations for the Period Ended 30 June 2000

1. Items of Note

- During the period three burst mains were reported and all repaired within the allotted time frame.
- It is pleasing to note that the new Contract with the Wellington City Council has been negotiated for a further 12 month period.

2. Water Supply (PT 30.1)

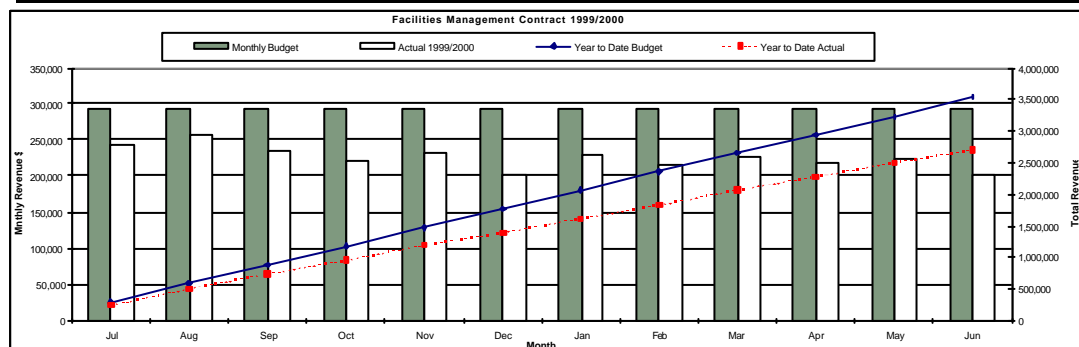


3. Financial

Facilities Management Contract

Contract Amounts : Wellington, Including Tawa

Month	Actual \$	Budget \$	Variance %	Year to Date	Budget \$	Variance %
June	202,239	294,314	-31.29%	2,704,388	3,531,768	-23.43%



4. Water Quality

4.1 Routine Testing (PT 1.1)

The water quality was monitored and the appropriate laboratory tests were completed for June. There were 170 samples from the reticulation system tested for bacteriological compliance. Compliance for the month is 100 percent. Compliance for the year to date is 100 percent.

4.2 Water Tests Initiated by Customers (PT 2)

	June	Year to Date	Compliance Year to Date (%)
(PT 2.2) Number received	3	96	-
(PT 2.1) Within ability of Operations Network to control	2	20	-
(PT 2.1) Formal response within five days	3	92	96%

5. Customer Services

5.1 Counter and Other Office Services (PTs 3.1, 4.1, 5.1)

Information has been provided to customers requesting information by letter, telephone and over the public counter. A breakdown of enquiries received during the reporting period is as follows:

June	
(PT 33.1) Counter enquiries	69 + 14 encroachments
Proposals from other utilities	12
(PT 33.1) Plan records : New services recorded	12
Response time requirement compliance	100%

5.2 Complaints Register (Monthly Summary) (PT 5.1)

An enquiry/complaints register is being maintained. A breakdown of complaints and enquiries received during the reporting period is as follows:

June	
(PT 2.2) Water quality	3
(PT 16.1.2) Pressure	16
(PT 20.1) Reinstatement	0
(PT 16.1.4) No-water	17
Contractors	0
Other	0

All of the *Water Quality, Pressure and No-water* complaints were responded to and completed within the performance criteria.

6. Response Maintenance

6.1 Compliance (*PTs 9.1, 9.1a, 9.2, 10.1, 16.1*)

June				
	No. of Calls	Completed to Standard	Compliance %	
<i>(PT 9.1)</i>	Stopcocks	266	255	96
<i>(PT 9.1)</i>	Hydrants	100	92	92
<i>(PT 9.1a)</i>	Valves	13	9	69
<i>(PT 9.2)</i>	Other leaks	170	155	91
<i>(PT 10.1)</i>	Mark-outs	43	43	100
<i>(PT9.1a)</i>	Value repacks	11	11	100
<i>(PT 16.1.1)</i>	Burst mains	3	3	100
<i>(PT 2.1)</i>	Water quality complaints	4	4	100
		610	572	94

Failures

	June		
	Jobs Failed by 1-24 Hours	Jobs Failed by 1-5 Working Days	Jobs Failed >5 Working Days
Fire hydrants	3	3	2
Mains	1	0	1
Valve repacks	0	0	0
Valves	1	0	3
Services	5	2	6
Tobies	2	7	2
Total	12	12	14

Additional Work Carried Out

	June
New services	28
Damages by contractors	39
Variations	6
Renewals over 4 m	5

6.2 Burst Mains (*PT 16.1*)

There were three burst mains during the month of June, these being as follows:

21 Churchill Drive, Crofton Downs	5 June 2000
27 Halifax Street, Kingston	18 June 2000
4 Rangiora Avenue, Khandallah	25 June 2000

All burst mains were attended to within 30 minutes and repaired within 8 hours.

6.3 Supply (PT 16.1)

	June
Total calls regarding loss or temporary loss of supply because of broken mains or supply failure	17
Total calls attended within 30 minutes	17
Total Compliance	100%

6.4 Reinstatement (PT 20.1)

There were no complaints received this month regarding trench reinstatements. The Facilities Management Contract target is less than 12.

6.5 Shutdown Notification (PT 6.1)

There were 21 planned shutdowns during June. All identifiable customers received notification within 24 hours prior to the shutdown.

6.6 Locates and Investigations (PT 10.1)

Work completed during the period comprised:

	June
Locate stopcocks	74
Leak location	77
Flow tests	0
Seepage/Investigations	4
Miscellaneous supply jobs	12

7. Health and Safety

There was one minor incident reported during the month.

8. Meters (PT 13.1)

A total of 1,402 suburb and high use meters were read, and entered into the system by 23 June 2000.

9. Pumping Stations, Reservoirs and System Control

9.1 General

Normal routine maintenance has resulted in the Wellington City system operating satisfactorily.

9.2 Control System *(PT 30.1)*

The control system continues to operate satisfactorily.

9.3 Allington Road Reservoir

The pumping station and reservoir have been decommissioned and the zone is being supplied from the new Karori South Reservoir.

9.4 Thorndon Pumping Station

One of the two pressure reducing valves at Thorndon Pumping Station has been dismantled. We are still waiting for the parts to arrive.

The rebuild will be carried out in early July.

9.5 New Flow Meters

No new electromagnetic flow meters were installed during the month.

9.6 Maintenance Checks *(PT 17.4)*

Maintenance was carried out in June as follows:

Round C	Round D
Allington Road Messines Road Pumping Station Karori Park Montgomery Avenue Makara Road Verviers Street The Zoo Russell Terrace Lyndhurst/Chester Roads Mills Road Woodridge CV	Karepa Street Highbury Landfill Reservoir Landfill CV Rhine Street Beacon Signal Hill Townsend Road Miramar North Dargle Way Grenada CV Rangoon Heights Ngaio CV

10. Development

10.1 Development Statistics

Subdivisions	June	Year to Date
Construction plans approved (lots/units)	17	253
Scheme plans approved	22	365
Subdivisions cleared (lots/units)	141	741

10.2 Development Projects

10.2.1 Churton North Reservoir

Minor leaks in the reservoir were repaired. The reservoir was cleaned and refilled. There are no visible leaks.

The reservoir was chlorinated successfully. The electrical and control system was approved.

10.2.2 Westchester Drive Pumping Station and Rising Main

The pumping station has now been successfully commissioned. The rising main is being rechlorinated with highly chlorinated water from the reservoir.

10.2.3 Conditions of Subdivisions Review

A number of meetings have been held with representatives of Wellington City Council's Environmental Business Control Unit (ECBU) and Water and Waste Unit in order to review the conditions of subdivision.

Concern has been expressed to Wellington City Council about ECBU staff members making engineering decisions about conditions of subdivision.

10.2.4 Major Subdivisions

Construction plans were submitted for approval of the following major subdivisions:

- 11 Duncan Street, Tawa (6 lots). Approved 27 June 2000.
- Downing Street Extension, Chartwell (15 lots). This has not yet been finally approved, as amendments to network analysis calculations have been requested.
- 2 Coolidge Street, Brooklyn (3 lots). This has not yet been approved, as plan amendments have been requested.

- 17 Sim Street, Raroa (8 lots). Plans were received on 30 June 2000 and are currently under consideration.
- Bushy Bend, Nicholson Road, Onslow (8 lots). Plans were received on 27 June 2000 and are currently under consideration.
- Greenvue Subdivision, Stages 10 and 10B (11 lots). Approved 20 June 2000.
- de Bes Subdivision, Beacon Hill (5 lots). This has not yet been finally approved, as plan amendments have been requested.

As-built plans were submitted for approval for the following major subdivisions:

- Kim Street/Burma Road (5 lots). This has not yet been cleared, as completion of outstanding work is awaited.
- Chippenham Grove, Churton North (22 lots). Approved 19 June 2000.
- Waverton Terrace and Erlestoke Crescent, Churton North (17 lots). Approved 19 June 2000.
- Downing Street Extension, Chartwell (15 lots). This plan is currently under consideration. The construction plan has not yet been finally approved.
- Churton North Reservoir Reticulation. This plan is currently under consideration.

10.2.5 Fire Services Recently Connected (*PT 12.1*)

There was one fire service connected during the month:

- 29 Jessie Street, Te Aro : 50 mm

10.2.6 New Commercial Metered Services

There were no new commercial metered services connected during the month:

10.3 Building Development Appraisals

	June	
	Commercial	Domestic
Building consents	8	48
PIMS applications	11	60
Compliance with response time requirement	100%	100%

10.4 Land Information Memorandum

	June
Applications processed	38
Compliance with response time requirement	100%

11. Capital Works

11.1 Main Laying : City

11.1.1 Contracts in Maintenance Period

The following pipelaying contracts in the central city are in the maintenance period:

- Manners Street
- Cuba Street

Various contractual issues are being worked through.

11.1.2 Taranaki Street

Additional issues on traffic control and road reinstatement are being resolved. Contract Documents are about to be submitted to Wellington City Council for the replacement of the 150 mm cast iron and 150 mm asbestos cement mains in Taranaki Street.

11.2 Main Laying : Suburbs

11.2.1 Contracts in Maintenance Period

The following pipelaying contracts are in the maintenance period:

- Makara Road Rising Main
- Owhiro Bay Parade
- Helston Road
- Rider Main Renewals
- Fox Street

The maintenance period for the Tirangi Road, Kingsford Smith Street and George Bolt Street Contract has expired. The Contractor has been asked to rectify some minor issues before the maintenance retentions are released.

11.2.2 Bell Road Zone Improvements

The Contract attained practical completion on 12 June 2000. The Contract is now in the maintenance period.

11.3 High Level Distribution and Storage

11.3.1 Karori South and Allington Road Zones Amalgamation

The Contract attained practical completion on 30 June 2000. The Contract is now in the maintenance period. The Allington Road water supply zone has been incorporated into the Karori South zone, with the water being supplied from the new Karori South Reservoir. The Allington Road Pumping Station and associated storage tanks have been demolished and the area reinstated.

11.3.2 Wadestown Reservoir

The consultant has virtually completed the Contract Documents. The pipework and electrical drawings and specifications have been completed. The condition of the existing pipeline to be used as a scour/overflow for the reservoir is being investigated and will need to have a liner pipe installed. There has been some hold-up in giving approval for this project to proceed to the next stage. Wellington City Council is considering how to arrange the bonds required by the resource consent for landscaping and road reinstatement.

11.3.3 Grenada North High Level Reservoir

The resource consent has now been issued for this project. There are some minor items to be attended to in the draft Contract Documents.

11.4 Low Level Zone Storage

11.4.1 Eastern Suburbs Reservoir

The report on the preliminary assessment of the potential reservoir sites has been prepared and distributed. A response is still awaited from the client.

Analysis - December 1998 to June 2000																
	Quality Reports PT 2.1			No of Planned Shut-downs PT 6.1	Stopcocks PT 9.1			Leaking Hydrants PT 9.1		Leaking Valves PT 9.1a		Leaks PT 9.2			Mark-outs PT 10.1	
	Calls Received	5 Day Response	% Compl.	Completed	Calls Received	Completed	% Compl.		% Compl.		% Compl.	Calls Received	Completed	% Compl.	Received	% Compl.
July 1998	8	8/8	100%	2	371	359	96%	90	94%	24	100%	231	213	95%	61	95%
August 1998	10	17/18	94%	2	304	243	87%	91	86%	25	100%	216	183	85%	74	100%
September 1998	11	26/29	90%	4	289	211	81%	71	77%	13	100%	219	183	84%	74	100%
October 1998	6	32/35	91%	3	385	293	73%	107	73%	6	100%	216	147	68%	67	100%
November 1998	7	37/42	88%	3	421	382	76%	70	75%	13	100%	228	198	86%	91	100%
December 1998	9	46/51	92%	2	365	362	90%	79	78%	9	100%	234	233	99%	16	100%
January 1999	13	59/64	93%	25	431	429	99%	77	64%	15	93%	275	271	98%	21	100%
February 1999	10	69/74	93%	30	343	336	97%	106	81%	18	94%	176	170	96%	11	100%
March 1999	5	74/79	94%	34	488	359	74%	118	94%	12	92%	324	282	84%	108	100%
April 1999	5	79/84	94%	18	430	367	85%	129	91%	20	95%	259	221	85%	94	100%
May 1999	8	86/92	93%	18	366	285	78%	110	78%	10	80%	239	200	84%	140	100%
June 1999	5	90/97	93%	18	364	269	74%	90	68%	21	95%	262	204	77%	86	100%
Summary (1998/9)	97	90/97	93%	159	4557	3915	86%	1138	81%	186	96%	2879	2505	87%	823	99%
July 1999	16	15/16	94%	18	385	345	92%	72/78	92%	18/19	95%	267	258	96%	47	100%
August 1999	6	6/6	100%	15	347	333	91%	85/89	96%	16/19	84%	241	225	98%	51	100%
September 1999	1	1/1	100%	12	356	275	82%	68/72	94%	18/20	90%	276	226	82%	41	100%
October 1999	13	13/13	100%	21	320	241	75%	71/87	81%	19/20	95%	234	198	85%	40	100%
November 1999	12	12/12	100%	16	365	334	92%	81/92	88%	11/13	85%	246	228	93%	30	100%
December 1999	4	4/4	100%	8	364	346	95%	77/80	96%	21/32	66%	218	194	89%	28	100%
January 2000	3	3/3	100%	0	391	341	87%	77/94	82%	18/26	69%	237	182	77%	40	100%
February 2000	9	7/9	78%	6	467	389	83%	102/117	87%	19/25	76%	222	196	88%	57	100%
March 2000	15	14/15	93%	46	473	405	86%	105/134	78%	14/17	82%	247	204	83	24	100%
April 2000	7	7/7	100%	17	312	278	89%	100/114	88%	13/27	48%	181	152	84%	28	100%
May 2000	7	7/7	100%	18	399	347	86%	85/94	90%	22/27	81%	202	176	87%	52	100%
June 2000	3	3/2	100%	21	266	255	96%	92/100	92%	9/13	69%	170	155	91%	43	100%
Running Total for Current Year	96	92/96	96%	198	4,445	3,889	87%	1015/1170	87%	198/258	77%	2,741	2,394	87%	481	100%
Analysis - December 1998 to June 2000																
	Loss of Supply PT 16.1			Burst Mains PT 16.11	Reinstatements PT 20.1			Toby Locates	Damage Repairs	Total Calls						

	Complaints Received	% Compl.	Occurred	% Compl.	Occurred	% Compl.			Calls Received	Completed	% Compl.
July 1998	29	97%	6	100%	3	100%	81	91	791	753	95%
August 1998	31	97%	2	100%	4	100%	89	100	703	613	81%
September 1998	30	100%	8	100%	1	100%	97	98	683	553	81%
October 1998	29	83%	5	100%	0	100%	72	57	795	605	76%
November 1998	24	96%	9	90%	3	100%	89	103	838	751	90%
December 1998	15	80%	4	100%	1	100%	101	26	770	763	99%
January 1999	21	100%	7	100%	1	100%	92	23	875	868	99%
February 1999	25	96%	5	100%	0	100%	100	29	647	630	97%
March 1999	32	97%	8	100%	0	100%	102	102	1073	884	82%
April 1999	46	94%	7	100%	1	100%	64	46	945	831	88%
May 1999	32	100%	2	100%	1	100%	81	109	875	729	83%
June 1999	33	85%	7	100%	3	100%	80	105	837	655	78%
Summary (1998/9)	347	94%	70	99%	18	100%	1048	889	9832	8635	88%
July 1999	19/22	86%	8	100%	4	100%	91	75	830	767	92%
August 1999	14/16	88%	9	100%	0	100%	85	34	807	735	91%
September 1999	50/50	100%	9	100%	1	100%	75	54	777	640	82%
October 1999	17/17	100%	4	75%	0	100%	76	22	724	591	82%
November 1999	9/10	90%	8	100%	1	100%	72	29	774	709	92%
December 1999	10/10	100%	5	100%	1	100%	64	20	744	681	92%
January 2000	3/4	75%	7	100%	0	100%	83	16	809	677	84%
February 2000	2/2	100%	5	100%	0	100%	135	58	909	783	87%
March 2000	8/8	100%	4	100%	0	100%	113	41	929	782	84%
April 2000	8/9	89%	5	100%	3	100%	73	18	701	600	86%
May 2000	26/26	100%	5	100%	0	100%	100	31	798	706	88%
June 2000	17/17	100%	3	100%	0	100%	74	39	610	572	94%
Running Total for Current Year	255/263	97%	72	98%	10	100%	1,041	437	9,412	8,243	87%

Strategy and Asset Group

June 2000

Strategy and Asset Group Review of Operations for the Period Ended 30 June 2000

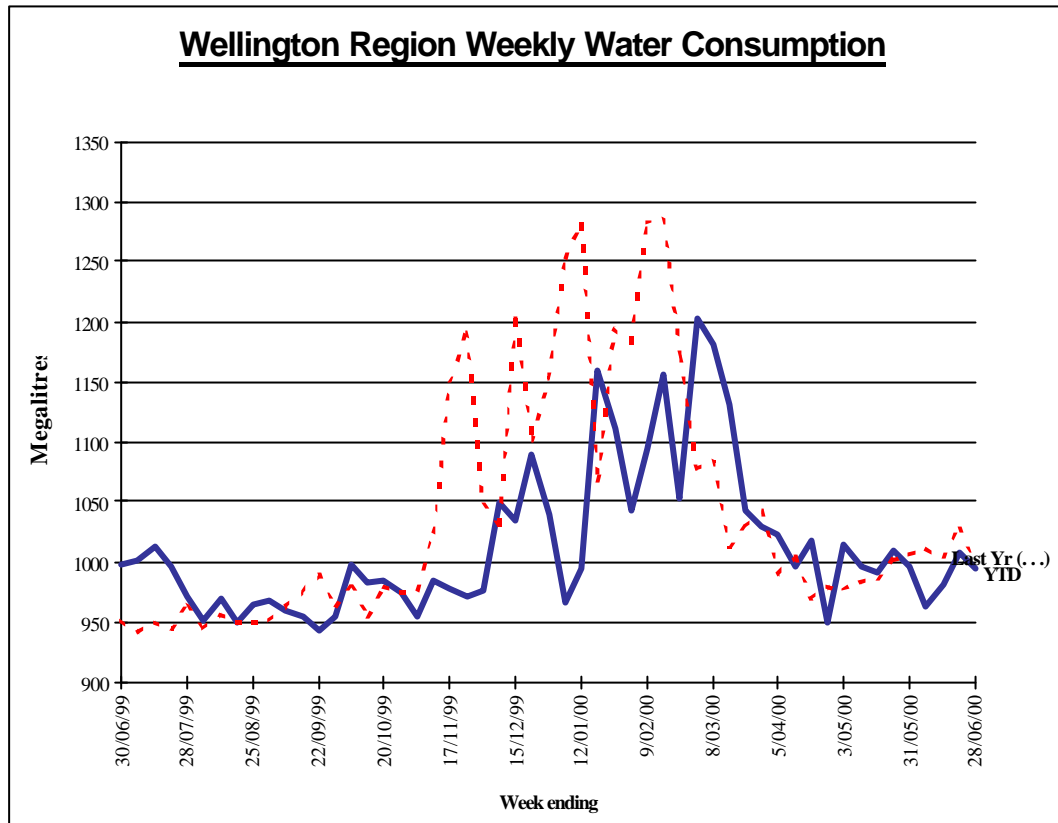
1. Items of Note

- Achieving ISO 14001 is a major milestone and completes over a year's work by staff in the Utility Services Division, including members of the Strategy and Asset Group.
- Agreement with the Hutt City Council on system changes to enable the Petone area to receive unfluoridated water has not been concluded at the time of writing this report. Agreement is expected shortly and an update will be given at the Committee meeting.
- There has been a close interaction with the Council's financial staff to ensure the robustness of the information in the MITS Hansen Asset Management System. This system will be used to calculate depreciation on The Water Group's main fixed assets.
- Agreement has been reached with Watercare Services in Auckland to continue the benchmarking process for another year.
- A feature on water supply was included in the *Holmes* show on TV1. It incorporated segments of The Water Group's activities.
- The Water Group has been invited by the Victorian Government of Australia to participate in a study *Enhancing and Maintaining Water Quality for Metropolises*. A report will be tabled at a meeting in Seoul in September 2002.
- It appears that changes to the way water standards are set may be attached to health legislation later this year. Indications are that the standard will be mandatory and based on a detailed risk management approach. The Committee will be kept informed of developments.
- Apart from an initial discussion with Landcare staff, there has been no progress on the plan for allowing managed access into the Wainuiomata and Orongorongo Catchments.

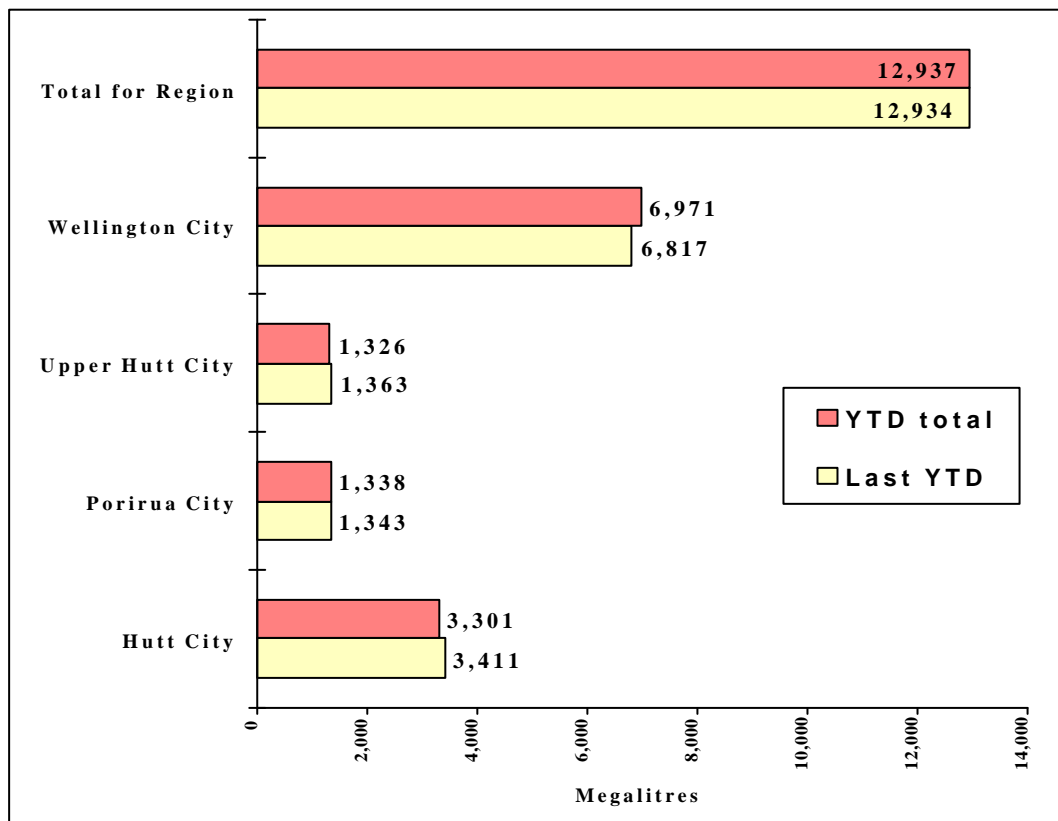
2. Sales Volume

Charts outlining sales volumes are shown on pages 23 and 24.

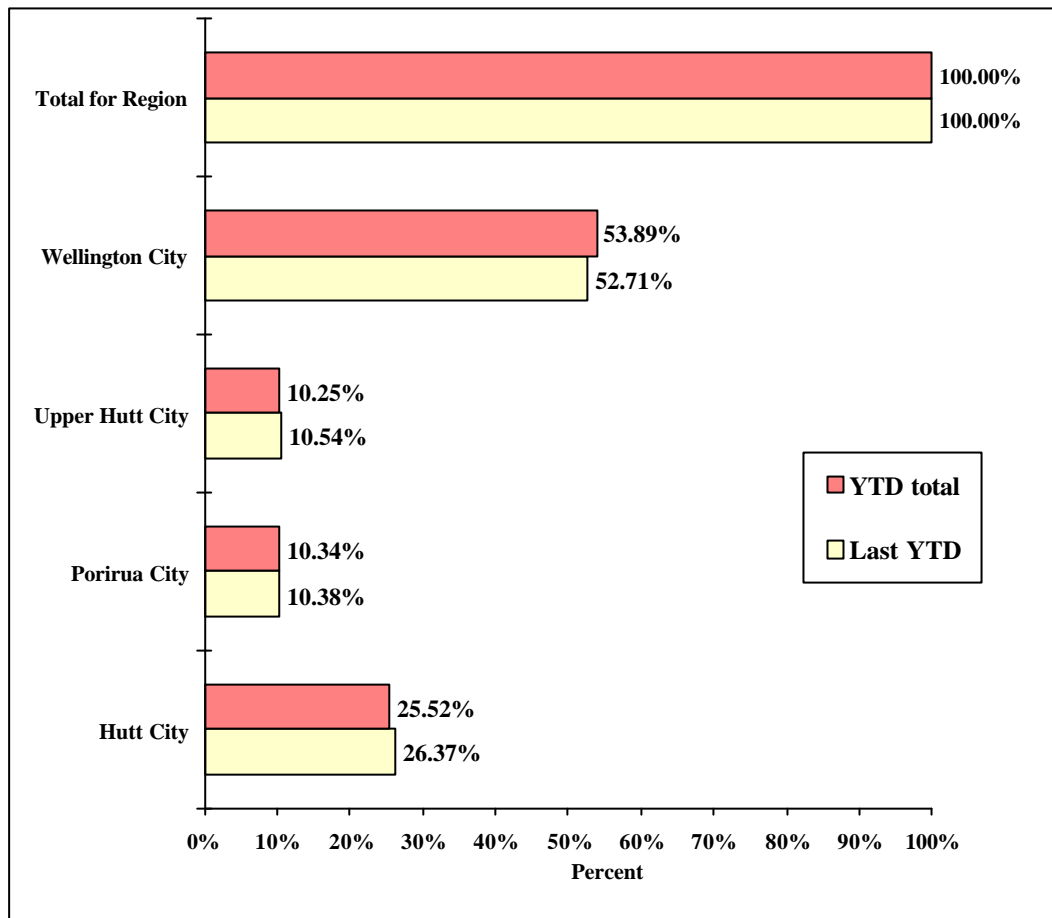
Water Sold Over the Last 12 Months



Water Sold from 1 April to 5 July 2000



Water Sold from 1 April to 5 July 2000 (contd)



3. Asset Management

- A detailed procedure for year end capitalisation of new assets has been developed in consultation with Finance Division. The value of individual new assets will be captured in the Hansen Asset Management System and the total reconciled with the amount capitalised in SAP. Further work with the Hansen support consultants will be undertaken in July to prepare reports that will facilitate the transfer of depreciation data from Hansen to SAP.
- A review of the June 1998 Asset Management Plan has been commenced but no significant changes will be made until 2001.
- Capital Works for 1999/2000 have been completed. The projected full year expenditure on capital works for 1999/2000 is \$3.985 m, against a budget of \$4.165 m. Of this amount, \$400,000 has been rebudgeted to 2000/2001 to complete projects that have been delayed. Delays to some projects are outside the control of the Group.
- Commissioning of Stage 1 of the System Optimiser was completed early in June. The programme has been running reliably since 3 June.

A series of scenario tests was run during June to test the robustness of the system and some refinements were made as a result. The programme is reliably filling reservoirs by 8 am, avoiding pumping during peak power tariff hours, managing peak electricity use, maximising night pumping and choosing the cheapest source.

- Design work on a system to supply unfluoridated water to Petone from Waterloo has begun. A decision has been taken to use a liquid acid form of fluoride, which is cheaper and easier to handle than the powder form used at the other treatment plants.
- Decommissioning work at Karori Reservoir has been completed. Discussions have been held with the Wellington City Council and the Karori Wildlife Sanctuary Trust regarding the safety and on going management of the dams. All the conditions in the Heads of Agreement have been met and a surveyor has been commissioned to prepare a subdivision plan. Following approval of this plan and the availability of titles the sanctuary land will be formally transferred back to the Wellington City Council. The Wellington Regional Council is retaining ownership of the pumping station land.
- A resource consent application for a new well tapping the Moera Aquifer at Gear Island is being prepared. A new well may affect IBM's firefighting wells. To check this, tests on the IBM well have been conducted. A report of the outcomes is awaited.
- The Environment Division has notified our applications for new surface water take consents.
- Detailed seismic review and risk assessment work has been carried out for a number of network elements, and some strengthening works is proposed for 2000/2001 as a result. A draft report describing a detailed study of the risks associated with the water main crossing the Hutt River at Silverstream has been completed.
- The ranger for the Wainuiomata and Orongorongo Catchments reports a quiet month in the catchment but the usual delinquent motorists on the access road. A draft Vegetation Management Plan has been received from the Landcare Division.

4. Quality Assurance

- Statistical analyses of turbidity readings to demonstrate compliance with the rule that requires turbidity to be less than 0.5 NTU for 95 percent of the time have been carried out. The results for June are set out in the following table. The percentage of the time turbidity is less than 0.1 NTU has also been calculated.

Percentage Compliance	Turbidity <0.5 NTU	Turbidity <0.1 NTU
Plant	June	June
Te Marua	100.00%	100.00%
Wainuiomata	100.00%	58.30%

The >0.2 NTU change within 10 minutes rule has been tested for both plants. This rule identifies “spikes” in the turbidity results, which have the potential to carry protozoa into the treated water. The results are as follows:

No. of Exceedances	
Plant	June
Te Marua	0
Wainuiomata	0

These rules are intended to reduce the risk of *Giardia* and *Cryptosporidium* passing through the plant. The plants incorporate “slam-shut” valves so that any water that does not comply with the 0.5 NTU rule is not delivered to the customers.

- Bureau Veritas Quality International audited the Environmental Management System on 19/20 June. The system was approved for certification.

5. Marketing

5.1 Market Research - Summer Water Conservation Campaign

- A *PowerPoint* presentation of results has been presented to customers. Councillors will receive this presentation shortly.

5.2 Public Relations

- Planning continued for Utility Services’ involvement in the Upper Hutt Science Festival, a programme to promote the role of science in the community. An open day at Te Marua involving presentations and a guided tour is being held on Saturday, 22 July, in conjunction with Operations and the Water Laboratory. Wrote and arranged placement of an advertisement in the *Upper Hutt Leader* and wrote a media release *See the what, how and why of water supply* to support the event.

5.3 Other Activities

- Planning has continued for The Water Group’s annual *Report of Business Activity*. A concept for the style development of the report has been presented by our design company and approved. A flat plan of images is being prepared. Text content headings have been circulated among Utility Services’ water managers and put in running order. Writing of detailed

content will commence shortly.

- The Utility Services and Environment Divisions are working together to ensure that Environment's *Learnwell* programme being developed for water conservation will address Utility Services' objectives for educational material, as well as Environment's.

5.5 Economics

- The new wholesale water database has now been running for approximately nine months. Minor teething problems have been fixed and an instruction manual compiled. An automated reporting process is being developed.
- A time dependent database package suitable for the storage of data from the telemetry system is currently being evaluated.
- New population projects are currently being analysed.

6. Projects Undertaken by Engineering Consultancy for the Strategy and Asset Group

- Te Marua Lakes to Treatment Plant Pipelines

This Contract is in the maintenance period.

- Kaitoke Weir Repair

The Contract for repairing the Kaitoke Weir is in maintenance.

Additional minor repair work is proposed during the low river flow period next summer.

- Kaitoke Concrete Pipeline

Repair works to the joints on the concrete pipeline between the Kaitoke Flume Bridge and the No. 2 Tunnel entrance are proposed. Budget prices are being obtained from applicators of suitable projects for repair of the pipeline.

- Branch Line to Plateau Reservoir

Upper Hutt City Council has requested a direct connection from the Kaitoke main to the Plateau Reservoir at Te Marua. The design and preparation of the Contract Documents are nearing completion.

- Silverstream Scour on Kaitoke Main

A drawing detailing a new connection and scour for the Kaitoke main at Silverstream has been prepared. Further work on this is on hold until August 2000.

➤ OK Main Slip Lining : Waiapu Road to The Rigi

The Contract for slip lining the OK main between The Rigi and Waiapu Road is in maintenance.

➤ OK Main Cement Mortar Lining : Thorndon to Karori

Use of a thin walled PE insertion pipe as an alternative to cement mortar lining has been investigated. This alternative is being incorporated into the Contract Documents for the relining of the OK main between Thorndon and Karori.

➤ OK Main Crossing of Korokoro Stream

The OK main between Randwick and Korokoro supplies water to the new Rahui Reservoir. The pipe crossing the Korokoro Stream is corroded and poorly supported. Design of the proposed replacement crossing is proceeding.

➤ Plimmerton/Pukerua Bay Branch Pipeline Shut-off Valve

The automatic shut-off valve is operational. This project is complete.

➤ Hutt Estuary Bridge Pipelines

Flexible couplings are to be installed on our pipelines on the Hutt Estuary Bridge to accommodate the design movement of the bridge in a seismic event. Delivery of the couplings is due late August 2000.

➤ Buick Street Pumping Station Decommissioning

The Buick Street Pumping Station has been demolished, all pipework disconnected and the site reinstated. This project is complete.

➤ Karori Reservoir Rationalisation

The road has been resealed. This project is complete.

➤ Haywards Reservoir Utilisation

The new inlet main to Haywards No. 2 Reservoir has been installed. Arrangements are being made to install a new outlet branch on the Kaitoke main.

➤ Water Meter Replacement Programme

The 1999/2000 flow meter replacement programme is complete.

➤ Te Marua Lakes Surveillance Manual

Final amendments are being made to the *Te Marua Lakes Surveillance Manual* before issue. A draft emergency action plan has been circulated and comments received.

➤ Gear Island and Waterloo Fluoride Dosing

An agreement has been reached in principle with Hutt City Council to jointly fund the modifications required to supply Petone with unfluoridated water. A design report is being prepared detailing the proposed modifications and the equipment to be used at both treatment plants.

➤ Cathodic Protection of Pipelines

A report is being prepared reviewing the status of the existing cathodic protection systems on the wholesale water pipelines.

Engineering Consultancy Group
June 2000

Engineering Consultancy Group Review of Operations for the Period Ended 30 June 2000

1. Work Carried Out for the Strategy and Asset Group

The main capital projects for which the Engineering Consultancy Group has responsibility are itemised in the Strategy and Asset Group report. Support is also provided for other projects being undertaken by this group.

2. Work carried Out for the Operations Group

The Engineering Consultancy Group has continued to provide support for smaller projects arising from the operation and maintenance of the wholesale water supply system.

3. Work carried Out for Wellington City Council

3.1 General

Current projects underway are detailed in the following sections.

3.2 Pipeline Projects

Work is complete for main laying in Rolleston Street, Salisbury Avenue, Salisbury Terrace and adjustment to the Bell Road Zone. This work has resolved a longstanding low pressure problem in this area. In addition, the abandoned Bidwill Street pressure maintaining tank has been demolished.

Contract Documents are being prepared for a replacement main to be laid in Taranaki Street from Courtenay Place to Webb Street. This will be difficult because of the extensive underground services, as well as the constraints arising from the route being on a State Highway. A proposal has been put to the road controlling authority to extend the allowable working hours.

3.3 Grenada North High Level Reservoir

This permanent reservoir, 160 m³ capacity, will replace the Grenada North temporary tanks. The site is at a higher level to the east of Nassau Avenue on land that has recently been transferred from TransPower to Wellington City Council. The intention of this reservoir and associated pipework is the second stage in the upgrade of the Grenada North water supply following the contamination incident in early 1998.

The consultants have prepared draft plans and Contract Documents. These are undergoing further review. The resource consent has now been issued.

3.4 Wadestown Reservoir

Montgomery Watson Ltd was engaged for the design of a replacement reservoir, capacity 1,800 m³, along with the obtaining of resource consents necessary for the completion of the reservoir on the Town Belt, as well as for access across the Town Belt.

The plans and Contract Documents are almost complete. These incorporate the pipework and electrical/controls sections prepared in this office. There are some hold-ups arising from the various internal Wellington City Council approvals required.

An assessment as made of the old rising main that will be used as an overflow. Its condition is worse than expected and will require some rehabilitation work.

3.5 Karori South Zone

This project will create the new larger zone and allow the decommissioning of the Allington Road Pumping Station and removal of the associated precast concrete tanks following the commissioning of the Karori South Reservoir. A new main will be laid to connect the two parts of the zone. A Contract was awarded and work is now complete. The Contract included the demolition of the redundant pumping station, control hut and temporary tanks. The zone changeover has been put in place.

3.6 Eastern Suburbs Storage

There is a storage deficit in the Low Level Zone of 10 ML. This was identified and reported on at the time of approval of the Macalister Park 20 ML Reservoir. Of this storage, approximately 7 ML is required in the Eastern Suburbs (Miramar) and 3 ML in the Southern Suburbs (Island Bay).

Because these reservoirs will balance on the Low Level Zone, a very careful analysis is required to establish the optimum reservoir levels. Additional pressure monitoring points have been established at the Moa Point Sewage Treatment Plant and Kilbirnie Crescent. Network modelling was undertaken to establish levels for the reservoir at different sites, as well as enhancement required to the pipe network.

A preliminary analysis of the three potential sites has been made, which has indicated that one site has significant advantages. A report has been prepared and submitted to Wellington City Council. A response is still awaited.

3.7 Work Related to the Facilities Management Contract

The maintenance of the Wellington City Council plan record system continues. The details of this service after 30 June 2000 will change because of the move away from paper records.

The exact new scope of work is still being resolved but we will have a continuing involvement.

Subdivisions are assessed for compliance with the *Code of Practice for Land Development* and approval given.

Project Information Memoranda (PIMs) and Land Information Memoranda (LIMs) are processed on a regular basis for the City Council.

4. Other Projects

4.1 Rallywood Bridge

The various agreements have now been entered into so the Contract was finally awarded to Works Infrastructure Ltd. Work on-site is programmed to commence on 3 July 2000. Preparatory meetings have been held. An amended resource consent was applied for to allow work to continue through the fish spawning season. This consent was granted with a specified methodology.

4.2 Wellington City Bus Priority Lanes

This project is to arrange the implementation of bus priority lanes in four areas. More information has now been obtained from Wellington City Council, which will allow the investigations to proceed.

4.3 Karori Wildlife Sanctuary

Investigations were completed to amend the overflow pipework from the Kelburn Reservoir that impacted on the security fence. Arrangements have been made to complete the work. An assessment was made of the requirements for replacing the Upper Dam main scour valve and a preliminary assessment was made of a system to monitor the Upper Dam water level.

Laboratory Services
June 2000

Laboratory Services Department Review of Operations for the Period Ended 30 June 2000

1. Items of Note

- The Porirua City Council water testing contract was renewed for another year.
- Peter Nugent, the new Laboratory Manager, started on 5 July 2000.
- The laboratory will participate in the Upper Hutt Science Fair during July.
- The laboratory is due for an IANZ inspection during August and final preparations are underway.

2. Financial

The operating surplus is below budget at this stage. Although operating expenditure is slightly under budget currently, the reduced level of internal revenue significantly outweighs any direct cost savings.

3. Business Summary

3.1 Quality

There were no requests for retesting samples and test reports are being sent out within the agreed time frames.

3.2 Health and Safety

There are no incidents to report.

Plantation Forestry

June 2000

Plantation Forestry Department Review of Operations for the Period Ended 30 June 2000

1. Log Harvest Contract

As Rayonier NZ Ltd does not have the same financial year end as Council, the full June figures were not available when this report was prepared and only three weeks' production has been included. Thus far a total 4,654 tonnes have been logged for a royalty of \$169,039. This takes the annual royalty to \$1.7 m very close to the budget of \$1.85 m.

The grade outputs for the June month (three weeks) were:

Grade		Tonnes	%
Pruned Domestic		0	0
Pruned Export		0	0
Partial Pruned		0	0
S Grade		1317.48	28.3
A Grade		463.92	10
L Grade		404.22	8.7
R Grade	(Renalls)	425.8	9.1
Rough	(Renalls)	79.03	1.7
K Sawlog		423.38	9.1
K Rough		309.35	6.6
Pulp		757.51	16.3
O/S Pulp		154.87	3.3
Other (Corsican)		318.59	6.8
		4,654.15	

Freight rates are forcing prices down, only for the weaker currency to return them to earlier levels so overall there has been little change.

Renalls are still in the throes of calibrating their new mill so there has been reduction in logs forwarded to them of late. It is anticipated that demand will increase as they get the mill running as designed.

Mitchpine is now working the corsican stand in Pakuratahi East and this month took out over 300 tonnes.

2. Silviculture Contracts

Two hundred and sixty-four hectares of a total 306 hectares of the current year's contract have been completed. Contracts have been awarded for the 2000/01 silviculture programme. Three contractors, one of which is new to Council work, have been awarded contracts for a total of 516 hectares of silvicultural work.

3. Plantation Forestry Operations

The cost of fertiliser application, which was quoted last month at \$70,000, has now reduced to \$46,000 following some further reduction in area and some aggressive quotation seeking. We are still seeking to reduce the sum further.

The Contract for forest health assessments, which in the past was carried out by the FRI, has been put out to tender at a reduced intensity by the Forest Owners Association. We have received an offer from Vigil (FRI) to continue the previous level of inspections. The new regime comes at a reduced cost but an assessment of the risk will need to be made before a final decision can be made.

4. Forest Access

Maungakotukutuku remains the only access problem. Kapiti Coast District Council has advised that following the accident that occurred outside of Invercargill it has installed a barrier on the road. As far as the District Council is concerned the road ends at that point and it will not reinstate the road between the washout and the forest entrance. We will assess the implications of this action.

The new road into Pakuratahi East continues to be satisfactory with no major problems. A prewinter "touch up" was carried out and spot maintenance continues as necessary. Given that over 40,000 tonnes has gone out over the road so far, it has held up well.

The Engineering Consultancy Group is designing a concrete culvert/ford to replace the open ford in the Wainui Stream at the entrance of Puketiro Forest. This will allow the crossing to be used for over 90 percent of the time.

Work has commenced on the Rallywood Bridge. The survey works required for the land exchanges is well underway and these should be close to completion by the end of July.

5. Market Trends

Exports markets are drifting a little, with the true effects being disguised by fuel and currency movements. Domestic prices have eased a little but remain ahead of this time last year. Demand for product appears to be remaining strong.