
Water Supply

(July)

Operations Group

(July)

Operations Group Review of Operations For the Period Ended 31 July 1999

1. Items of Note

There has been a marked decrease in the number of reported damage incidents caused by contractors working within the Wellington City boundaries. This follows the decision by the Wellington City Council to change the specifications for damage from repair to the replacement of the complete service and hence increase the costs to the subcontractor. It is suspected that the subcontractors are not reporting the damage occurrences and are in fact carrying out their own repairs. This has had an effect on our workload. We have since been instructed to revert to the previous practice of repairing the damage rather than replacing the service.

The plant optimisation trials at Te Marua and Wainouimata are proceeding well with full scale trials in progress at Te Marua.

2. Water Quality

A total of 323 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 2.4 and 2.8 m, and in the south lake between 3.8 and 4.8 m. These are considered satisfactory. The dominant phytoplankton were as follows:

- North Lake: *Oscillatoria*, *Asterionella*, *Peridinium*
- South Lake: *Staurastrum*, *Synedra*, *Peridinium*

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.

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

Te Marua:	Treated water	}	nil detected
	Lakes	}	nil detected
	Intake	}	low level of <i>Giardia</i> and <i>Cryptosporidium</i> detected
Wainuimata:	Treated Water	}	nil detected

Orongorongo River Intake	}	low level of <i>Giardia</i> and <i>Cryptosporidium</i> detected
Big Huia Intake	}	low level of <i>Giardia</i> and <i>Cryptosporidium</i> detected
Wainuiomata River Intake	}	low level of <i>Giardia</i> , no <i>Cryptosporidium</i> detected.
Lower George Creek Intake	}	nil detected

Wainuiomata 1080 Monitoring:

Sinclair Creek	}	low level of <i>Giardia</i> , no <i>Cryptosporidium</i> detected.
Wainuiomata River East	}	low level of <i>Giardia</i> and <i>Cryptosporidium</i> detected
Wainuiomata River West	}	low level of <i>Giardia</i> , no <i>Cryptosporidium</i> detected
Skull Gully Stream	}	low level of <i>Giardia</i> , no <i>Cryptosporidium</i> detected
Control Site	}	low level of <i>Giardia</i> , no <i>Cryptosporidium</i> detected

Over the June/July period 25 transgressions were notified:

- 3 low pH
- 4 high pH
- 3 low chlorine residual
- 11 low fluoride
- 1 high fluoride
- 1 low alkalinity
- 1 high alkalinity
- 1 high cadmium

Six artesian samples were tested for the presence of macro-organisms this month - none were detected. This testing is necessary to prove security of the groundwater.

3. **Supply Situation**

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

Situation as at 10 August:

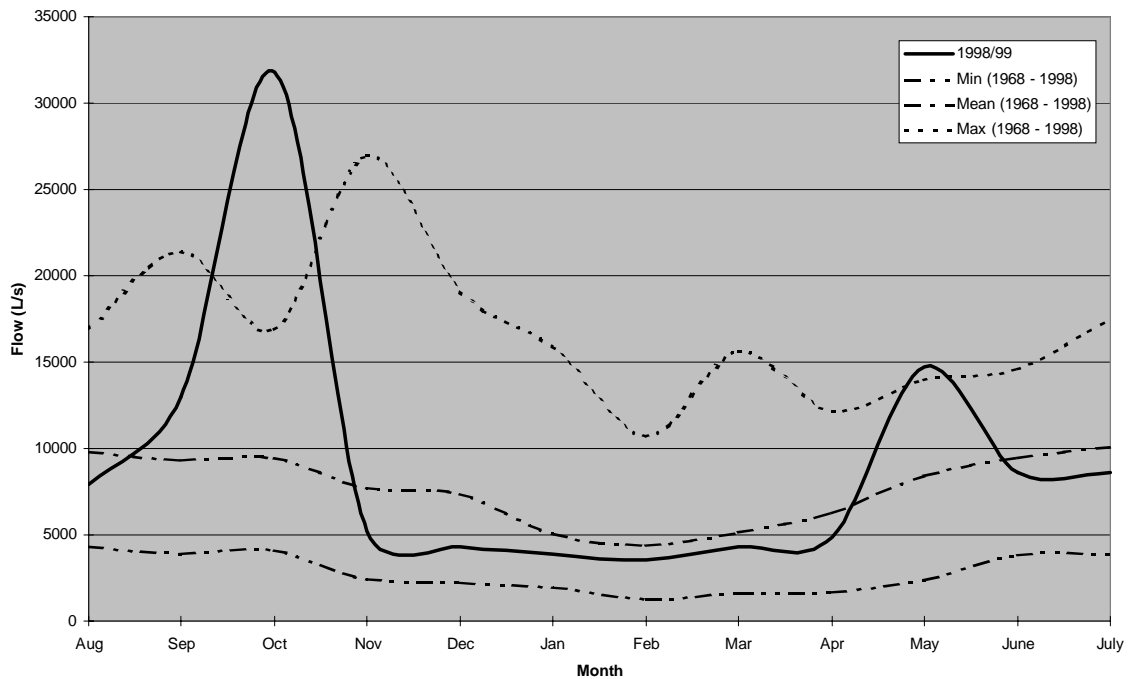
For Wellington:

- Rain:** Patchy and as likely to be above as below normal.
- Wind:** Probably lighter than normal
- Temperature:** Continuing about 1 degree above normal
- Sunshine:** Average
- Specials:** Some thundery showers in Wellington and Wairarapa with the onset of southerly outbreaks

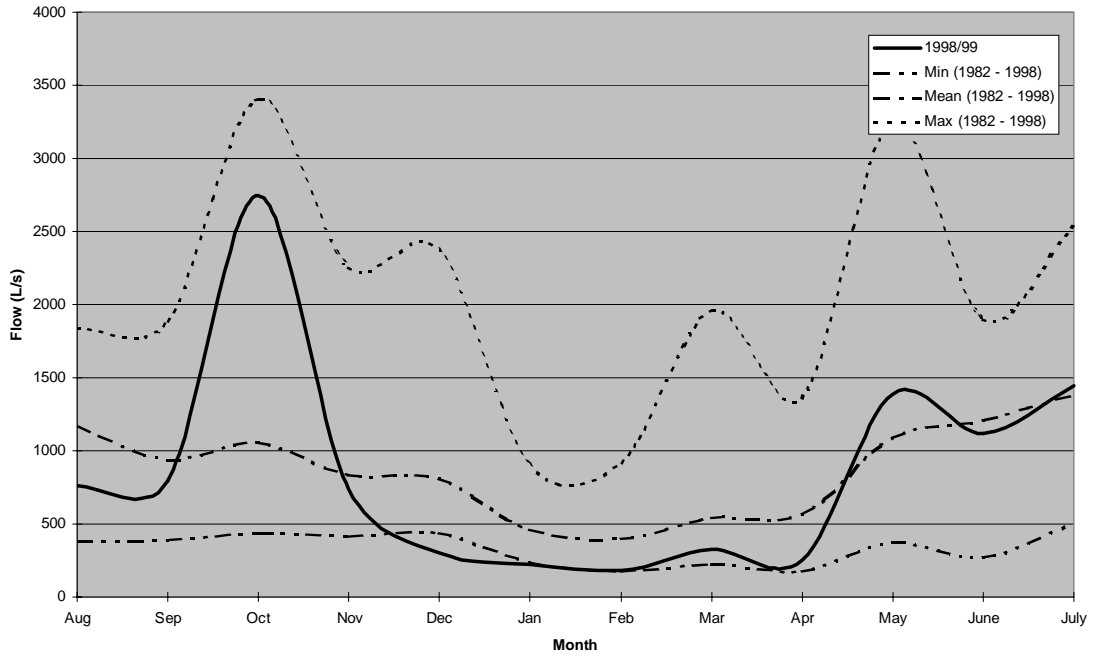
Confidence: Moderate to high

The strong northwesterly episodes that usually mark the start of spring are expected to be delayed a few weeks this year. Take note of any low pressure system developing 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.

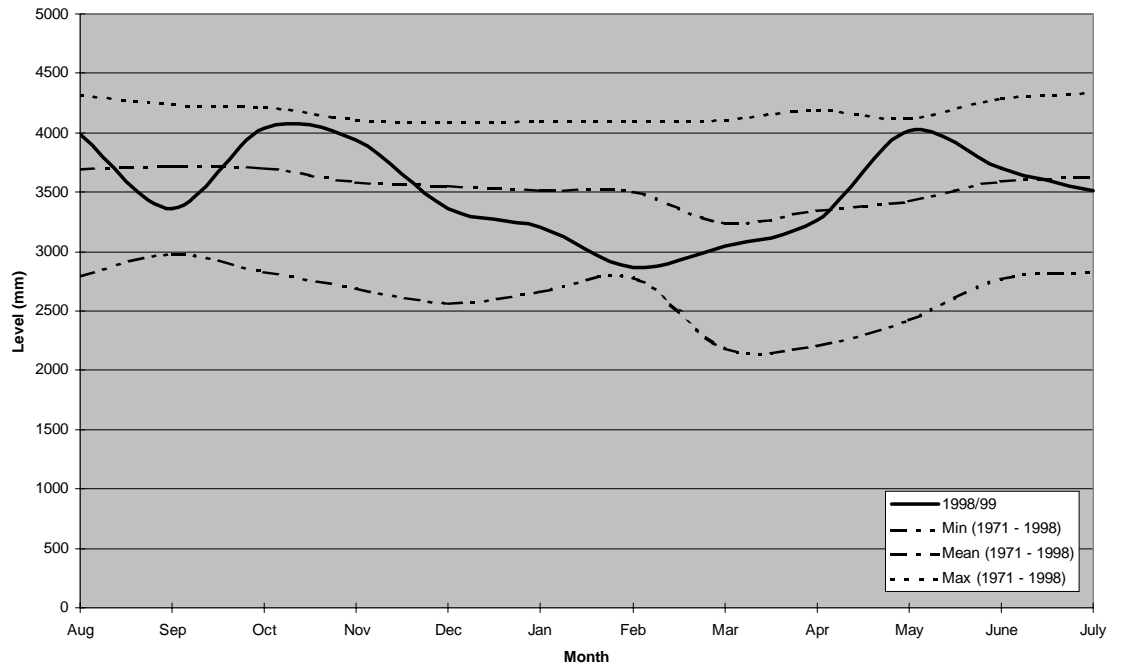
Hutt River Flows



Wainuiomata River Flows



Aquifer Levels



4. **Production**

4.1 **Te Marua**

4.1.1 *Quality*

7 July – Treated water turbidity and aluminium residual were higher than normal due to blockage in the poly mixing system

27 July – During full scale trials filter breakthrough occurred which increased treated water aluminium residual.

During both of the above occasions the plant was isolated from the distribution system and any water not meeting quality standards was diverted to the lakes.

4.1.2 *Safety*

No health and safety issues to report.

4.1.3 *Operations*

20 July - Plant was shutdown for 17 hours to allow the Distribution Section to install a new line valve in the Hutt pipeline.

23 July – A Slam-shut occurred, this was because of faulty turbidity meter.

28 July – Slam-shut because of power surge.

Plant Tours – No plant tours for the period.

4.1.4 *Projects*

Y2K – As part of the Y2K testing the plant was successfully operated for six hours under manual control.

Full scale trials have been underway since 26 July. The plant has been manned for 24 hours per day and significant modifications have been made to the plant controls to achieve improved flow characteristics through the filters. Although some initial problems were encountered, the results to date are very promising.

4.2 **Wainuiomata Water Treatment Plant**

4.2.1 *Quality*

We are continuing to work through problems with fluoride dosing. The chemical supplier has been to site to investigate why the fluoride is not dissolving as well as expected. It has been suggested that, due to lower water temperatures, the agitation and dilution water flow through the mixing tank should be increased. Modifications to the dosing equipment are underway to check if this is the case.

4.2.2 *Safety*

No safety issues to report.

4.2.3 **Operations**

16 July - Notification was received that the Wainuiomata and George Creek intakes were clear of 1080 and could be used for drinking water.

19 July - The treatment plant was put back into service providing potable water to the distribution system.

23 July - Hydraulic tests on the reaction tank were successfully carried out following modifications to the poly-mixing tank.

4 August - The modifications to the coagulant mixing tank were completed.

9 August - The new reaction tank was put in to service for commencement of process commissioning.

Plant Tours - Six health board officers visited the plant on the 12 August. They were taking part in a course run by OPUS.

4.2.4 **Projects**

Fluoride Building Refurbishment - The fluoride building has been partially rewired to improve electrical safety and remove redundant equipment and live cabling from flood prone pipe trenches.

Process Optimisation/Reaction Tank Commissioning – Some of the process changes recommended from the recent pilot trials have been made and the reaction tank is now in service. The initial results are encouraging viz.

- Reduced turbidity spikes during float offs.
- More uniform filter quality
- Reduction in polymer dose rates
- General improvement in treated water quality

There are some minor problems with the commissioning of the new tank, which will be addressed over the next few weeks, namely:

- Inadequate instrument sample flows
- Tuning correcting the chemical control loops

Plant Security - The installation of new locks has commenced.

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*

The annual inspection of the B stream, reservoir aerator took place. One of the reservoir flow path curtains was found damaged and the anchor points had almost failed. One of the four curtains has been removed and all anchor points upgraded. Some of the sealing between the concrete floor slabs in reservoir B was also replaced.

Gear Island has been used very little since Wainuiomata came back into service. A routine inspection of the DC motors has revealed that brush gear modifications may need to be made to one of the motors.

Plant Tours - Six health board officers visited the plant on the 12 August. They were taking part in a course run by Opus.

4.4.1 *Projects*

Capacity Increase - Wellington #2 variable speed drive failed because of a high power transistor failure after 460 hours run time. The drive was completely rebuilt by the supplier and is back in service. The three new pumps are now running automatically.

Process Optimisation – The software control to the well pumps was modified in order to maintain steady flows into the plant and pH fluctuations were reduced. This has proved to be more difficult than anticipated, partly because of the increased and varied demand on the plant by the new Wellington pumps. Software changes are being made to cope with all flow patterns.

Plant Security - The installation of new locks has been completed.

4.4.1 *Gear Island*

Gear Island Switchboard – The delivery of the new board has been rescheduled to ensure that Gear Island remains available during the process trials at Te Marua and Wainuiomata. The installation is now planned for early September.

Gear Island pH control – The installation of stroke positioners on the caustic pumps is planned to occur during the switchboard installation. This will improve pH control and reduce the likelihood of quality transgressions.

5. **Distribution**

Electrical Section

New controls were fitted to the inlet valve at Plimerton Reservoir to make it to be remotely controlled.

The controls were also modified at Ascot Park Reservoir.

The new reservoir at Karori South (Makara) has been commissioned

Telemetry units have been installed at Mills Road and Dargle Way Pump Stations.

Pipeline Section

Te Marua to Karori Pipeline

- A new 600 line valve and bypass were installed in the 750 pipeline at Ngaio.
- A new 600 line valve and bypass were installed in the 900 pipeline at Silverstream.
- Eleven new scour valves were installed, complete with non-return valves.

Electromagnetic Flow Meters

- A new electromagnetic flow meter for the Gracefield Reservoir supply was installed at Gracefield Reservoir, and connected to the telemetry system.

Waterloo to Randwick 750

- A leaking valve was repaired at Randwick Pump Station.
- A leaking scour valve was repaired on the 750 mm main.

Karori Decommissioning

- Assistance with valving has been given to the contractor carrying out the decommissioning work.

Rahui Commissioning

- Ongoing work with pressurising and chlorinating the new inlet main to the new Rahui Reservoir, and chlorinating the new reservoir during filling.

Trentham/Kingsley Branchlines

- Two scour valves at Pinehill Crescent (Trentham) and upstream of Kingsley Pump Station were renewed.

6. Health and Safety

Total Injury/Illness/Incident Record:

Production: One minor back sprain with no time off.

Distribution: Incident Free

Network Incident Free Staff member on ACC from a previous injury.

Wellington City Water Review of Operations For the Period Ended 31 July 1999

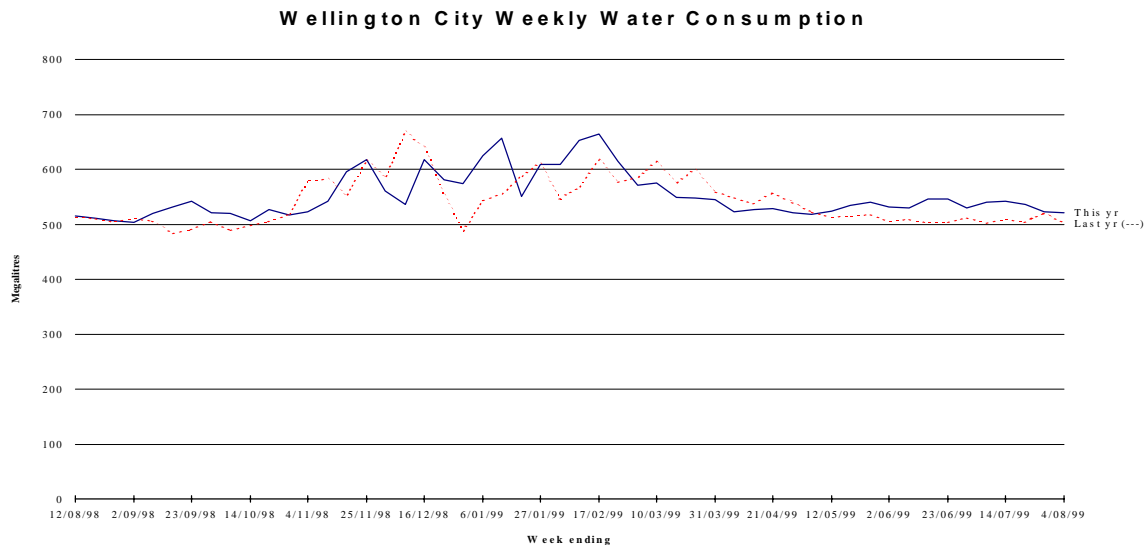
1. Items of Note

The number of damage repair jobs caused by subcontractors was reduced during the month. This factor together with practically full attendance of staff following the flu epidemic enabled the section to vastly improve their performance during the month.

An audit of the sections Health and Safety performance was carried out by TOSHA working on behalf of the Wellington City Council.

In addition 8 mains bursts occurred during the month all were repaired within the time allocated under the performance targets.

2. Water Supply (PT 30.1)

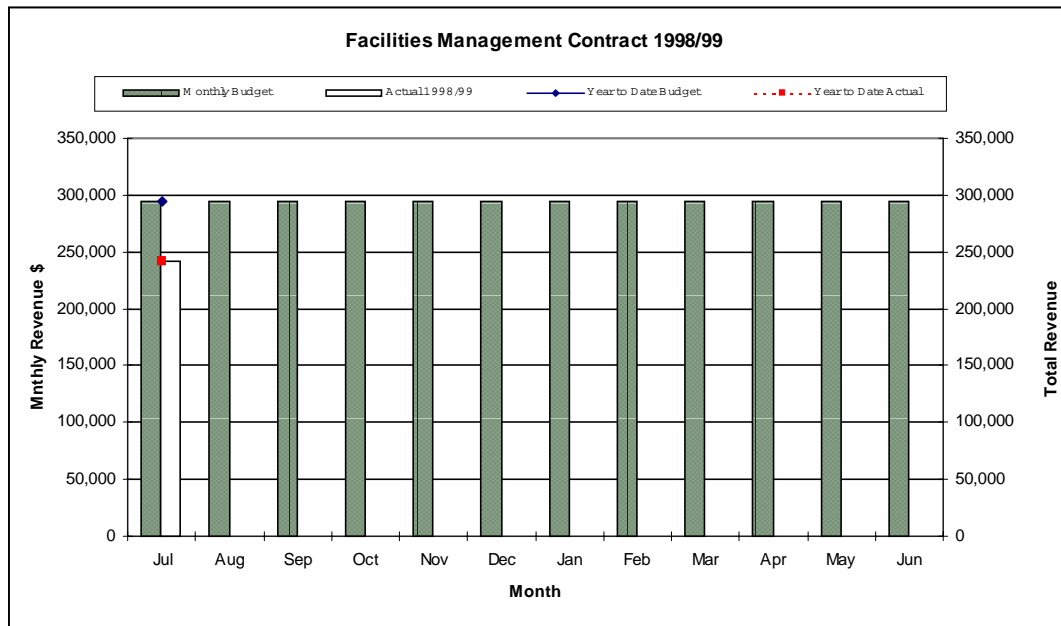


3. Financial

3.1 Facilities Management Contract

Contract Amounts : Wellington, including Tawa

Month	Actual \$	Budget \$	Variance %	Year to Date \$	Budget \$	Variance %
July	241,68	294,31	-17.8	241,682	294,31	-17.8



4. Water Quality

Routine Testing (PT 1.1)

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

	July	Year to Date	Compliance (%) Year to Date
(PT 2.2) Number received	15	15	-
(PT 2.2) Within ability of Wellington City Water to control	3	3	-
(PT 2.1) Formal response within five days	14	14	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 69 enquiries were received during July.

	July
Counter enquiries	55 (+ 14)

	July
	encroachments)
Proposals from other utilities	12
(PT 33.1) Plan records: - New services recorded	14
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:

	July
	Complaints
(PT 2.2) Water quality	16
(PT 16.1.2) Pressure	22
(PT 20.1) Reinstatement	4
(PT 16.1.4) No-water	41
Contractors	2
Other	15

All of the 6 “Pressure” complaints were responded to and completed within the performance criteria. 19 of the 22 “No-Water” calls regarding “supply” were attended to within 30 minutes as required by the FMC. (The 3 no-water calls which have failed were attended late by a maximum of 10 minutes).

6. Response Maintenance

6.1 Compliance

	July		
	Number of Calls	Completed to Standard	Compliance %
(PT 9.1) Stopcocks	385	345	90%
(PT 9.1) Hydrants	78	72	92%
(PT 9.1a) Valves	19	16	84%
(PT 9.2) Other Leaks	267	258	96%
(PT 10.1) Mark Outs	47	47	100%
(PT9.1a) Value Repacks	10	6	60%
(PT 16.1.1) Burst mains	8	8	100%
(PT 2.1) Water Quality Complaints	16	15	94%
TOTAL	830	767	92%

Additional Work Carried Out:

New Services	12
Water Meters	18
Damages by Contractors	75

6.2 **Burst Mains (PT 16.1)**

There were a total of 8 burst mains during the month of July 1999. They were as follows:

7 Easdale Street, Lambton	1 July 1999
Oriental Terrace, Mt Vic	10 July 1999
Ngatoto Street, Ngaio	10 July 1999
1 Ryan Grove, Tawa	20 July 1999
1 Ryan Grove, Tawa	20 July 1999
1 Ryan Grove, Tawa	20 July 1999
Newman Terrace, Thorndon	23 July 1999
41 Traft Street, Brooklyn	26 July 1999

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

6.3 **Supply (PT 16.1)**

	July
Total calls received regarding loss of or temporary loss of supply due to broken mains or supply failure	22
Total calls attended within 30 minutes	19
Total Compliance	86%

6.4 **Reinstatement (PT 20.1)**

There were 4 complaints received during the month of July regarding trench reinstatements. The FMC target is less than 12.

6.5 **Shutdown Notification (PT 6.1)**

There were 18 planned shutdowns during July. 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:

	July
Locate stopcocks	91
Leak location	74
Flow tests	2
Seepage/Investigations	3
Miscellaneous supply jobs	11

7. **Meters (PT 13.1)**

A total of 1,387 City and High Use meters were read and entered into the system by 23 July 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 telemetry pressure monitoring unit continues to monitor the pressure in the water supply to Aro Valley. The contact tank is back in service as the dedicated reservoir for Aro Street Zone, and a separate supply pipeline to Bell Road Reservoir has been commissioned.

8.4 **Karori South Reservoir**

The telemetry equipment has been shifted to the new reservoir and recommissioned. The electrical equipment at the old Makara Reservoir has been removed.

8.5 **Dargle Way and Mills Road Pump Stations**

Remote Telemetry Units have been installed at Dargle Way Pump Station, and at Mills Road Pump Station. They are being used to monitor the delivery pressure.

8.6 **Lyndhurst Pumping Station**

The electric motor on number 2 pumpset has burnt out. It is currently being rewound by a contractor.

8.7 **Maintenance Checks (PT 17.4)**

Maintenance has been carried out as follows:

July	
Round C	Round D
Allington Road	Karepa Street
Messines Road Pump Station	Highbury
Karori Park	Carries Gully
Montgomery Avenue	Landfill Pump

July	
Round C	Round D
Makara Road	Rhine Street
Verviers Street	Beacon/Signal Hill
The Zoo	Townsend Road
Russel Terrace	Miramar North
Lyndhurst Road/Chester	Dargle Way
Mills Road	Grenada CV
Baylands CV	Rangoon Heigts CV
Omega CV	Ngaio CV
Woodridge CV	Cunliffe Cv
Sidlaw Street CV	Cambrian CV

9. Development

9.1 Development Statistics

Subdivisions	July	Year to Date
Construction plans approved (lots/units)	0	0
Scheme plans approved	35	35
Subdivisions cleared (lots/units)	49	49

9.2 Development Projects

9.2.1 *Woodridge Reservoir*

Disconnections of old reservoir complete. Land issues being arranged. Removal of old reservoir being negotiated.

9.2.2 *Churton North Reservoir*

Financial repayment proposal submitted to WCC for approval. Construction of reservoir well underway. Floor poured. Twenty five percent of walls poured or ready for pouring. Requirement, for financial contribution towards provision of reservoir, as condition of subdivision no longer required. Approval of pump station being negotiated.

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

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

- 80 Salamanca Road

9.2.5 ***Domestic Services Priced***

- 17-19 Burgess Road
- 1 Tyers Road
- 33-39 Johnsonville Road

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

- Lot 2 Centennial Highway
- Chaffers Area
- 5/7 Tyers Road
- 233-243 Thorndon Quay
- 310 Tinakori Road
- 16 Fox Street

9.3 **Building Development Appraisals**

	<i>July</i>	
	Commercial	Domestic
Building consents	13	59
PIMS applications	13	59
Compliance with response time requirement	100%	100%

9.4 **Land Information Memoranda**

	July
Applications processed	39
Compliance with response time requirement	100%

10. **Capital Works**

10.1 **Main Laying City**

10.1.1 ***Contracts in Maintenance Period***

The Terrace pipe replacement contract is in the maintenance period.

The maintenance periods for Courtenay Place, Marion Street and Hall and Riddiford Streets 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. A draft report has been prepared on the condition of two short pieces of pipe removed from the main.

10.2 **Main Laying Suburbs**

10.2.1 ***Contracts in Maintenance Period***

The following pipe laying contracts are in the maintenance period.

- Johnsonville Road
- Tirangi, McGregor, Kingsford Smith and George Bolt Streets
- Bracken Road
- Breaker Bay Road

The maintenance periods for Broderick Road, Miles Crescent/Lyndfield Lane, Chelmsford Street and Rakau Road, Hapua Street and Upoko Road 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 on 9 August 1999.

10.2.3 ***Helston Road, Newlands***

The contract for replacing the pipeline along Helston Road was awarded to Groundworks Ltd. Approximately 400 m of pipe has been installed.

10.2.4 ***Rider Mains Replacement***

The contract for the replacement of rider mains was awarded to N Forsyth Ltd. The contractor has installed new rider mains in Summerville Terrace, Richmond Ave and Queens Drive.

10.3 **High Level Distribution and Storage**

10.3.1 ***Karori South Reservoir***

Commissioning of the reservoir was successfully completed on 14 July 1999. The reservoir is now in service. Landscaping and roading is being completed.

Planning for supplying the Allington Road Zone from the new reservoir is underway.

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. The contractor is proposing to start work on site on 9 August 1999.

10.3.3 ***Wadestown Reservoir***

Montgomery Watson are undertaking the design and are making arrangements to obtain resource consents for the proposed reservoir. A preliminary design report has been prepared and consultation with interested parties is underway.

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 and reviewed. The final report is being prepared.

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

There were two minor incidents reported this month.

Analysis – December 98 to July 99

	Stopcocks			Toby Locates	Damage Repairs	Burst Mains		Leaks			Total Calls			Mark-outs	
	Calls Received	Completed	% Comp			Occurred	% Comp	Calls Received	Completed	% Comp	Received	Completed	% Comp	Received	% Comp
December-98	365	362	99%	101	26	4	100%	234	233	99%	770	763	99%	16	100%
January-99	431	429	99%	92	23	7	100%	275	271	98%	875	868	99%	21	100%
February-99	343	336	97%	100	29	5	100%	176	170	96%	647	630	97%	11	100%
March-99	488	359	74%	102	102	8	100%	324	282	84%	1073	884	82%	108	100%
April-99	430	367	85%	64	46	7	100%	259	221	85%	945	831	88%	94	100%
May-99	366	285	78%	81	109	2	100%	239	200	84%	875	729	83%	140	100%
Jun-99	364	269	74%	80	105	7	100%	262	204	77%	837	655	78%	86	100%
Jul-99	385	345	90%	91	75	8	100%	267	258	96%	830	767	92%	47	100%

Strategy and Asset Group

(July)

Strategy and Asset Group Review of Operations For the Period Ended 31 July 1999

1. Items of Note

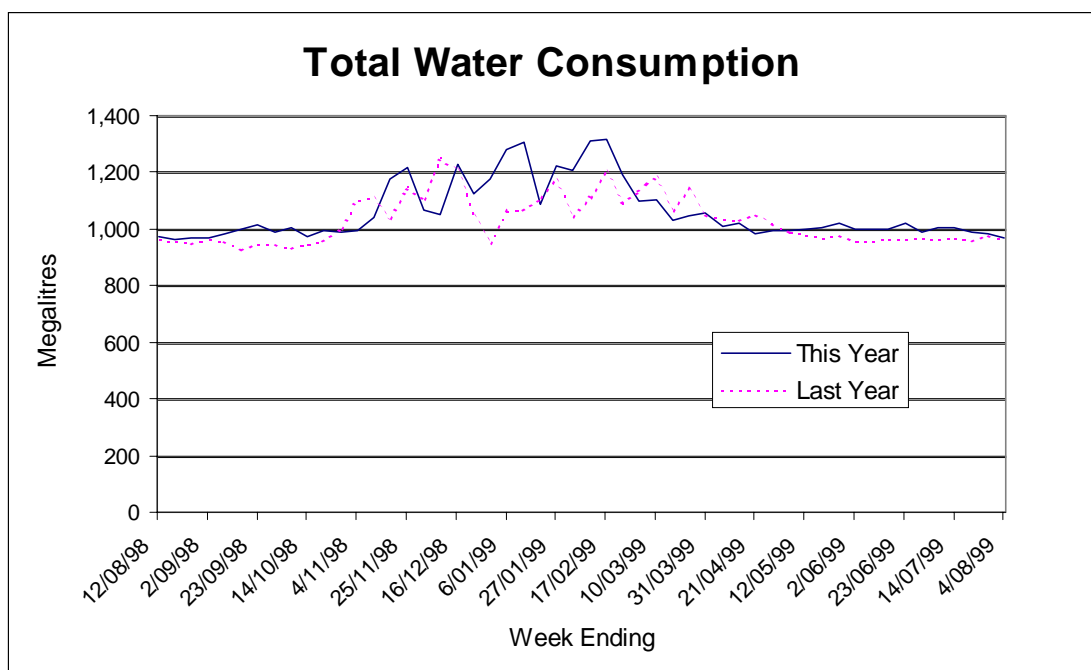
It was indicated in the report for June that information on the effectiveness on the 1080 drop in the Wainuiomata and Orongorongo catchments would be available for this report. Unfortunately, at the time of writing, the information had not been received.

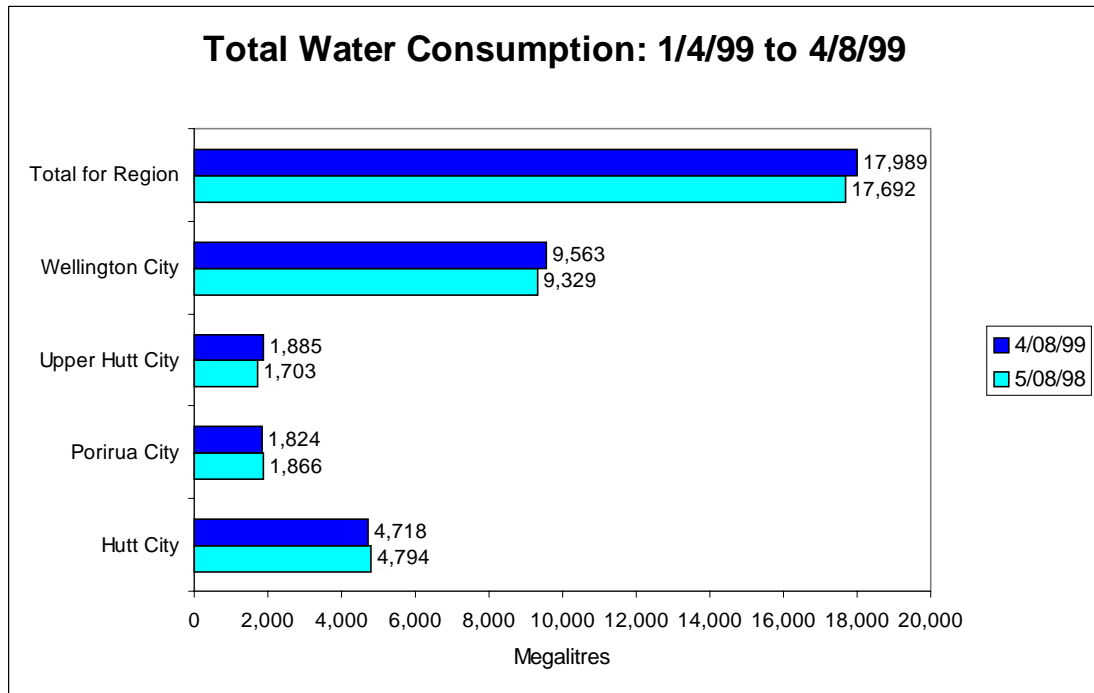
A report on tenders for a new electricity supply contract was considered in the public excluded section of the Policy and Finance Committee meeting on 3 August. It is disappointing to have to record publicly that our electricity prices between 1998/99 and 1999/2000 will have increased 17 percent. Last year we negotiated a one-year contract with the local supplier. This year we took advantage of the electricity reforms and called tenders which included the local supplier. From our point of view, as one of the larger electricity users in the Wellington area, the electricity reforms have not met our expectations.

Ongoing fluoridation issues in Petone have taken a significant amount of resources during the month.

An order was placed for a standby generator for the Te Mara pump station in late June. Delivery is expected in late September to enable project completion in early November.

2. Sales Volume





3. Asset Management

- Process and Instrumentation diagrams for the treatment plants have been revised, resulting in significant changes to the assets captured earlier in the year. It is hoped to have all revisions complete by the end of August. Following this, asset listing reports will be run for use in the asset valuation exercise. Additional data, e.g. installation dates will be added as it is researched.
- Nine registrations of interest for the revaluation of Wholesale Water assets have been received. A detailed brief has been prepared and forwarded to six consultants. Proposals are due on 20 August.
- The final cost of capital works in the 1998/99 year was \$5.414m against a budget of \$5.945m. The reduction was due in the main to significant under expenditure on several of the larger projects.
- The Wainuiomata catchment has been reopened following completion of the 1080 drop. Further testing is required before the Orongorongo catchment can be reopened.
- A consultant is preparing a Resource Consent Application for a new well tapping the Moera Aquifer. Consultation with the IBM whose fire fighting well could be affected by a new well, is proceeding, with slow progress being made.
- Draft Applications and Environmental Assessments have been prepared, and forwarded to a range of groups and individuals. So far there has been little response.
- The consultant commissioned to build a control optimisation system for the Wainuiomata/Waterloo supply is making good progress. The optimisation system will manage source and pump use to minimise the cost of the production and distribution of water.

- Detailed seismic review work and risk assessment has been carried out for a number of network elements. Report have been received on:

Black Creek pipe crossing;

Gear Island reservoir, buildings and structures;

Korokoro stream pipe crossings;

Haywards reservoir;

The stream pipe crossing at the bottom of Haywards Hill;

Randwick pump station;

Haywards reservoir site to land slide potential;

Potential for damage from landslides to the Orongorongo pipelines;

Potential for landslide damage to Kaitoke pipeline adjacent to the intersection of SH2 and SH 52.

4. **Quality Assurance**

- 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 is being 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 for July 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	99.73%	98.02%
Wainuiomata	99.29%	75.61%

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 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. Draft Objectives and Targets have been prepared. They will be finalised in early September and then submitted for approval.

5. **Marketing and Economics**

5.1 **Market Research**

- Presentations of results from the 1998-99 Summer Water Conservation Campaign have now been made to all our customers. They are generally satisfied with the results achieved and have indicated their agreement to continue with a similar strategy for the coming summer.
- CM Research have been selected to undertake research to identify what Wellington City water users who have had contact with Operations – Network think of the service they received. The research will be undertaken in two stages. A quantitative stage will be used to identify the relative importance of different service aspects to the public's overall impression of service. A qualitative stage will then be used to explore consumer expectation for these critical service areas in more detail. The questionnaire for the quantitative stage of the research is currently being finalised. The project should be completed by 31 October.

5.2 **Summer Water Conservation Campaign**

A review of all the research regarding our conservation activity over the last two years has been completed. Following this, initial discussions were held with Scenario Communications regarding strategy and tactics for the coming summer's conservation activity. Scenario will provide a draft timetable and costs to produce a television commercial in the next week. This will identify whether we can afford to utilise television as part of our media mix. We will provide our four city customers with a proposal for our summer water conservation activity within the next two weeks.

5.3 **1998-99 Business Report**

Planing continues for the 1998-99 Report of Business Activity. Discussions have been held with Scenario Communications over the content and style of the document. This year's report will again be in two sections: the front half documenting the Water Group's major achievements and the second section providing statistical and financial detail. Background reports covering the major events of the last financial year have been delivered to Scenario. These will be used to construct the Foreword and part of the main body of the report. Details for remainder of the main body of the report will be compiled in the coming week for delivery to Scenario. A first draft of the front section of the report should be ready for consideration around 10 September.

5.4 **Press Releases**

- Press release 'Water passes Y2K 'bag bug' test' regarding Y2K preparations for wholesale water supply was released 14 July.
- Advertisement 'Options for Petone's Water Supply' was placed in The Hutt News of 13 July.

5.5 Other Activities

Cover for the Economist's role included:

- Liaison with Theta Systems regarding progress of the Meters Database
- Provision of year-end supply and cost statistics for Utility Support
- Provision of Metered Flow information for ECG
- Production of weekly consumption reports

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

Te Marua Lakes to Treatment Plant Pipeline

The proposal for the rehabilitation of the re-laid bitumen lined pipes with cement mortar lining was investigated further.

Wainuiomata Reaction Tank

The contract achieved "Practical Completion" on 28 May 1999 and was handed to the Production Group for process commissioning. The reaction tank is now in continuous use. Minor adjustments have been made to eliminate surging within the mixer boxes.

Orongorongo Intake to Tunnel Pipeline

The construction of retaining walls and fences is almost complete.

Waterloo Capacity Increase

Investigations have continued to determine the appropriate way to rearrange pipework in the Randwick valve chamber.

Orongorongo Pipeline Petone Esplanade

Several 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. Additional unknown ball hydrants have become noticeable by leaking. These have been removed.

Rahui Reservoir Rising Main

The installation of inlet pipework telemetry and controls is complete. The reservoir was filled for testing by passing water along the OK Main from Randwick. Assistance was given to chlorinate the reservoir and outlet pipeline.

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 requested delaying the start date.

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 zone reservoir (previously the Karori Contact Tank) are now complete. The reservoir was out of service while this work was undertaken. This was a major project and involved the removal of many large redundant valves and pipework. Remaining work is centred around the Kelburn and Messines Road pump deliveries.

Orongorongo Main Thorndon to Karori

An investigation has been undertaken to determine the appropriate method to rehabilitate this main. It will act as an alternative supply to the Karori reservoir pumping station and pipelines, if the supply from Ngauranga is unavailable.

The recommended solution is to concrete line most of the main and to insert a smaller PE pipe from The Rigi to Waiapu Road. The pipeline failed several times in this section when it was being tested earlier in the year.

Arrangements are underway for a contract to carry out this first stage early in the new year.

Engineering Consultancy Group

(July)

Engineering Consultancy Group Review of Operations For the Period Ended 31 July 1999

1. Work Carried Out for the Strategy and Asset Group

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

Work is continuing on the project to transfer the plans index onto a different database. The database will be accessible over the network and has the additional facility for viewing and printing copies of the plans. The system is now being extended to include the plans that were not produced on the computer by scanning them.

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 Wellington City Council extended the completion date for 1998/99 Capex jobs 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 are underway 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, and consultation has been undertaken with various groups.

The construction of the extension of Weld Street to provide a legal access to private properties is complete.

3.4 **Karori South Reservoir**

This 800 cubic metre reservoir is complete and commissioned including landscaping.

This reservoir replaces the temporary precast concrete tanks at the site which have been removed. Various interconnections will be made shortly to create the new larger zone, and to allow the decommissioning of the Allington Road Pumping Station and the associated precast concrete tanks.

3.5 **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 is being undertaken to establish levels for the reservoir at different sites, as well as enhancement required to the pipe network. The report is now complete, ready to be forwarded to WCC.

3.6 **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.

3.7 **Asset Valuation**

A valuation of the water supply assets of the WCC was carried out, by updating earlier assessments and including new facilities. This was extended to include a valuation of pumping station equipment.

4. **Other Projects**

4.1 **River Surveys**

Cross sectional surveys have been carried out on the Hutt River at Melling.

4.2 **Pakuratahi Forest Access Road**

The contract for the continuation of the access road from this forest to SH2, near the top of the Rimutaka Hill, is well underway. The work has been designed and is being carried out so as to minimise visual and physical impacts. Currently progress has slowed because of harder rock conditions..

Laboratory Services

(July)

Laboratory Services Department Review of Operations For the Period Ended 31 July 1999

1. Items of Note

IANZ Audit completed and full accreditation maintained, and all signatories status also maintained.

2. Financial

No financials are available at this point in time.

3. Business Summary

Measure

3.1 *Quality*

There was no client request for re-testing samples.

- International New Zealand Accreditation is maintained.
- Test reports are being sent out within agreed time frames.

3.2 *Health and Safety*

No incidents reported.

3.3 *Number of Samples analysed*

July

- 977 samples
- 3,888 tests

Plantation Forestry

(July)

Plantation Forestry Department Review of Operations For the Period Ended 31 July 1999

1. Log Harvest Contract

July continued the trend of good results with 4,823 tonnes harvested from Whakatikei for a royalty of \$146,968

The pruned crop produced an average royalty of \$30.48/t

Output by grade was:

July	Tonnes	%
Pruned Domestic	931.68	19.3
S Grade	110.1	2.3
A Grade	490.0	10.2
L Grade	439.6	9.1
R Grade	620.6	12.9
Pulp Domestic	1084.8	22.5
Pruned Export	89.6	1.8
Sawlog Export	52.7	1.1
Rough Export	1003.5	20.8
Pulp Export	0	0
Total	4,822.56	

Logging has continued at Whakatikei through the winter month with little disruption. A marked contrast with last year where the Pakuratahi River caused regular disruptions to logging activities. The only problem has been damage to the internal roading network – the result of operating heavy trucks at times of continual rain. The return is ongoing access to markets and improved prices.

During this months logs were sold as far as Te Kuiti, Te Puke and Thames.

We have retained access to the NDG mill in Wanganui and continue to supply them with the large branched logs from above the pruned butt

2. **Silviculture Contracts**

Five hundred and forty eight (548) hectares of a programmed 556 has been completed.

Tenders have now been confirmed for the 1999/2000 silviculture programme.

Planting has been completed at Pakuratahi and Hukinga. Planting at Whakatikei is due to commence late August.

3. **Plantation Forestry Operations**

Given the extent of ground based logging at Whakatikei the area has been windrowed prior to planting. This process has also allowed a post harvest clean up of waterways to ensure now slash is left to impede waterflows.

It was proposed to release all the newly planted areas in Pakurathi this spring, however at an assessed cost of around \$550 per hectare the proposal is being revisited. The initial proposal was to apply the spray by helicopter but we are now investigating ground based options and will only treat those areas where the gorse and broom actually overtops the growing trees.

4. **Forest Access**

Access has been maintained to all blocks.

The Kaitoke track has been upgraded in conjunction with Bulk Water

Considerable maintenance has proved necessary within the Whakatikei block and on the access road to the metal source. As the block is to be finished within the next six weeks expenditure is being closely monitored to ensure that costs are minimised.

Work on the new Pakuratahi East Road has continued at a satisfactory rate. After some initial problems with the access road between the work site and the dump site work has been able to continue uninterrupted with the only delays arising from some particularly hard sections of rock. This rock has been stockpiled for later use on roads within the block.

Initial investigations and discussions with local authorities are underway for the commencement of harvesting in Puketiro. The internal trunk road will require upgrading and the terms and conditions of use of the public roads need to be understood.

5. **Market Trends**

Prices have improved slightly this month with further increases in export prices predicted next quarter. (September) Pulp continues to be a problem still returning a negative royalty. In a surprise move Winstones at Karioi became so short of pulp during the month that were forced to increase their price to “break-even” to entice us to sell them some pulp. Unfortunately I do not expect this trend to continue.

Renalls at Masterton have purchased new equipment which will enable them to complet for logs which are currently exported as “K” grade. Competition within this grade can only help. The plant is programmed to operational before Christmas. This will be even more beneficial when logging recommences at Pakuratahi as both the type of wood and the shorter haul will act in our favour.