
Water Supply

(June)

Operations Group

(June)

Operations Group Review of Operations For the Period Ended 30 June 1999

1. Items of Note

The recent influenza outbreak during the last week of the month has had a severe impact on the performance of the Network Group.

In addition, the activities of subcontractors working for Saturn Communications have caused disruption to the normal maintenance activities of the Network Section.

Work has taken place in preparation for the proposed manual operation of the Te Marua Water Treatment Plant in early July.

2. Water Quality

A total of 530 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 2.5 and 5.4 m, and in the south lake between 3.8 and 4.7 m. These are considered satisfactory. Along with the change in water clarity (Secchi) there was a corresponding change in phytoplankton levels. The dominant phytoplankton were as follows:

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

When present in high concentrations *Oscillatoria* may cause filter clogging and *Staurastrum* may cause taste and odour in treated water.

Dissolved oxygen and pH readings are also satisfactory.

Twelve water samples were tested for *Giardia* and *Cryptosporidium*. The results were as follows:

Te Marua:	Treated water	nil detected
	Lakes	nil detected
	Intake	nil detected

Wainuiomata:	Treated Water	nil detected
	Intakes:	
	- Orongorongo River Intake	} nil detected
	- Big Huia Intake	} low level of <i>Giardia</i> and <i>Cryptosporidium</i> detected
	- Wainuiomata River Intake	} low levels of <i>Giardia</i> , no
	- Georges Creek Intakes -	} <i>Cryptosporidium</i> detected.

Over the May/June period 43 transgressions were notified:

7 low pH
10 low chlorine residual
17 low fluoride
3 high turbidity
6 high fluoride

In addition, three artesian samples were tested for the presence of macro-organisms - none were detected. This testing is necessary to prove security of the groundwater.

3. **Supply Situation**

The two monthly seasonal forecast for July and August 1999 issued by the Meteorological Service is as follows:

Situation as at 12 July

For Wellington:

Rain: Patchy after a dry June, and as likely to be above normal as below

Wind: About normal, but several northwest gales are likely in August

Temperature: Slightly above normal

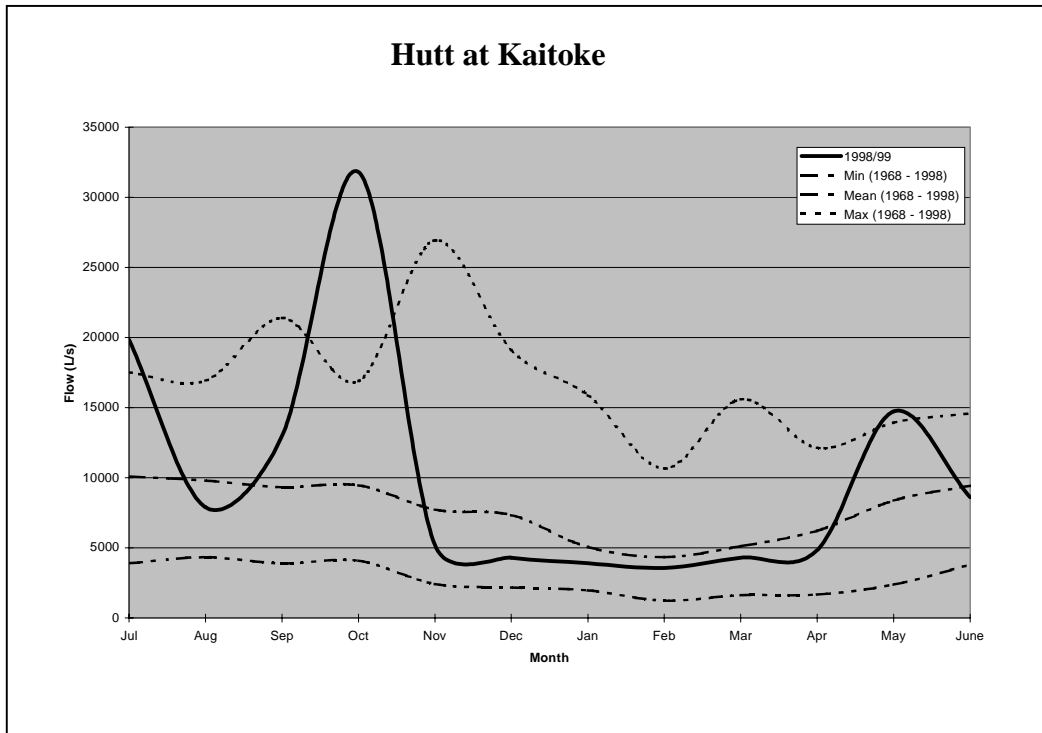
Sunshine: Average

Specials: Some hail showers in Wellington and Wairarapa in southerly outbreaks.

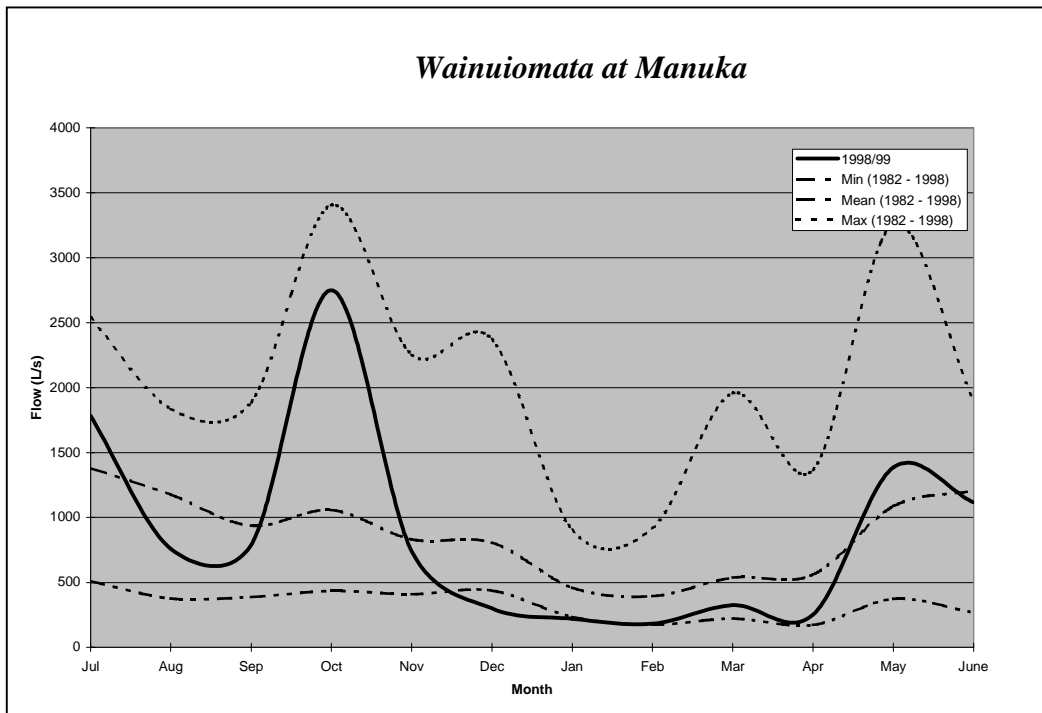
Confidence: Moderate to High

Low-pressure systems from the Tasman Sea are expected to bring patchy amounts of rain, some of which may include some brief thundery downpours. These rains will generally be preceded by a period of strong north or northwest winds, often gale force in August, and followed by a period of cloud showery southerlies. Take note of any low-pressure system redeveloping near the Chatham Islands, for this can result in a southerly outbreak lasting for three days or more. A slightly warmer than normal sea will help the showers in the southerlies to be heavier than normal, and may help produce some pea sized hail in the south and east.

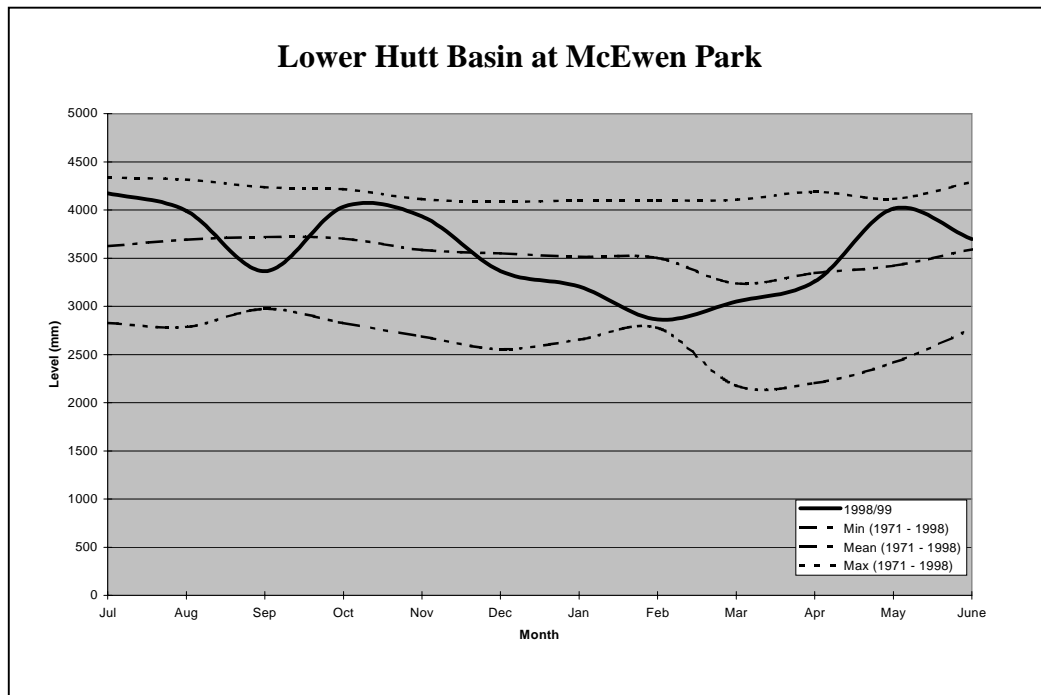
Hutt River Flows



Wainuiomata River Flows



Aquifer Levels



4. Production

4.1 Te Marua

4.1.1 Quality

15 June. Fluoride shutdown for nine hours due to power surge during storm.

4.1.2 Safety

No health and safety issues to report.

4.1.3 Operations

Plant operation was affected on two separate occasions in May due to power fluctuations caused by severe electrical storms. Some damage to equipment was sustained, however plant output was not significantly reduced.

Plant Tours

There were five plant tours for the period, these were:

27 May	'B' grade water treatment students	13
4 June	Titahi Bay school teachers	6
15 June	NZCE – CIT students	16
16 June	'C' grade water treatment students	15
22 June	Public visit	4

4.1.4 ***Projects***

Manual Operation

Modification to plant controls has been made to allow full manual operation of the plant in the event of any failure of the control system. This will be tested in July.

Treatment Pump 1 VSD

Installation is now complete. Commissioning is expected to be carried out in early July.

4.2 **Wainuiomata Water Treatment Plant**

4.2.1 ***Quality***

No quality issues to report.

4.2.2 ***Safety***

One lost time injury (1 day) to a Streat Electrical employee when a piece of steel fell on his foot. Safety boots were being worn, however the steel hit the foot above the toecap.

Upon investigation it was found that the steel was not correctly stored and the contractor was subsequently instructed to ensure that all construction materials be stored in a safe manner.

4.2.3 ***Operations***

During the 1080 drop in the catchment, the plant was taken out of service. This down time has been used to carry out maintenance work that would normally require a plant shutdown.

Standby backwash pump pipe work has been installed, the outlet grit chamber has been cleaned, the outlet weir chamber has been cleaned, the wash water recovery plant sludge thickener has been drained, cleaned and inspected, and modifications carried out to the lime slurry system.

The hydraulic test in the reaction tank commenced on 21 June 1999. The test was abandoned at 17 MLD due to mixer frames moving.

Plant Tours

No tours for May or June.

4.2.4 **Projects**

Safe access: The filter, lime silo and flocculator safe access has been completed.

Wainui Security Gate. Complete.

Video Surveillance. The installation of video cameras and floodlighting is complete.

Wainui WWR. Monitoring period complete and process engineers report received.

Standby Pump Installation. Complete

Fluoride Building Refurbishment. Complete.

Repair of George Creek Bridge. Complete.

Health and Safety

To date 14 large holes have been found in the Wainui catchment. The holes were up to 10 meters deep and half full of water. It would be impossible for a man to climb out of these holes. To date 156 man-hours and five digger hours have been spent to fill in the holes.

4.3 **Waterloo**

4.3.1 **Quality**

No quality issues to report.

4.3.2 **Safety**

No health and safety issues to report.

4.3.3 **Operations**

Production

The plant flows are being gradually stepped up as we develop the commissioning of the Wellington pumps. Wainuiomata being off line has also meant that one Wellington pump has been continually running for the majority of this month.

Lightning strikes took out half of the control system on 2 June. We were able to run that half of the plant manually and with no noticeable interruption to supply.

16th – 18th June: The A stream reservoir, sand trap, aerator cleaning and sand removal took place. The B-side should be done towards the end of July.

Plant Tours

15 June Water treatment students from CIT 16

4.4.1 **Projects**

Wellington Pump Upgrade

The commissioning of the Wellington pumps continues.

Power Monitoring

The new power monitors have now been installed.

4.4 **Gear Island**

At the present time there is minimal requirement to use this facility as system demands are being met by Te Marua, Wainuiomata and Waterloo. Future use of this installation will continue as a standby facility, however, the dosing of fluoride will be discontinued once current supplies have been exhausted.

5. **Distribution**

Electrical Section

The portable telemetered pressure monitoring unit continues to monitor the pressure in the water supply to Aro Valley while the contact tank at Karori is out of service. The pressure is being controlled by changing the inlet flow to Bell Road Reservoir, and the level of water in Bell Road Reservoir is being controlled by opening and closing the valve at Prince of Wales Park.

Pipeline Section

Te Marua to Karori Pipeline

- All scours on the Hutt main have now been housed/exercised and are operational.
- All line valves and associated pipework have been assembled for installation when Wainuiomata comes back on line (so we can shutdown the Te Marua to Karori line).

Electromagnetic Flow Meters

New electromagnetic flow meters and control valve have been installed for the Churton Park supply. All connectors have been made to the telemetry system.

6. **Health and Safety**

Total Injury/Illness/Incident Record:

Production:	Incident Free	Staff member on ACC with injury to back
Distribution:	Incident Free	Staff member resting at home after operation
Network	Incident Free	

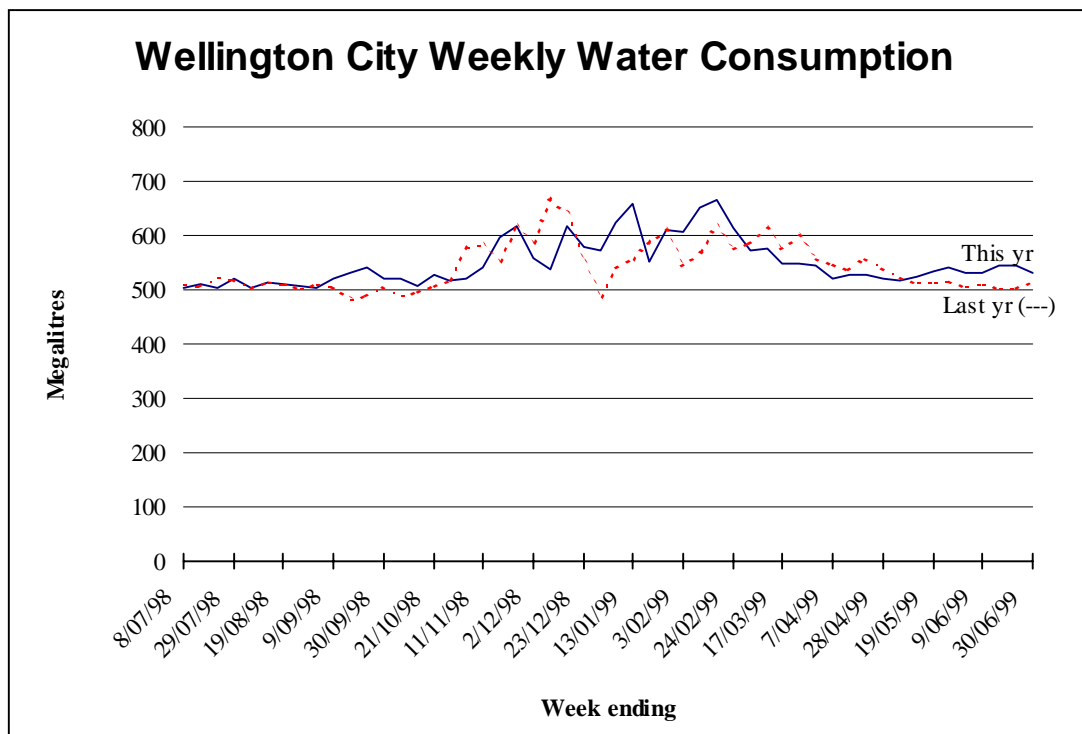
Wellington City Water Review of Operations For the Period Ended 30 June 1999

1. Items of Note

During the last week of the month we experienced difficulties with manning levels due to the current flu epidemic. Some 12 people were absent from work due to illness over the last week of the month. This has obviously had an effect on our performance levels.

In addition, we have again experienced an exorbitant level of damage repair jobs caused by subcontractors working for Saturn Communications.

2. Water Supply (PT 30.1)



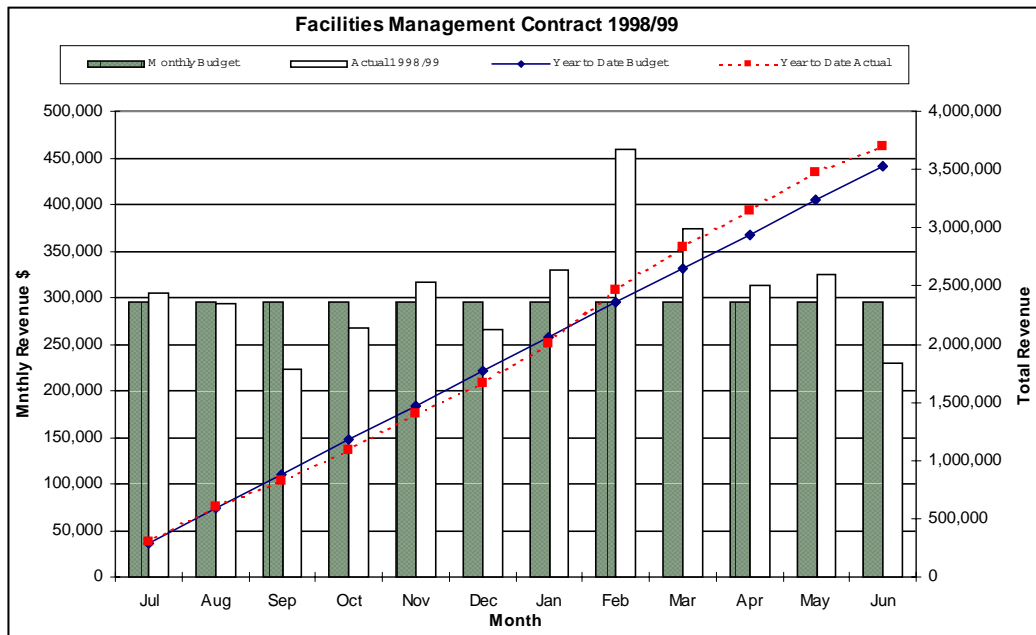
3. Financial

3.1 Facilities Management Contract

Contract Amounts : Wellington, including Tawa

Month	Actual \$	Budget \$	Variance %	Year to Date \$	Budget \$	Variance %
June	230,19	294,31	-21.79	3,702,07	3,531,	1.05

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4. Water Quality

Routine Testing (PT 1.1)

The water quality was monitored and the appropriate laboratory tests were completed for the month of 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.

Water Tests Initiated by Customers (PT 2)

	June	Year to Date	Compliance (%) Year to Date
(PT 2.2) Number received	5	97	-
(PT 2.2) Within ability of Wellington City Water to control	1	31	-
(PT 2.1) Formal response within five days	4	90	93%

5. Customer Services

5.1 Counter and Other Office Services (PT 3.1.) (PT 4.1) (PT 5.1)

Information has been provided to customers requesting information by letter, telephone and over the public counter. A total of 75 enquiries were received during June.

	June
Counter enquiries	65 (+ 10 encroachments)
Proposals from other utilities	9
(PT 33.1) Plan records: - New services recorded	16
Compliance with response time requirement	100%

5.2 Complaints Register (Monthly Summary) (PT 5.1)

A complaints register is being maintained. A breakdown of the complaints received during the reporting period is as follows:

	June	
	Complaints	
(PT 2.2) Water quality	6	
(PT 16.1.2) Pressure	19	
(PT 20.1) Reinstatement	3	
(PT 16.1.4) No-water	33	
Contractors	0	
Other	10	

All of the 19 “Pressure” complaints were responded to and completed within the performance criteria. Twenty eight of the 33 “No-Water” calls regarding “supply” were attended to within 30 minutes as required by the FMC.

6. Response Maintenance

6.1 Compliance

	June		
	Number of Calls	Completed to Standard	Compliance %
(PT 9.1) Stopcocks	364	269	74
(PT 9.1) Hydrants	90	62	68
(PT 9.1a) Valves	22	21	95
(PT 9.2) Other Leaks	262	204	77
(PT 10.1) Mark Outs	86	86	100
(PT 16.1.1) Burst mains	7	7	100
(PT 2.1) Water Quality Complaints	6	6	100
Total	837	655	78

Additional Work Carried Out:

New Services	16
Water Meters	18
Damages by Contractors	105

Variations/Ongoing leaks or repairs

Cnr Collins Ave, Coates St & Collins Ave	Uncovered three valves
Surrey Street Bridge, Tawa	Repair private leak
Cnr Surrey St & Oxford Street	Raise valve
Cnr Collins St & Handyside Street	Install spindle on valve
2 Newlands Road	Install spindle on valve
Fox Street	(Repair burst main, capped main, remove spoil, laid temporary feeds)

The performance targets this month have been difficult to achieve. This is mainly a result of 45 percent of staff absent/sick for the full week beginning 21 June 1999. As shown above, the high number of broken services by contractors continues and is beginning to have an impact on our performance figures. The performance figures for fire hydrants is at the present unachievable. This is a result of the extra time required for the delivery of shutdown notices.

6.2 Burst Mains (PT 16.1)

There were a total of 7 burst mains during the month of June 1999. They were as follows:

Kellesmere Crescent, Island Bay	7 June 1999
Fox Street, Ngaio	7 June 1999
Iwi Street, Ngaio	10 June 1999
Cnr Thorndon Quay & Murphy Street	9 June 1999
36 Bell Street, Tawa	16 June 1999
Cnr Dixon Street & Percival Street	14 June 1999
41 Rajkot Terrace	26 June 1999

All of the burst mains were attended to within 30 minutes and repaired within eight hours.

6.3 Supply (PT 16.1)

	June
Total calls received regarding loss of or temporary loss of supply due to broken mains or supply failure	33
Total calls attended within 30 minutes	28
Total Compliance	85%

6.4 Reinstatement (PT 20.1)

There were three complaints received during the month of June regarding trench reinstatements. The FMC target is less than 12.

6.5 Shutdown Notification (PT 6.1)

There were 18 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 month comprised:

	June
Locate stopcocks	80
Leak location	86
Flow tests	0
Seepage/Investigations	1
Miscellaneous supply jobs	12

7. **Meters (PT 13.1)**

A total of 1,388 City and High Use meters were read and entered into the system by 23 June 1999.

8. **Pumping Stations, Reservoirs and System Control**

8.1 **General**

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

8.2 **Control System (PT 30.1)**

The Control system continues to operate satisfactorily.

8.3 **Pressure Monitor**

The portable telemetered pressure monitoring unit continues to monitor the pressure in the water supply to Aro Valley while the contact tank at Karori is out of service. The pressure is being controlled by changing the inlet flow to Bell Road Reservoir, and the level of water in Bell Road Reservoir is being controlled by opening and closing the valve at Prince of Wales Park.

8.4 **Sar Street Pumping Station**

The pump has been replaced by a new larger unit.

8.5 **Grenada North Supply**

The Grenada North Pumping Station has been recommissioned.

8.6 **Maintenance Checks (PT 17.4)**

Maintenance has been carried out as follows:

June	
Round E	Round F
Johnsonville Pump Station	Randwick Pump Station
Ngauranga Reservoir/Pump Station	Tunnel Grove Chamber

Kaiwharawhara Pump Station	Rocky Pt Chamber
Thorndon Pump Station	Korokoro Valve Chamber
Karori Reservoir/Pump Station	Wainui Pump Station
Macalister Park Reservoir	Moore's Valley Pump Station
Churton Park CV	Mabey Road Generator
Maldives Reg/Abb CV	Naenae Reservoir
Tawa	Gracefield Reservoir
Lindon	Rahui Reservoir
	Buick Street Pump Station

9. Development

9.1 Development Statistics

Subdivisions	June	Year to Date
Construction plans approved (lots/units)	0	118
Scheme plans approved	50	390
Subdivisions cleared (lots/units)	53	444

9.2 Development Projects

9.2.1 *Woodridge Reservoir*

Disconnections of old reservoir in progress. Land issues being arranged.

9.2.2 *Churton North Reservoir*

Financial repayment proposal submitted to WCC for approval. Underfloor pipes laid. Base prepared. Working towards first pour for floor.

9.2.3 *Major Subdivisions*

As built plans for two major subdivisions submitted and approved.

Jordan Street, Island Bay	30 lots, as built approval
Columbo Street	4 lot multi units, as built approval

9.2.5 *Fire Services Recently Priced (PT 12.1) Fire Services Recently Connected*

- 318 Oriental Parade

9.2.6 *Domestic Services Priced*

- 233-243 Thorndon Quay
- Chaffers Area
- 1, 5-7 Tyers Road

Domestic Services (PT 12.2.) Recently Connected

- 84 Jamaica Drive
- Biofilters – Southern Landfill Road
- 10 Cambridge Tce

- 64 Northland Road
- 310 Tinakori Road
- 16 Fox Street

9.3 **Building Development Appraisals**

	June	
	Commercial	Domestic
Building consents	12	53
PIMS applications	11	53
Compliance with response time requirement	100%	100%

9.4 **Land Information Memoranda**

	June
Applications processed	30
Compliance with response time requirement	100%

10. **Capital Works**

10.1 **Main Laying City**

10.1.1 *Contracts in Maintenance Period*

The following pipe laying contracts are in the maintenance period.

- Hall and Riddiford Streets
- The Terrace

The maintenance periods for the Courtenay Place and Marion Street contracts have expired. Arrangements are being made to rectify any minor maintenance issues and to release the maintenance retentions.

10.1.2 *Taranaki Street*

Investigations into replacement of the 150 mm cast iron main in Taranaki Street are on hold. Two short pieces of the main were cut out allowing a visual inspection of the inside of the pipe.

10.2 **Main Laying Suburbs**

10.2.1 *Contracts in Maintenance Period*

The following pipe laying contracts are in the maintenance period.

- Rakau Road, Hapua Street and Upoko Road
- Chelmsford Street
- Johnsonville Road
- Tirangi, McGregor, Kingsford Smith and George Bolt Streets

- Bracken Road
- Breaker Bay Road

The maintenance periods for the Broderick Road and Miles Crescent/Lyndfield Lane contracts have expired. Arrangements are being made to rectify any minor maintenance issues and to release the maintenance retentions.

10.2.2 *Owhiro Bay Parade*

The contract for replacing the pipeline along Owhiro Bay Parade was awarded to Pipeline Techniques. The contractor is proposing to start work on site in August 1999.

10.2.3 ***Helston Road, Newlands***

The contract for replacing the pipeline along Helston Road was awarded to Groundworks Ltd. The contractor is proposing to start work on site mid July 1999.

10.2.4 ***Rider Mains Replacement***

The contract for the replacement of rider mains was awarded to N Forsyth Ltd. The contractor is about to start work.

10.3 **High Level Distribution and Storage**

10.3.1 ***Karori South Reservoir***

Construction of the reservoir by Juno Civil Ltd is complete. Two minor leaks were identified during the water tightness test. These leaks are being repaired. The reservoir has been disinfected. Commissioning is programmed for 12 July 1999.

10.3.2 ***Makara Road Rising Main***

The contract for installing a rising main to the new Karori South Reservoir was awarded to N Forsyth Ltd. Work will start on site when the contractor receives delivery of the pipe.

10.3.3 ***Grenada North High Level Pumping Station and Reservoir***

The new pumps have been commissioned and are operating satisfactorily. Arrangements are being made for purchasing the land for the proposed reservoir.

10.3.4 ***Wadestown Reservoir***

Montgomery Watson are undertaking the design and are making arrangements to obtain resource consents for the proposed reservoir.

10.3.5 ***Onslow and Kelburn Reservoirs***

Preliminary investigations into the replacement of these reservoirs have been put on hold pending instruction from WCC.

10.4 **Low Level Zone Storage**

10.4.1 ***Eastern Suburbs Storage Enhancement***

Investigations into the potential sites and proposed level for this reservoir have been completed. A draft report presenting the results of this investigation has been prepared. This draft is being reviewed before issuing the final report.

11. **Health and Safety (PT 27.1)**

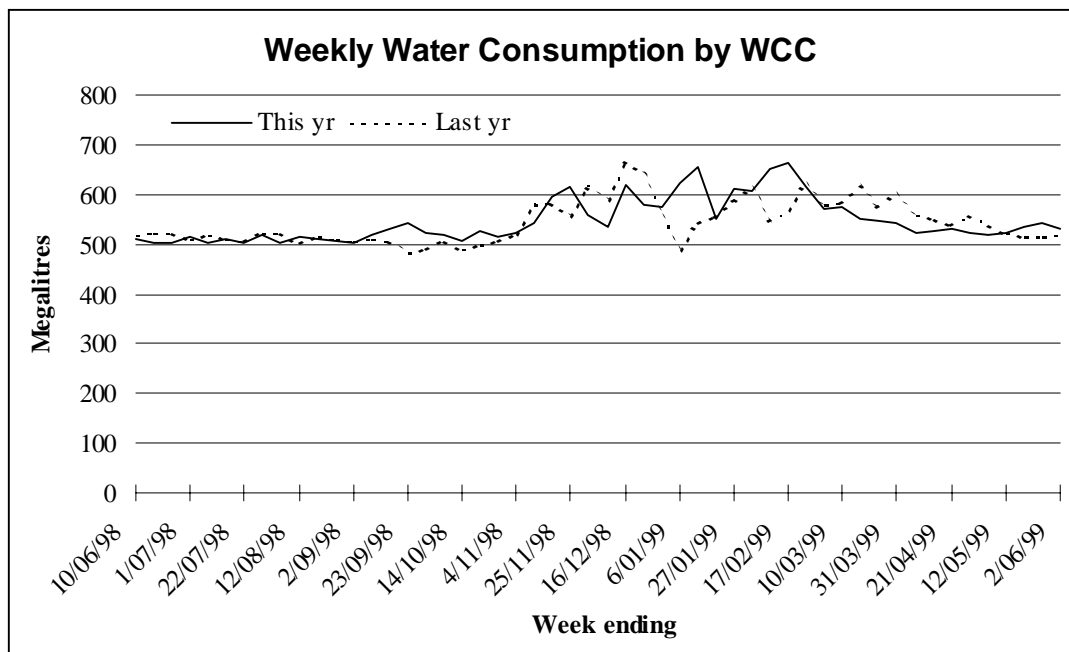
There were three minor incidents reported this month.

Review of Operations For the Period Ended 31 May 1999

1. Items of Note

During the month of May the operation of the Department has again been affected by the work being carried out by Contractors working for Saturn Communication. This work severely impaired the ability to respond to the routine maintenance requirements.

2. Water Supply (PT 30.1)

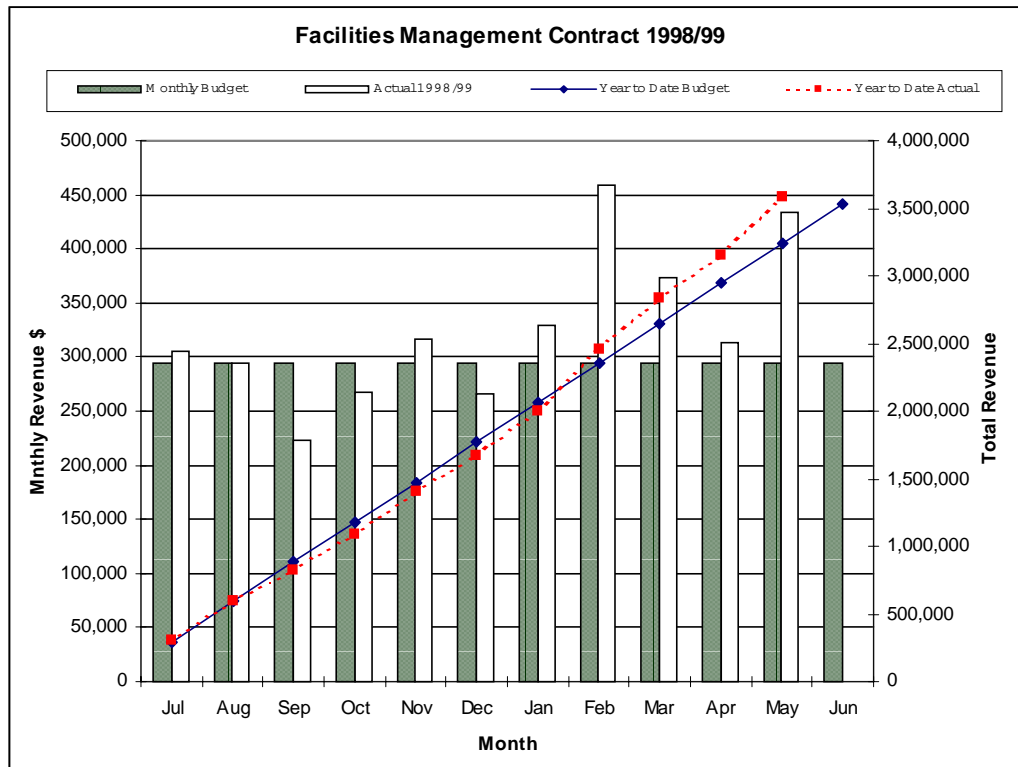


3. Financial

3.1 Facilities Management Contract

Contract Amounts : Wellington, including Tawa

Month	Actual \$	Budget \$	Variance %	Year to Date \$	Budget \$	Variance %
May	432,95	294,31	47.11	3,579,45	3,237,	10.56



4. Water Quality

Routine Testing (PT 1.1)

The water quality was monitored and the appropriate laboratory tests were completed for the month of May. There were 136 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.

Water Tests Initiated by Customers (PT 2)

	May	Year to Date	Compliance (%) Year to Date
(PT 2.2) Number received	8	92	-
(PT 2.2) Within ability of Wellington City Water to control	0	30	-
(PT 2.1) Formal response within five days	7	86	93

5. Customer Services

5.1 Counter and Other Office Services (PT 3.1.) (PT 4.1) (PT 5.1)

Information has been provided to customers requesting information by letter, telephone and over the public counter. A total of 74 enquiries were received during May.

	May
Counter enquiries	56 (+ 18 encroachments)
Proposals from other utilities	8
(PT 33.1) Plan records: - New services recorded	35
Compliance with response time requirement	100%

5.2 Complaints Register (Monthly Summary) (PT 5.1)

A complaints register is being maintained. A breakdown of the complaints received during the reporting period is as follows:

	May
	Complaints
(PT 2.2) Water quality	8
(PT 16.1.2) Pressure	15
(PT 20.1) Reinstatement	2
(PT 16.1.4) No-water	32
Contractors	0
Other	5

All of the 15 “pressure” complaints were responded to and completed within the performance criteria. All of the 32 No-Water calls regarding “supply” were attended to within 30 minutes as required by the FMC.

6. Response Maintenance

6.1 Compliance

	May		
	Number of Calls	Completed to Standard	Compliance %
(PT 9.1) Stopcocks	366	285	78
(PT 9.1) Hydrants	110	86	78
(PT 9.1a) Valves	10	8	80
(PT 9.2) Other Leaks	239	200	84
(PT 10.1) Mark Outs	140	140	100
(PT 16.1.1) Burst mains	2	2	100
(PT 2.1) Water Quality Complaints	8	8	100
Total	875	729	83%

Additional Work Carried Out:

New Services	13
Water Meters	7

Miscellaneous Leaks	30
Damages by Contractors	109

Variations/Ongoing leaks or repairs

Cnr Miramar North Rd & Park St	Replacement of valve
Coromandel St/Kotinga Crescent	Installation of 300meters of temporary feed
Cochrane Street	Dead-end main
21 Hania Street	Disconnection at main

The damage to the water services by Contractors has increased. We have now reached the record of 109 broken services in one month.. Along with this is the increase in the requests for 'Mark Outs'. The completed mark-outs of 140 is also a record figure.

6.2 **Burst Mains (PT 16.1)**

There were a total of two burst mains during the month of May. They were as follows:

94 Aro Street, Wellington	26 May 1999
Cnr Frederick St and Lincoln Ave	24 May 1999

Both of the burst mains were attended to within 30 minutes and repaired with eight hours.

6.3 **Supply (PT 16.1)**

	May
Total calls received regarding loss of or temporary loss of supply due to broken mains or supply failure	32
Total calls attended within 30 minutes	32
Total Compliance	100%

6.4 **Reinstatement (PT 20.1)**

There were two complaints received during the month of May regarding trench reinstatements. The FMC target is less than 12.

6.5 **Shutdown Notification (PT 6.1)**

There were 18 planned shutdowns during May. All identifiable customers received notification within 24 hours prior to the shutdown.

6.6 **Locates and Investigations (PT 10.1)**

Work completed during the month comprised:

	May
Locate stopcocks	81
Leak location	85
Flow tests	0
Seepage/Investigations	5
Miscellaneous supply jobs	22

7. **Meters (PT 13.1)**

A total of 1,388 Suburb and High Use meters were read and entered into the system by 23 May 1999.

8. **Pumping Stations, Reservoirs and System Control**

8.1 **General**

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

8.2 **Control System (PT 30.1)**

The Control system continues to operate satisfactorily.

8.6 **Pressure Monitor**

The portable telemetered pressure monitoring unit has been removed from Plumer Street and installed at the meter house in Raroa Road to monitor the pressure in the water supply to Aro Valley while the contact tank at Karori is out of service. The pressure is being controlled by changing the inlet flow to Bell Road Reservoir, and the level of water in Bell Road Reservoir is being controlled by opening and closing the valve at Prince of Wales Park.

8.7 **Overhauls**

The Greyfriars Pump Station No.1 pump set and the Beacon Hill Pump Station No.2 pump set have been overhauled and returned to service.

The controls for the Clayton valve at the inlet to Ngaio Reservoir have been replaced.

8.8 Grenada North Supply

A new telemetry unit has been commissioned to measure the level of water in Grenada North High Reservoir. The Grenada North Pumping Station is being readied for re-commissioning.

8.9 Maintenance Checks (PT 17.4)

Maintenance has been carried out as follows:

May	
Round A	Round B
Rajkot Terrace	Huntington Street
Nassau Avenue	Warwick Street
Mark Avenue	Hay Street
Chapman Street	Epuni Street
Burnside Road	Mapuia Street/Mt Crawford
Ruskin Road	Sar Street
Broderick Road	Alexander Road
Broadmeadows High Pump Station	Redwood
Satara Street	Greyfriars Road
Kitchener Terrace	Bell Road CV
Davies Road CV	Webb Street CV
Birch Street CV	Prince of Wales CV
Ohariu CV	Vasanta CV
Glover Street CV	
Ironside CV	

9. Development

9.1 Development Statistics

Subdivisions	May	Year to Date
Construction plans approved (lots/units)	0	118
Scheme plans approved	36	340
Subdivisions cleared (lots/units)	14	391

9.2 Development Projects

9.2.1 Woodridge Reservoir

Disconnections of old reservoir and land issues being arranged.

9.2.2 ***Churton North Reservoir***

WCC has approved foundations, structural, and supervision proposals. Financial repayment proposal submitted to WCC for approval. Construction contracts let to Juno Civil Ltd on 17 May 1999. Juno currently ordering materials.

9.2.3 ***Meadowcroft Grove***

Correspondence has been submitted to WCC for actioning.

9.2.4 ***Major Subdivisions***

As built plans for two major subdivisions submitted and approved.

Ridvan Gardens, Downing Street	6 Lots, as built approval
Churton Park, Amesbury Drive	16 Lots, as built approval

9.2.5 ***Fire Services Recently Priced (PT 12.1) Fire Services Recently Connected***

20-22 Egmont Street

9.2.6 ***Domestic Services Priced***

***Domestic Services (PT 12.2.)
Recently Connected***

- 84 Jamaica Drive
 - Lot 2 Centennial Highway
 - Biofilters – Southern Landfill Road
 - 9 Bunny Street
 - 64 Northland Road
 - 310 Tinakori Road
 - 456 Adelaide Road
- 9 Bunny Street
 - 48 Kemp Street
 - 458A Adelaide Road

9.3 **Building Development Appraisals**

	May	
	Commercial	Domestic
Building consents	8	55
PIMS applications	8	57
Compliance with response time requirement	100%	100%

9.4 **Land Information Memoranda**

	May
Applications processed	16
Compliance with response time requirement	100%

10. **Capital Works**

10.1 **Main Laying City**

10.1.1 *Contracts in Maintenance Period*

The following pipe laying contracts are in the maintenance period.

- Courtenay Place
- Marion Street
- Hall and Riddiford Streets
- The Terrace

10.1.2 *Taranaki Street*

Investigations started on replacement of the 150 mm cast iron main in Taranaki Street. This work is now on hold pending instruction from WCC.

10.2 **Main Laying Suburbs**

10.2.1 *Contracts in Maintenance Period*

The following pipe laying contracts are in the maintenance period.

- Rakau Road, Hapua Street and Upoko Road
- Broderick Road
- Miles Crescent/Lyndfield Lane
- Chelmsford Street
- Johnsonville Road
- Tirangi, McGregor, Kingsford Smith and George Bolt Streets

10.2.2 *Bracken Road*

The contractor has completed all connections and reinstated the road. The Certificate of Practical Completion is about to be issued. The contract is now in the maintenance period.

10.2.3 *Breaker Bay Road*

The contractor has completed all connections and reinstated the road. The Certificate of Practical Completion is about to be issued. The contract is now in the maintenance period.

10.2.4 *Owhiro Bay Parade*

A report evaluating the tenders received has been submitted to WCC. Awarding the contract has been delayed due to inadequacies in the submitted Health and Safety Plans. The tenderers have been requested to provide further information on their Health and Safety procedures.

10.2.5 ***Helston Road, Newlands***

A report evaluating the tenders received has been submitted to WCC. Awarding the contract has been delayed due to inadequacies in the submitted Health and Safety Plans. The tenderers have been requested to provide further information on their Health and Safety procedures.

10.2.6 ***Rider Mains Replacement***

Tenders have been received for replacement of six rider mains that have reached the end of their economic life. A report evaluating the tenders received has been submitted to WCC. Awarding the contract has been delayed due to inadequacies in the submitted Health and Safety Plans. The tenderers have been requested to provide further information on their Health and Safety procedures.

10.3 **High Level Distribution and Storage**

10.3.1 ***Karori South Reservoir***

Construction of the reservoir by Juno Civil Ltd is complete. Filling the reservoir for the water tightness test is due to begin on 4 June 1999.

10.3.2 ***Makara Road Rising Main***

Tenders have been received for installation of a dedicated rising main to the new Karori South Reservoir. A report evaluating the tenders received has been submitted to WCC. Awarding the contract has been delayed due to inadequacies in the submitted Health and Safety Plans. The tenderers have been requested to provide further information on their Health and Safety procedures.

10.3.3 ***Lyndhurst Road Pumping Station***

The contract is out of the maintenance period and the maintenance retentions are about to be released.

10.3.4 ***Grenada North High Level Pumping Station and Reservoir***

The pumping station installation work is practically complete. Arrangements are being made for commissioning of the new pumps. Arrangements are being made for purchasing the land for the proposed reservoir.

10.3.5 ***Wadestown Reservoir***

Montgomery Watson are undertaking the design and are making arrangements to obtain resource consents for the proposed reservoir.

10.3.6 ***Onslow and Kelburn Reservoirs***

Preliminary investigations into the replacement of these reservoirs have been put on hold pending instruction from WCC.

10.4 **Low Level Zone Storage**

10.4.1 ***Eastern Suburbs Storage Enhancement***

Investigations into the potential sites and proposed level for this reservoir are continuing. Network modelling and pressure monitoring is proceeding. A report presenting the results of these investigations is being drafted.

11. **Health and Safety (PT 27.1)**

There was one minor incident reported this month.

Strategy and Asset Group
(May/June)

Strategy and Asset Group Review of Operations For the Period Ended 30 April 1999

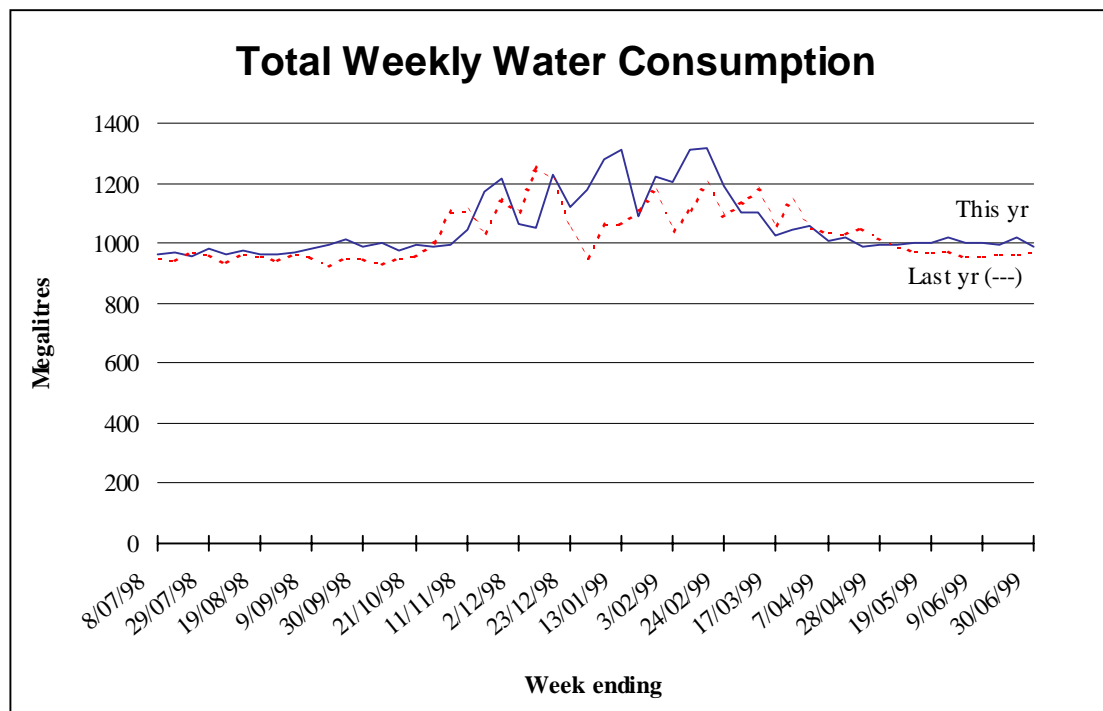
1. Items of Note

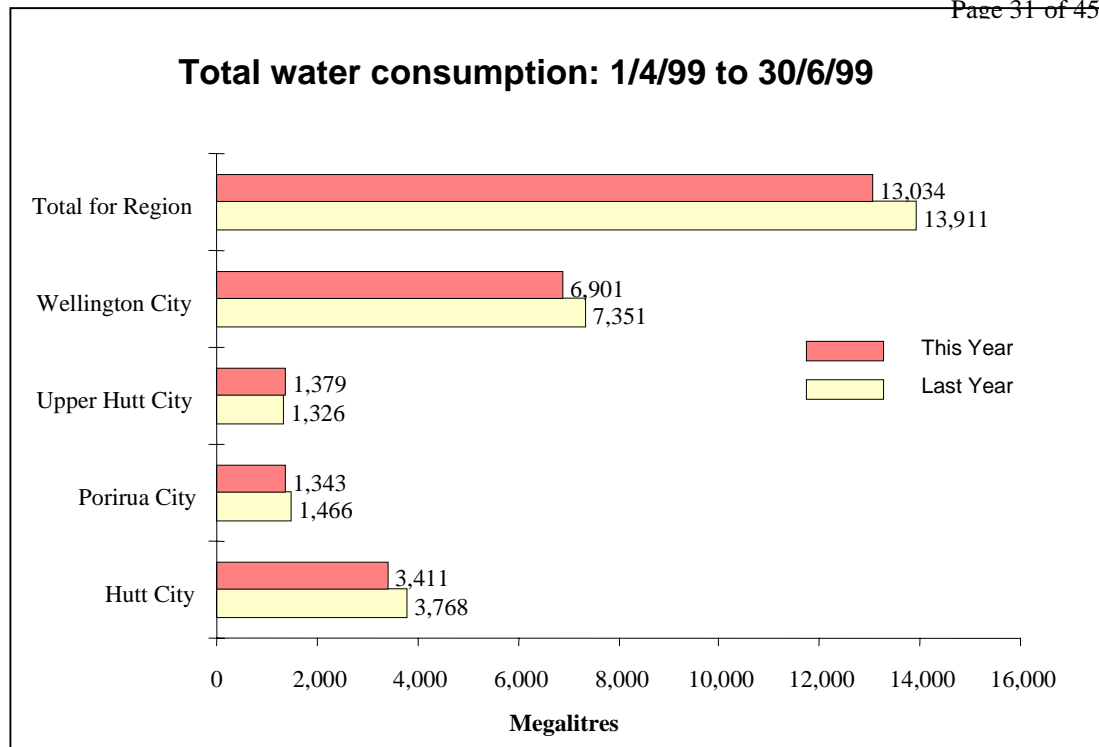
The Chairperson of the Utility Services Committee has issued invitations to our four city customers, for a wholesale water pricing workshop at the end of July.

The 1080 drop in the Orongorongo and Wainuiomata catchments was undertaken as two operations because of weather constraints. It is expected the Wainuiomata catchment will be available for supplying raw water to the treatment plant in mid July. The Orongorongo catchment will probably follow about two weeks later. A detailed report on the operation will be sent to the next Utility Services and Landcare Committee meetings.

The Committee was previously advised that it was intended to dispose of one, or possibly two of the three houses situated near the Wainuiomata water treatment plant. A sale for removal process has not proceeded, as Landcare are able to utilise two of the houses for their rangers (at market rents). The third house is currently leased to one of the contractors employed from time to time to assist with catchment work.

2. Sales Volume





3. Asset Management

- A complete review of Production assets is almost finished and work has begun loading this more detailed information into the Hansen database. A report that extracts data about water mains has been compiled, and MITS (Melbourne) have been commissioned to build a report that will list all Water Treatment Plant assets. Some conflicts over the level of materiality of treatment plant assets have been resolved by using different fields for report selection.
- Work on all capital works projects is proceeding. Total expenditure of about \$5 M for 1998/99 is forecast against a budget of \$5.945 M. Minor delays have been experienced with the new switchboard for Gear Island.
- The 1080 drop in the Orongorongo and Wainuiomata Catchments has been completed, and the plant is shutdown pending a clearance from the public health authorities.
- A consultant is preparing a Resource Consent Application for a new well tapping the Moera Aquifer. Consultation with IBM whose fire fighting well could be significantly affected by a new well, is proceeding. Consultation with the Shandon Golf Club is complete, and the Club is satisfied with our proposal.
- Good progress is being made on the preparation of Resource Consent Renewal Applications for surface water take consents at Kaitoke, Wainuiomata and Orongorongo. Draft Applications and Environmental Assessments have been prepared, and will be forwarded to a range of groups and individuals to be consulted early in July.
- A consultant has been commissioned to build a control optimisation system for the Wainuiomata/Waterloo supply.

The objective of the optimisation system is to manage source and pump use to minimise the cost of the production and distribution of water. Preliminary estimates indicate that an annual power cost saving of around 10 percent (\$90,000 for the Wainuiomata/Waterloo system) could be achieved. These savings give a pay back period for the project investment of less than four years, and an internal rate of return of approximately 30 percent. It is expected that the system will be operational this summer.

- A seismic review of the wholesale water system, carried out by Kingston Morrison in July 1993, identified the vulnerability to a major earthquake of each element of the water supply system. Further, more detailed seismic review work and risk assessment is progressively being carried out for the various elements.

A report on the seismic risk to the Black Creek pipe crossing in Wainuiomata, Gear Island reservoir, buildings and structures, and the Korokoro stream pipe crossings by consultants is nearly complete. The report suggests that the pipes crossing streams could be severely damaged by liquefaction.

Seismic assessment of the Haywards reservoir, the stream pipe crossing at the bottom of Haywards Hill and the Randwick pump station is underway by consultants. Investigation boreholes at the Haywards reservoir site to assess the land slide potential have been completed.

A risk assessment of the potential for damage from landslides to the Orongorongo pipelines, and the Kaitoke pipeline adjacent to the intersection of SH2 and SH 52, is close to completion.

- A tender has been let to Cummins – Onan for supply of a new standby generator for the Te Marua pump station.

4. **Quality Assurance**

- The Quality Assurance Officer is attending monthly plant meetings in order to improve response to transgressions and internal audit requests.
- Trials of the Wainuiomata Wastewater Treatment Plant following modifications have been completed, and show improved performance. A strategy for dealing with Supernatant in the future will be developed.
- 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 are set out below. The percentage of the time turbidity is less than 0.1 NTU has also been calculated.

Plant	Turbidity < 0.5 NTU	Turbidity < 0.1 NTU
Te Marua	99.99%	99.99%
Wainuiomata	97.33%	43.01%

Software to analyse the data to check compliance with the rule requiring less than a 0.2 NTU rise in turbidity within ten minutes is being developed. These two rules are intended to reduce the potential risk of *Giardia* and *Cryptosporidium* getting through the plant undetected.

- Work is continuing on the proposed Environmental Management System under ISO 14001. Draft procedures have been prepared for document control, communications, training and assessment of aspects and impacts. At the July meeting of the Environmental Management Team, work to date will be brought together to formulate objectives and targets for the EMS.

5. Marketing

Market Research

- Analysis of results from the 1998/99 Summer Water Conservation Campaign was completed and a presentation made to Strategy and Asset staff. Main findings suggest that recall of the campaign was good, but persuading consumers to change their behaviour will continue to be difficult due to lack of tangible reasons for change. Presentations currently being made to customers.
- A brief has been written and sent to two market research companies for a project to identify what Wellington City water users who have had contact with the Operations Network Section think of the service they received.

1998-99 Business Report

- Planning continues for the 1998/99 Report of Business Activity. Water Group managers have identified the major business activities in their areas for the year.

Customer Contact

- A customer meeting took place on 9 June at the Regional Council Centre. Main topics for discussion were the current state of Y2K readiness for the wholesale water supply and an optimisation model that requires data from customer's storage reservoirs. Customers indicated willingness to co-operate with this project. A re-drafted version of the customer contract was also presented to customers for discussion at the next meeting.

Public Relations

- Press release 'Better bug detection for water supply' written. Due for release 5 July.

Education

- Brochure 'Petone's Water Supply' written. Design, printing and distribution arranged. A press release was also prepared to coincide with distribution of the brochure.
- Continuing discussions with Negawatt Resources regarding development of a primary schools water resource pack to tie in with the curriculum for both Science and Social Studies.
- Video presentation and talk to the Wellington Aquarium and Water Garden Society about water quality and water supply issues (in conjunction with Nick Hewitt, WRC Water Quality Officer).
- Two requests for information/resource material supplied.

6. Economics

Wholesale Water Database

Theta systems from Auckland are continuing with the development of the meter reading database. Development of the application was expected by late June, but it is now two weeks behind schedule. The delay though will not increase the cost of the project.

Development of a database for other quality of supply information is on hold pending the employment of a replacement economist.

Electricity Contracts

Tenders for the supply of energy for a three year period close on 20 July. This is for 16 Water Group sites and the Regional Council Centre. Usage at other sites is too small to justify the additional expense of time of use metering. Because the tender sum will exceed \$1 M a report and recommendation will be submitted to the Policy and Finance Committee in due course. The new electricity contract will start on 1 October. Before then some meters may need to be changed.

Discussions have been taking place with UnitedNetworks about a contract for electricity network services for the same 17 sites. This is as an alternative to purchasing this service through the energy supplier. Since the issues which concern us are likely to be related to the physical supply, a separate contract is quite logical. UnitedNetworks have now indicated that they will only offer network services through electricity retailers. It seems this is a decision imposed by the Auckland Head Office of the company. The implications for us and our options are being reviewed.

A sustained electricity outage in parts of Central Otago in early July highlighted the benefits of having a close relationship with a network company. Electricity users in Central Otago had to telephone a call centre in Tauranga to receive information. Media reports indicate the quality of the information was, at times, unsatisfactory.

7. **Projects undertaken by Engineering Consultancy for the Strategy and Asset Group**

Te Marua Site Rehabilitation

The planting contractor (GMS) has replaced the plants that died during the maintenance period. The maintenance period has ended and the maintenance certificate issued. This project is complete.

Te Marua Site Development

The contract for sealing the lower access road is in the maintenance period.

The contractor (Tim Green) has planted the area around the lagoons and entrance to the treatment plant. This landscaping contract has a two year maintenance period.

Te Marua Lakes to Treatment Plant Pipeline

The report recommending rehabilitation of the re-laid bitumen lined pipes was completed and distributed.

Kaitoke Intake Controls

The electrical and control equipment installation contract is in the maintenance period.

Wainuiomata Reaction Tank

The contract achieved “Practical Completion” on 28 May 1999 and was handed to the Production Group for process commissioning. The consulting engineers, Kingston Morrison Ltd, are investigating a phenomenon of surging within the mixer boxes.

Orongorongo Intake to Tunnel Pipeline

The contract for replacing the pipeline in the Orongorongo Valley is in the maintenance period. The contractor is attending to some minor items to complete the contract works.

Waterloo Capacity Increase

The three new Wellington pumps have been operating satisfactorily. There is still some minor control programming to be completed.

Orongorongo Pipeline along Petone Esplanade

All ball hydrants were removed from the pipeline. The pipeline was successfully pressure tested and superchlorinated. It has been put into service running parallel with the 1050 mm Wainuiomata pipeline along the Petone foreshore.

Revenue Meter Project

The contracts for the installation of Group 1 and Group 2 flow meters are in the maintenance period.

The flow meters for Group 3 have been ordered. The tender documents for installation of these meters are being prepared.

The Distribution Group has installed a new flow meter at Churton Park.

Rahui Reservoir Rising Main

Installation of the inlet control valve and flow meter has been arranged. The contract for installation of level monitoring, control and telemetry equipment was awarded to Streat Electrical. The installation of the pipework and electrical equipment has been delayed due to delays in construction of the reservoir.

Sar Street Pumping Station

The new pump has been installed by the Operations Group and is operating satisfactorily. This pump is of a larger capacity than the previous pump so it will operate for a reduced number of hours each day.

Wainuiomata Pipeline Valve Chambers

New access platforms have been installed in the Wainuiomata pipeline valve chambers.

Plimmerton/Pukerua Bay Branch Pipeline Shut Off Valve

Contract documents for the installation of an automatic closing valve on this pipeline have been prepared. The 400 mm Clayton valve to be used in this installation has been refurbished.

Hutt Estuary Bridge Pipelines

A report is being prepared proposing fitting flexible couplings on the pipelines across Hutt Estuary Bridge. The couplings are to allow for movement of the bridge in an earthquake. It is being proposed that the design of the couplings is not finalised until the bridge strengthening design work is completed by Hutt City.

Wainuiomata River Bridge

The contract for removal of the old deck and strengthening of the abutments and central pier was awarded. The contractor is about to start on site.

Karori Reservoir Rationalisation

Following the decommissioning of the open water storage at Karori, significant alterations in pipework connections are required to rationalise the whole layout.

The pipework alterations around the Aro Street Reservoir (previously the Karori Contact Tank) are nearing completion. The reservoir has been out of service while this work has been undertaken.

Engineering Consultancy Group
(May/June)

Engineering Consultancy Group Review of Operations For the Period Ended 30 June 1999

1. Work Carried Out for the Strategy and Asset Group

The main capital projects are itemised in the Strategy and Asset Group report.

A project is underway to transfer the plans index onto a different database. This database will be accessible over the network and will have the additional facility for viewing and printing copies of the plans. The system will then be extended to include the plans that were not produced on the computer. It is expected that staff at the treatment plants will find this very useful in allowing them to instantly view the plan records.

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

The WCC has indicated that the completion date for 1998/99 Capex jobs has been extended to the end of August. The construction period available for some contracts has consequently been adjusted. However, because of the sudden increase of work available, contractor resources and material supplies have become the controlling factor.

Current projects underway are as follows:

3.2 Pipeline Projects

Contracts have been awarded for replacement mains in Ohiro Bay Parade, Helston Road and for various rider mains as well as the inlet main to be laid in Makara road to the new Karori South Reservoir.

3.3 Wadestown Reservoir

Montgomery Watson have been engaged for the design of a replacement reservoir, capacity 1,800 cubic metres, along with the obtaining of resource consents necessary for work on the Town Belt. The design report is almost complete.

The construction of the extension of Weld Street to provide a legal access to private properties was held up for a period of time until the necessary consents

were obtained, and then significant construction difficulties. The access impacts on the two mains to the existing reservoir, and deviations have been installed.

3.4 **Karori South Reservoir**

The construction of this 800 cubic metre reservoir is complete, apart from final filling and commissioning. Landscape work will then be put in hand.

This reservoir replaces the temporary precast concrete tanks at the site and also at Allington Road, which will be removed shortly. Various interconnections are also required to create the new larger zone.

3.5 **Grenada North High Level Zone**

The pumping station has been commissioned and the temporary pipework that was installed following the contamination incident in early 1998 has been removed. The whole project also includes the construction of a permanent reservoir at a higher level, and associated pipelines. This is programmed for the 1999/00 year, depending on finance.

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 has been undertaken to establish levels for the reservoir at different sites, as well as enhancement required to the pipe network.

3.7 **Work Related to the Facilities Management Contract**

Maintenance of the plan record system so that these are up-to-date, incorporating any alterations, has continued. Continuing assistance has been given to the City Council in the transfer of plan records into the City Council system. Subdivisions are assessed for compliance with the Code of Practice and approval given.

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

3.8 **Asset Valuation**

A valuation of the water supply assets of the WCC was carried out, by updating earlier assessments, and including new facilities.

Laboratory Services

(May/June)

Laboratory Services Department Review of Operations For the Period Ended 30 June 1999

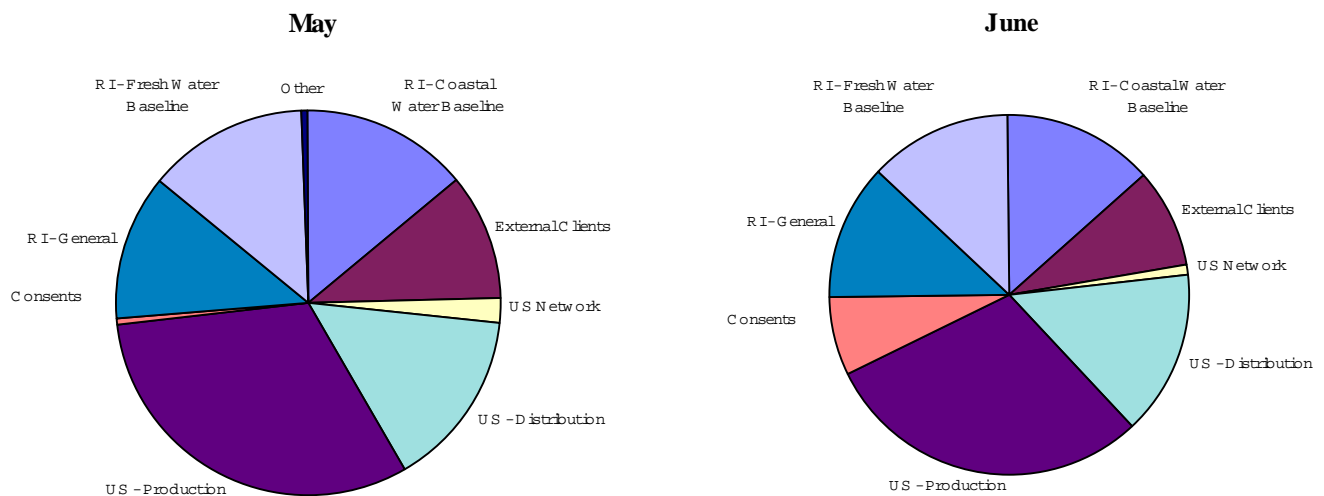
1. Items of Note

- Additional samples received as a result of the 1080 operation in the Wainuiomata catchment.
- The assessment of laboratory information systems software is still ongoing.

2. Financial

Financial position for the year to date shows the Laboratory has exceeded the budgeted surplus. The chart below shows the sources of revenue received by the Laboratory in May and June.

Note: RI - Resource Investigations (Environment Division)
Consents - Consents Management (Environment Division)
US - Utility Services Division



3. Business Summary

Measure

3.1 Quality

There was no client request for re-testing samples.

- International New Zealand Accreditation is being maintained. The next routine assessment is scheduled for August.
- Test reports are being sent out within agreed time frames.

3.2 **Health and Safety**

No incidents reported.

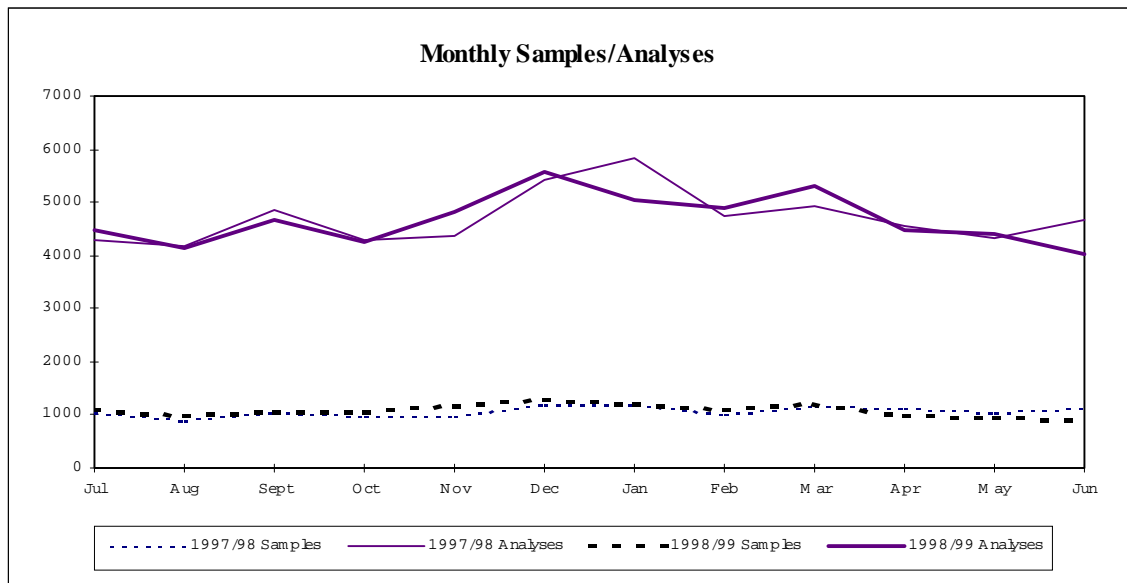
3.3 **Number of Samples analysed**

May

- 941 samples
- 4,403 tests

June

- 887 samples
- 4,031 tests



Plantation Forestry

(June)

Plantation Forestry Department Review of Operations For the Periods Ended 31 May and 30 June 1999

1. Log Harvest Contract

May was the best month yet with 7,284 tonnes harvested for a royalty of \$181,958. This result reflects the higher quality of wood from Whakatikei and the easier terrain within the block.

Pakuratahi produced 1,200t for a royalty of \$3,323 at an average of \$2.76/t.

Whakatikei old crop and road lining produced 1,768t for a royalty of \$38,216.96 at an average of \$21.61/t

Whakatikei pruned crop produced 4,316t for a royalty of \$140,418 at an average of \$32.53/t

The only harvesting for June was at Whakatikei which produced 4,596t for a royalty of \$118,724. The residual returns from the Corsican logging at Maymorn produced \$1,152 from 144t.

Output by grade was:

MAY	Tonnes	%
Pruned Domestic	457	6.3
S Grade	654	8.9
A Grade	129	1.8
L Grade	775	10.6
R Grade	1005	13.8
Pulp Domestic	2549	35.0
Pruned Export	597	8.2
Sawlog Export	138	1.9
Rough Export	567	7.8
Pulp Export	128	1.8
Corsican	283	3.9
Firewood		

Total **7,284**

JUNE

Pruned Domestic	545	11.5
Pruned Export	141	3.0
Pruned Shorts	28	0.6
S Grade	328	6.9
A Grade	359	7.6
L Grade	527	11.1
R Grade	400	7.2

Pulp Domestic	1166	24.6
Pulp Export	125	2.6
Sawlog export	188	4.0
Rough Export	851	18.0
Corsican	144	3.0
Total	4,740.71	

Logging has now ceased in Pakuratahi for the winter. The logging crews were losing too much time when the river crossing washed out and were having difficulty securing the hauler in the sodden ground. Harvesting will recommence in spring after the end of the spawning season. In the interim the spillway on the river crossing has been left permanently open.

We have been fortunate to gain access to the NDG mill in Wanganui. This mill purchases the logs "on truck in forest" and offers a very competitive price. They also accept a large branch "L" grade log which is prevalent in Whakatikei and will purchase short pruned logs.

The Douglas Fir shipment finally sailed early July with a total of 2,475 tonnes being dispatched.

The grade distribution was:

Grade	Actual		Estimated	
	t	%	T	%
FL12	233	9.4	500	20
FL8	292	11.8	625	25
FL4	302	12.2	275	11
F 12	143	5.8	275	11
F 8	198	8	350	14
F 4	128	5.2	175	4
CL 12	5	0.2	0	0
CL 8	487	19.7	150	6
CL 4	687	27.7	150	6

The grades are shown in descending value and can be compared with the estimated output at the time the original bids were received. The income will also be affected by the strengthening of the \$NZ.

2. Silviculture Contracts

Five hundred and twenty eight (528) hectares of a programmed 556 have been completed by 31 May and a further 20 hectares by 30 June.

Satisfactory tenders were received for the 1999/2000 silviculture programme. The award of tenders will be made after confirmation of 1999/2000 budgets.

Planting of the area harvested over the past twelve months has commenced. The areas are being predominately planted in Radiata except for areas immediately above the

Rimutaka Incline walkway, and the hill above McGhie's bridge which are planted in Douglas Fir.

3. **Plantation Forestry Operations**

Following the cessation of logging in Pakuratahi the opportunity has been taken to burn a number of the bird nests (piles of slash) left at the various hauler sites. Unless these are removed they have the potential to silt up and eventually slip.

Due to the mild winter last year a number of blocks were diagnosed as having been struck with *Cyclaneusma minus*. There is no treatment for this condition that results in some needle loss and can reduce growth rates. Within about three weeks all infected needles had fallen and now show no symptoms at all. Further incidence of this disease can be expected next spring.

An insurance refund has been received for the costs associated with the fire at Mangaroa last February.

4. **Forest Access**

Access has been maintained to all blocks.

Some maintenance has been arranged for Kaitoke where the track is also used by bulk water staff for access to holding tanks.

Work on the new Pakuratahi East Road commenced late June. As a suitable site has been located to dispose of the fill from the road construction within the forest, work commenced from the inland end. This will minimise the effects on State Highway 2 traffic and result in a reduction in cost.

5. **Market Trends**

The market remained reasonable for most of the month except for the last week when the mills run down their stock to avoid having surplus stock on hand at month end which has to be paid for on the 20th of the month following. The first week of the next month is correspondingly busy.

The export markets come and go with Kanematsu withdrawing again and small export pruned shipments in May and June.

The outlook continues to be for fluctuating exporting opportunities but with a growing market overall and hope of price increases towards the end of the calendar year. Modest price increases were achieved for the new quarter commencing 1 July.