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# Water Supply

(March)

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# **Operations Group**

**(March)**

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# Operations Group Review of Operations For the Period Ended 31 March 1999

## 1. Items of Note

It is pleasing to note that the operation of the Pilot Plants at Te Marua and Wainuiomata are producing some interesting indications that should provide a positive impact on operational cost reductions.

## 2. Water Quality

A total of 293 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 6.6 and 7.5 m, and in the south lake between 5.1 and 5.8 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*, *Staurastrum*, *Asterionella/Peridinium*
- South Lake: *Oscillatoria*, *Staurastrum*, *Cosmarium*, *Synedra*

When present in high concentrations *Oscillatoria* and *Asterionella* may cause filter clogging and *Staurastrum*, *Asterionella*, and *Peridinium* 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	low levels of <i>Giardia</i>

Wainuiomata:	Treated Water	nil detected
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### Intakes:

- Orongorongo River Intake – nil detected
- Big Huia Intake – nil detected
- Wainuiomata River Intake - low levels of *Giardia*, no *Cryptosporidium* detected.
- Georges Creek Intakes - low levels of both *Giardia* and *Cryptosporidium* detected.

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

There were several instances where the Guideline limits were not met during the March period. Transgressions reported by the Laboratory were:

- 1 high chlorine residual
- 1 low pH
- 2 high pH
- 27 low fluoride
- 1 high turbidity

The low fluoride levels were caused by malfunction of the dosing system at Gear Island. Alternative dosing methods are being investigated.

### 3. **Supply Situation**

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

#### **Situation as at 10 April:**

For Wellington:

Rain: 80 – 110% of normal

Wind: Mostly northwesterlies, with several gales

Temperature: Higher night-time temps due to the high humidity of the air

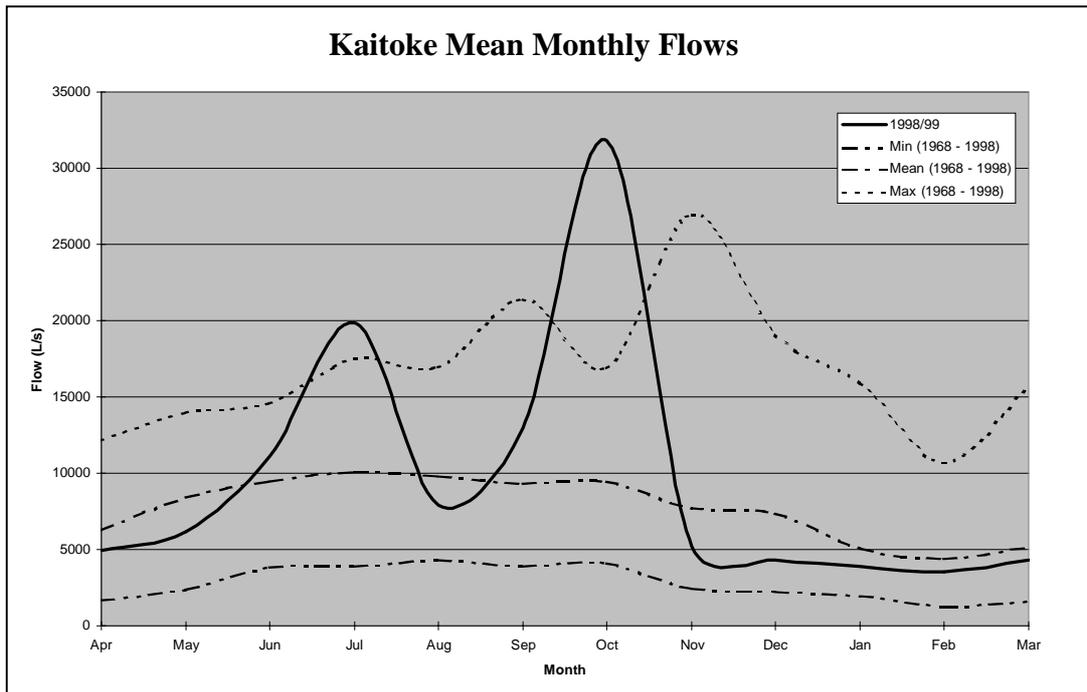
Sunshine: About normal

Specials: Be on guard for severe wind warnings

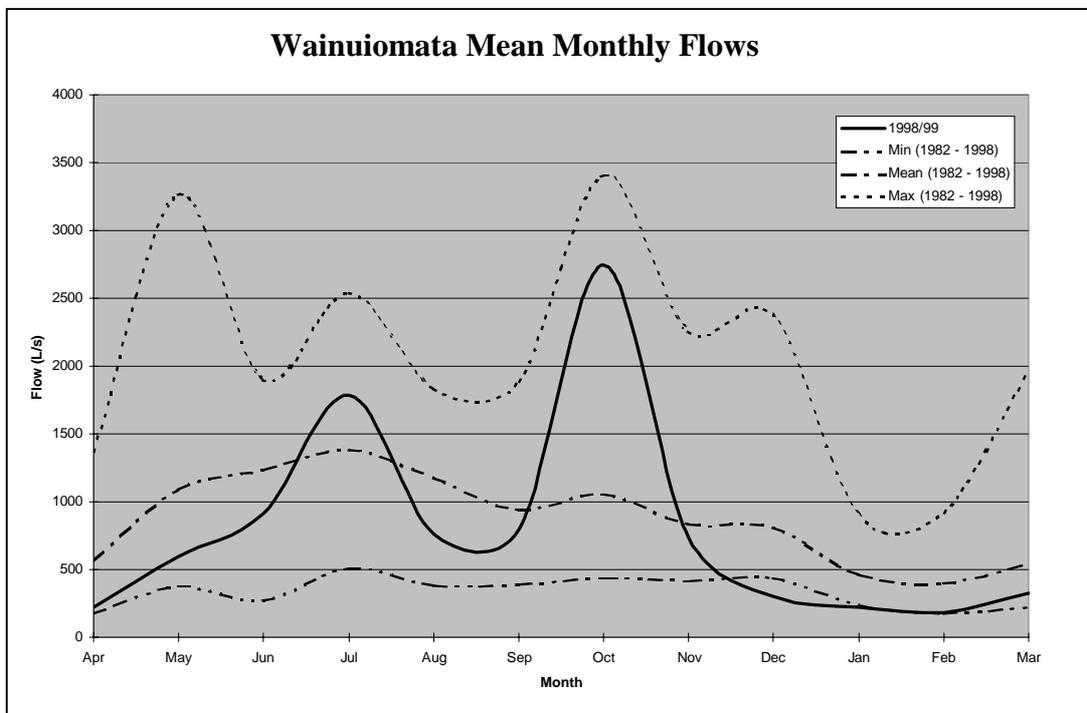
Confidence: Moderate

Cold fronts and low-pressure systems from the Tasman Sea are bringing regular top-ups of rain. Rain events are almost weekly and are preceded by a period of strong north or northwest winds, followed by a period of showery southerlies. Because the high-pressure systems still have higher than normal pressure centre, this is causing stronger pressure gradients and hence the northwest winds are more punchy than normal.

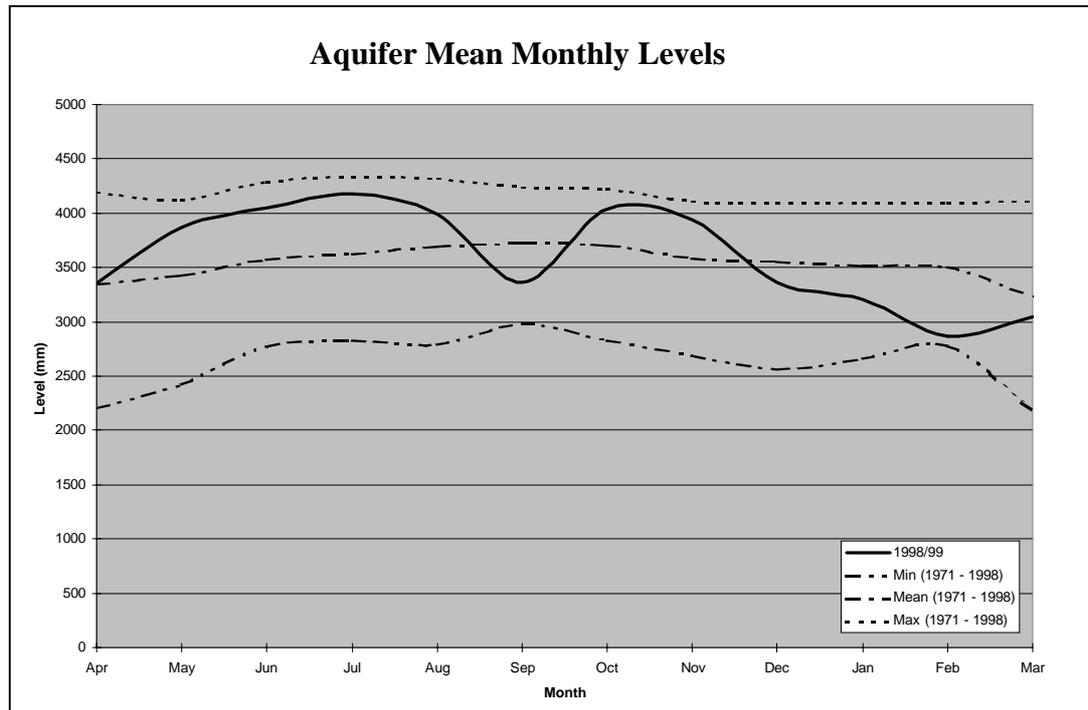
### Hutt River Flows



### Wainuiomata River Flows



## Aquifer Levels



## 4. Production

### 4.1 Te Marua

#### *Kaitoke Upgrade*

The overdue instrumentation has now arrived and installation work is progressing well.

#### *Boost Pump 3*

The new control system for boost pump 3 has been installed and commissioning is about to commence.

#### *Pump Station Stand By Power*

WRC staff and Beca's have carried out load testing on various pumps at the Te Marua Pumping Station to assist in accurately sizing the new stand by generator.

#### *Chemical Tank High Level Alarms*

Installation work is now complete and commissioning is about to commence.

#### *Clarifier Outlet Turbidity Meter*

A turbidity meter has been installed on the clarifier outlet and is providing valuable data on the performance of the treatment process.

### ***Wash Water Automation***

The final stage of automating the wash water recovery plant is well underway and should be completed by the end of April.

### ***Plant Tours***

09/3/99	Student Teachers	45
10/3/99	Delegation from China	8
10/3/99	WRC Induction Tour	10
17/3/99	St Orans 7 <sup>th</sup> Form	20
25/3/99	Hutt Valley Girl Guides	-

## **4.2 Wainuiomata Water Treatment Plant**

The plant continues to produce quality water during the period of dry weather. Due to the construction of the Orongorongo pipeline the flow through the plant has been limited to approximately 12 ML per day.

The actual contract to construct the pipeline has proceeded well apart from an incident occurring during commissioning of the pipeline. When draining down the pipeline following pressure testing, two sections of the pipe imploded due to a vacuum being created in the pipeline due to insufficient air being taken into the pipeline through the fitted air intake points.

Work continues on the construction of the contact tank. Problems are still being experienced with the actual commissioning and the sealing of the penstocks.

The construction of a pilot plant to mimic the treatment process has been completed. Preliminary results indicate that it will be possible to investigate all aspects of the performance of the Treatment Plant by using this equipment.

The ranger employed to monitor activities within the catchment has had beneficial results. Numerous persons have been observed entering the catchment area and have been approached by the ranger. Close liaison has been established with the Police at Wainuiomata, this has also had beneficial results.

Work continues on the analysis of the supernatant in order to determine the effect on the river flow and to establish whether or not this flow can be returned to the front end of the Treatment Plan. Toxicity results have been received from NIWA.

## **4.3 Waterloo**

The capacity increase upgrade is progressing well. The three pumps have now been installed and work proceeds on the commissioning of the two pumps installed during the month.

The plant has continued to operate satisfactorily and has run at maximum capacity for prolonged periods during the month.

#### 4.4 **Gear Island**

During the period of high demand, Gear Island has continued to operate satisfactorily although problems are still being experienced with obtaining consistent fluoride dosing. This is due to the method of dosing and alternative methods of treatment are being investigated.

### 5. **Distribution**

#### **Electrical Section**

The recently installed flow meters at Linden, Tawa, Wainuiomata and Point Howard have been connected to the telemetry system, and the valves are being trended and integrated.

The No.1 pump at the Beacon Hill Pump Station has been overhauled and reinstalled. Mains power has been connected to the Panorama Heights reservoir allowing previously installed electromagnetic flow meter to be commissioned.

The reservoir inlet control valve at the Bell Road reservoir has been overhauled and automatic controls fitted.

#### **Pipeline Section**

##### ***Te Marua to Karori Pipeline***

- The valve chamber housing the 600 line valve in the Ngaio roundabout was raised approximately 1.00 metre to road level.
- All pipework for the new 600 line valve at Ngaio has been fabricated, sandblasted and painted.
- All pipework for the new 600 line valve at Silverstream, Upper Hutt has been fabricated, sandblasted and painted.
- The scour valve at Merton Street Upper Hutt has been housed in a valve chamber, and a new tailpipe laid to the Upper Hutt stormwater.

##### ***Karori Reserve***

All valving for Stage 1 of the Karori decommissioning has been carried out.

### ***Electromagnetic Flow Meters***

New electromagnetic flow meters were installed in the following branchlines:

- Tawa Acme
- Linden Acme
- Wainuiomata No.1 Acme
- Point Howard WRC

## **6. Health and Safety**

Total Injury/Illness/Incident Record:

Production: Incident Free

Distribution: Incident Free

Network	Non-serious Harm – (2)	Lower back strain
	Non-serious Harm – (1)	Superficial burn
	Non-serious Harm – (1)	Chemical inhalation





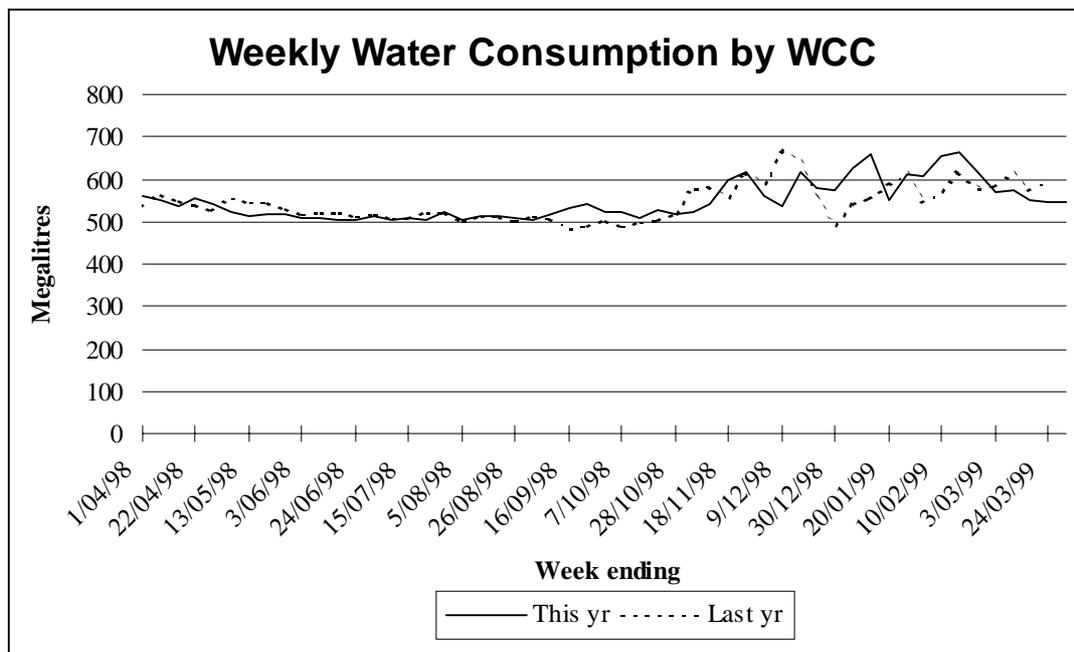
# Wellington City Water Review of Operations For the Period Ended 31 March 1999

## 1. Items of Note

During the month we again experienced difficulty in dealing with bursts caused by subcontractors working for Saturn. These activities resulted in our repairing 102 bursts.

The overall performance has increased dramatically even though we have been hampered by non delivery of manifolds and the fact that work activities have increased by 15 percent over last month.

## 2. Water Supply (PT 30.1)



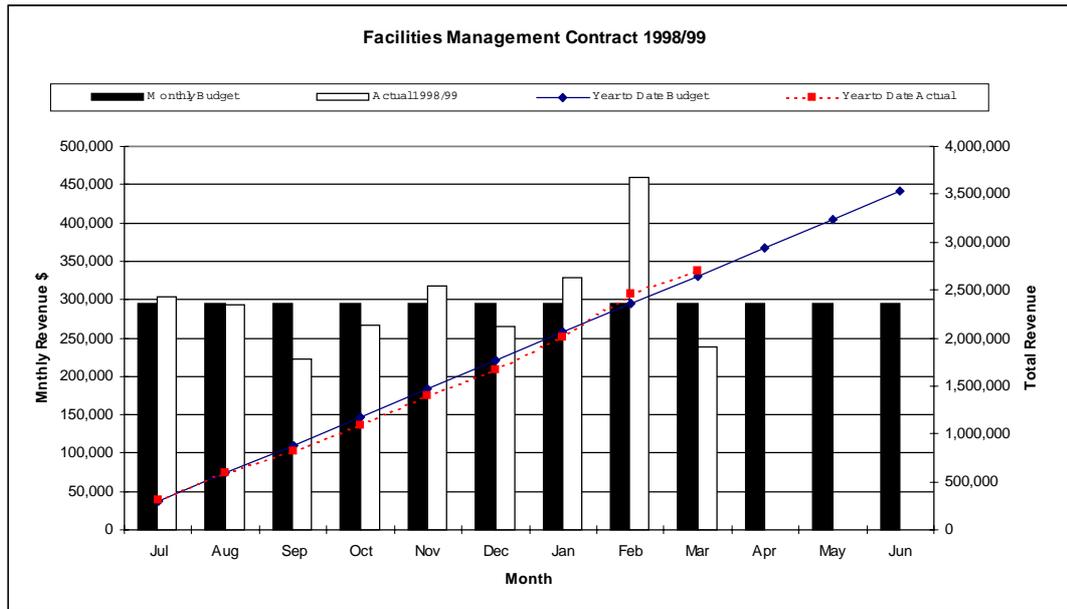
## 3. Financial

### 3.1 Facilities Management Contract

*Contract Amounts : Wellington, including Tawa*

Month	Actual \$	Budget \$	Variance %	Year to Date \$	Budget \$	Variance %
<b>March</b>	237,84	294,31	-19.18	2,697,74	2,648,	0.02

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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 February. 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)**

	March	Year to Date	Compliance (%) Year to Date
(PT 2.2) Number received	5	79	-
(PT 2.1) Within ability of Wellington City Water to control	0	29	-
(PT 2.1) Formal response within five days	5	74	94

Note: The figures for February were incorrect. They should have read 10 received, formal response within five days – 10.

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 85 enquiries were received during March.

	<b>March</b>
Counter enquiries	76 (+ 9 encroachments)
Proposals from other utilities	18
(PT 33.1) Plan records: - New services recorded	32
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:

	<i>March</i>
	<b>Complaints</b>
(PT 2.2) Water quality	8
(PT 16.1.2) Pressure	16
(PT 20.1) Reinstatement	0
(PT 16.1.4) No-water	32
Contractors	0
Other	7

All of the 16 “pressure” complaints were responded to and completed within the performance criteria. Thirty one of the 32 No-Water calls regarding “supply” were attended to within 30 minutes as required by the FMC. The one call which was not attended to within 30 minutes failed by five minutes.

## 6. Response Maintenance

### 6.1 Compliance

	<b>March</b>		
	<b>Number of Calls</b>	<b>Completed to Standard</b>	<b>Compliance %</b>
(PT 9.1) Stopcocks	488	359	74
(PT 9.1) Hydrants	118	111	94
(PT 9.1a) Valves	12	11	92
(PT 9.2) Other Leaks	334	282	84
(PT 10.1) Mark Outs	108	108	100
(PT 16.1.1) Burst mains	8	8	100
(PT 2.1) Water Quality Complaints	5	5	100
<b>Total</b>	<b>1073</b>	<b>884</b>	<b>82</b>

In addition to the above numbers, there were 102 repairs made to services/mains which had been damaged by other parties and 10 miscellaneous leaks attended to. There were a total of 22 new services connected.

It should be noted that the above results were achieved despite the following:

- No manifold stock provided for three days this period.
- A total of four staff absent for one week on ACC.
- An increase of 15 percent in the maintenance work since last reporting period.
- An increase of 121 percent in repairs made as a result of contractors damaging mains/services.

## 6.2 **Burst Mains (PT 16.1)**

There were a total of eight burst mains during the month of March. They were as follows:

80 Owhiro Bay Parade, Happy Valley	03.03.99
26 Kenya Street, Ngaio	03.03.99
173 Breaker Bay Rd, Seatoun	11.03.99
172a Breaker Bay Rd, Seatoun	18.03.99
3 Percival St, Lambton	23.03.99
173 Breaker Bay Rd, Seatoun	22.03.99
75 Fraser Avenue, Johnsonville	25.03.99
10 Earp Street, Johnsonville	26.03.99

All of the burst mains were attended to within 30 minutes and 100 percent repaired within eight hours.

## 6.3 **Supply (PT 16.1)**

	<b>March</b>
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	31
Total Compliance	97%

## 6.4 **Reinstatement (PT 20.1)**

There were no complaints received during the month of March regarding trench reinstatements. The FMC target is less than 12.

## 6.5 **Shutdown Notification (PT 6.1)**

There were 34 planned shutdowns during March. 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:

	<b>March</b>
Locate stopcocks	102
Leak location	112
Flow tests	1

	<b>March</b>
Seepage/Investigations	13
Miscellaneous supply jobs	14

## 7. **Meters (PT 13.1)**

A total of 1,389 Suburb and High Use meters were read and entered into the system by 23 March 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. The summer demand period is now over. The system is now in winter mode.

### 8.3 **Maintenance Checks (PT 17.4)**

Maintenance has been carried out as follows:

<b>March</b>	
<b>Round E</b>	<b>Round F</b>
Johnsonville Pump Station	Randwick Pump Station
Ngauranga Reservoir/Pump Station	Tunnel Grove Chamber
Kaiwharawhara Pump Station	Rocky Point 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
Maldiva Reg/Abb CV	Naenae Reservoir
Tawa	Gracefield Reservoir
Lindon	Rahui Reservoir
	Buick Street Pump Station

## 9. **Development**

### 9.1 **Development Statistics**

<b>Subdivisions</b>	<b>March</b>	<b>Year to Date</b>
Construction plans approved (lots/units)	30	44
Scheme plans approved	38	276
Subdivisions cleared (lots/units)	6	246

9.2 **Development Projects**

9.2.1 ***Woodridge Reservoir***

Reservoir now operating satisfactorily. Disconnections of old reservoir and land issues being arranged.

9.2.2 ***Westpac Trust Stadium***

North connection complete.

9.2.3 ***Churton North Reservoir***

Amended reservoir construction plans received and in process of being approved. Financial repayment proposal submitted to WCC for approval.

9.2.4 ***Meadowcroft Grove***

Proposal to deal with stormwater from Johnsonville West submitted to WCC for approval.

9.2.5 ***Major Subdivisions***

Construction plans for five major subdivisions were submitted for approval with a reply sent this month. Not all received approval, some required further information to be submitted and the plans amended.

Nuku Street, Miramar	12 Lots Construction Plans Approved
Jordan Street, Island Bay	30 Lots Construction Plans Approved
Landsdale Stage 3, Carmichael Street	13 Lots, further information to be supplied and construction plans to be amended
Woodridge Estate	31 Lots, further information to be supplied and construction plans to be amended
Mana Street, Brooklyn	8 Lots, further information to be supplied and construction plans to be amended

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

80-84 Karori Road

Westpac Stadium  
Upland Road – Cable Car End

9.2.7 ***Domestic Services Priced***

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

- Signals & Speedlink Building (repriced) - Signals & Speedlink
- Waterloo Quay (repriced) - Preston Gully Park, Marchison Rd
- 10 Cambridge Terrace - 39 Kaiwharawhara Road

### 9.3 **Building Development Appraisals**

	<b>March</b>	
	<b>Commercial</b>	<b>Domestic</b>
Building consents	3	44
PIMS applications	3	44
Compliance with response time requirement	100%	100%

### 9.4 **Land Information Memoranda**

	<b>March</b>
Applications processed	29
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

#### 10.2.2 ***Bracken Road***

The contract for replacing the AC main was awarded to Tatana Contracting Ltd. The contractor has installed all the pipe and is pressure testing the pipe prior to making the connections.

10.2.3 ***Breaker Bay Road***

The contract for replacing the AC main was awarded to HP Contractors. The contractor has installed all the pipe and is preparing for the pressure test.

10.2.4 ***Tirangi Road, McGregor Street, Kingsford Smith Street, and George Bolt Street***

The contract for replacing the AC main was awarded to N Forsyth Ltd. The contractor has installed all the pipe and completed a successful pressure test. Connections are being made.

10.2.5 ***Owhiro Bay Parade***

Contract documents are being prepared for the replacement of a section of the 150 mm Eternit main. WCC has confirmed that this work should proceed this financial year.

10.2.6 ***Helston Road, Newlands***

Contract documents have been prepared for the replacement of the 200 mm Eternit main. This contract will not proceed to construction until WCC confirms finance is available for the contract works.

10.2.7 ***Rider Mains Replacement***

Contract documents are being prepared for replacement of rider mains that have reached the end of their economic life. This contract will not proceed to construction until WCC confirms finance is available for the contract works.

10.3 **High Level Distribution and Storage**

10.3.1 ***Karori South Reservoir***

Construction of the reservoir by J Juno Ltd is progressing satisfactorily. The reservoir construction is programmed to be completed by July 1999.

10.3.2 ***Makara Road Rising Main***

Contract documents are being prepared for installation of a dedicated rising main to the new Karori South Reservoir.

10.3.3 ***Lyndhurst Road Pumping Station***

The Contract is in the maintenance period.

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

The construction of the building extension and installation of the pipework is complete. The electrical panel is installed and the pumps and lights are being wired up.

Arrangements are being made for purchasing the land for the proposed reservoir.

10.3.5 ***Wadestown Reservoir***

Montgomery Watson have been engaged to arrange resource consents and undertaking the design of the proposed reservoir.

10.3.6 ***Onslow Reservoir***

Preliminary investigations have been put on hold pending instruction from WCC.

10.3.7 ***Kelburn***

Preliminary scoping investigations have been completed.

10.4 **Low Level Zone Storage**

10.4.1 ***Eastern Suburbs Storage Enhancement***

Investigations into the potential sites and proposed level for this reservoir is continuing. Network modelling and pressure monitoring is proceeding.

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

There were five minor incidents reported this month.

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# **Strategy and Asset Group**

**(March)**

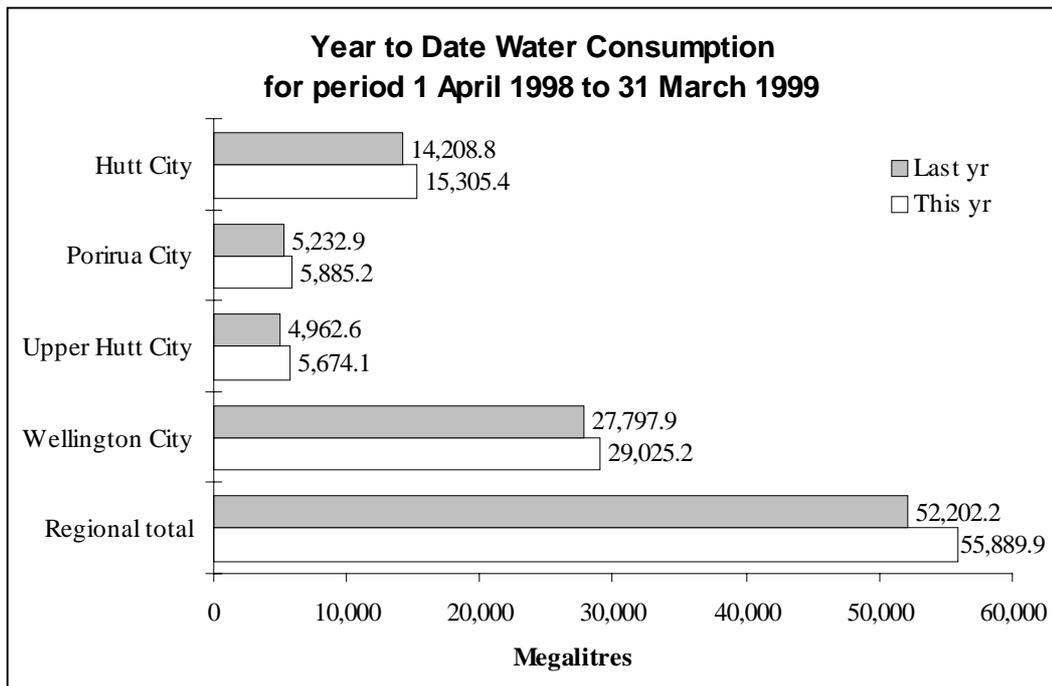
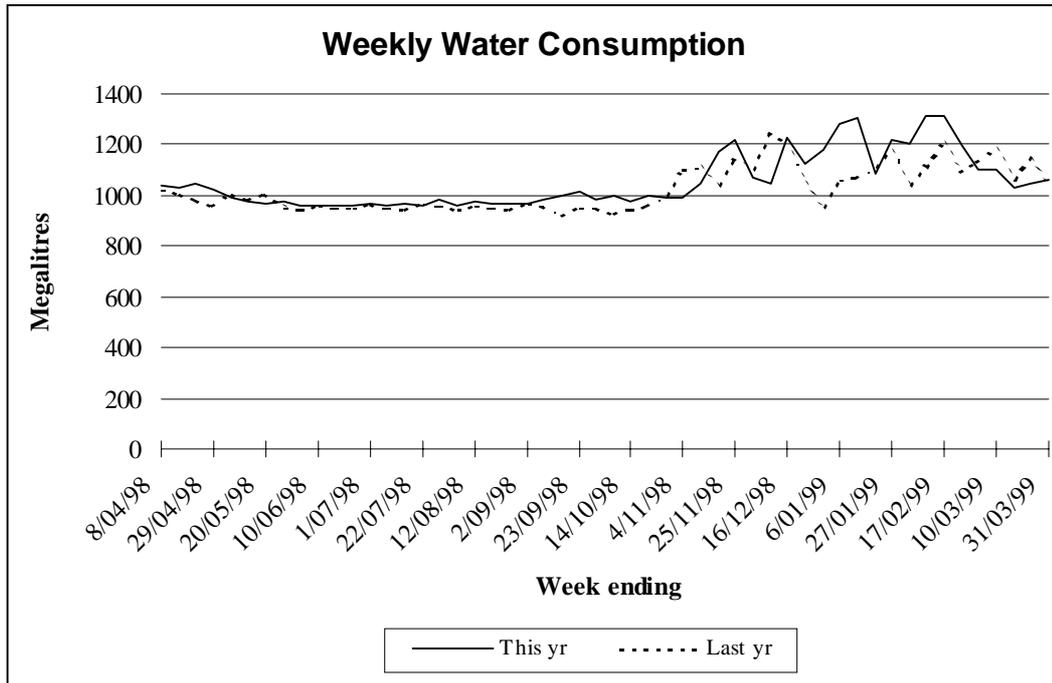
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## **Strategy and Asset Group Review of Operations For the Period Ended 31 March 1999**

### **1. Items of Note**

- The graph on the next page indicates water consumption for 1998/99 is 3,688 ML greater than the previous year. As there were 53 Wednesday weekly readings, compared to 52 in the previous year, the 1998/99 quantity can be normalised to 54,835 ML. Using this quantity the increase over the previous year is 2,633 ML or five percent. The dry summer period would account for most of this.
- It is disappointing to record that after two years work our customers have now decided they do not wish to proceed with a wholesale water supply agreement. Instead they have requested a performance specification.
- There was a recent Councillor request for information on the non-carbonated bottled water market in New Zealand. For the year ended March 1999 retail sales were \$6.84 M. If the average sales price is \$1.20 a litre then the volume is 5.7 million litres. The equivalent unit rate for our wholesale water is \$0.46 per 1,000 litres. This means the wholesale value of the bottled water market, using our rates, is \$2,622. The container, bottling, distribution, marketing and retail mark up, for bottled water therefore, are the main cost elements in the selling price.
- There is a separate paper to the Committee on Wholesale Water Pricing.
- It is proposed in May to call for registrations of interested parties to undertake a complete revaluation of the Water Group's infrastructure assets. This will be based on the Asset Management System database. The last valuation was in 1992.
- The electricity tender for the pumping stations and water treatment plants is likely to be called in June for a three year contract.
- A second hand generator set suitable for use at the Te Marua pump station has been identified. Negotiations for its purchase are proceeding.

## 2. Sales Volume



## 3. Asset Management

- Basic data has now been captured for 4,514 assets, estimated to about 75 percent of the total. Additional, more detailed data will be entered progressively as it is collected or becomes available. The target date for loading all basic asset data is 30 June 1999.
- Work on all capital works projects is proceeding. Total expenditure of just over \$5 M is forecast against a budget of \$5.984 M.

- Process optimisation trials at Te Mara are proceeding and are showing promising results.
- A report on security aspects of the Wainuiomata/Orongorongo catchment has been received from the ranger. Planning for noxious animal control is well advanced.
- The Natural Forestry Department has reported catchment vegetation management work undertaken to date. A forest health survey has shown no agencies likely to cause harm to the catchments.
- A consultant is preparing a Resource Consent Application for a new well tapping the Moera Aquifer. Consultation with Iwi and users of the aquifer will take place in April.
- Good progress is being made on the preparation of Resource Consent Applications for surface water take consents at Kaitoke, Wainuiomata and Orongorongo. Technical data is being collated and consultation with a number of affected and interested parties has been initiated.
- Preparation of a detailed technical proposal for the proposed system optimisation model is nearing completion. This model will interrogate system data and water demand and optimise the operation of the system to minimise pumping and other costs.

#### 4. **Quality Assurance**

- Work is continuing on the ten work streams identified as necessary to establish the proposed Environmental Management system under ISO 14001. A draft one page Environmental Policy has been prepared, procedures for document control and identifying environmental aspects and impacts drafted, and a communications and training strategy written.
- Modifications to the fluoride dosing equipment at Gear Island have produced some improvement in the consistency of fluoride levels.
- Improvements to the Wainuiomata Wastewater Treatment Plant have been completed. A months trial will be run to demonstrate the effectiveness of these modifications in eliminating protozoa from the supernatant liquid.

## 5. **Marketing**

### **Summer Water Conservation Campaign**

Work for this campaign continued. Main activity involved:

- Summary of water use and climate conditions for summer 1998-99 written for customers.
- Organised Water Watch notices in Contact. Final notice appeared Thursday 25 March.
- Post campaign research brief presented to Colmar Brunton. Questionnaire designed and finalised.

### **Photography for 1998-99 Business Report**

Arrangement of various photographs including school visit to Wainuiomata treatment plant, installation of new motors at Waterloo and construction of reservoir at Karori South.

### **Water Group staff newsletter**

Water Group News issue 1 written and produced during March.

### **Customer Contact**

Customer meeting held 25 March at Upper Hutt City.

### **PR**

- Arranged for TV3 film crew to visit Te Marua treatment plant to film background footage for an episode of the Channel 3 'Target' consumer affairs programme on NZ drinking water quality standards.
- Media release 'Harsheset summer for water supply since 1971' written and released 26 March.
- Media release 'Regional Council confident over Y2K readiness' written and released 16 April.

### **Education**

- Discussions and meeting with Negawatt Resources re possibility of WRC part-funding the development of water conservation resource material for schools.
- Arranged for seven groups to visit either Te Marua or Wainuiomata treatment plant, including a delegation from the People's Republic of China headed by Mr Zhu Dengquan, Vice Minister of Water Resources.
- Five additional requests for resource material supplied.

## 6. **Economics**

### **Wholesale Water Database**

User and functional specifications have been prepared. These documents provide a plan for developers to create the database. Proposals from developers are being considered. The successful developer will be chosen shortly.

### **Differential Pricing**

The project is to investigate and compare other logical methods for allocating Wholesale Water's fixed costs to the territorial authorities. The resulting discussion document will establish a source for future work into water pricing. A brief for further work has been prepared and sent to the consultant for comment and agreement.

### **Energy price tender**

Our contract with TransAlta expires 31 October 1999. A new contract is to be tendered in June.

A meeting with the new lines company, United Networks, has taken place. It was agreed that we would look to enter into a separate lines contract which might be of mutual benefit.

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

### **Te Marua Site Rehabilitation**

The second coat chip seal of the access road was completed. The planting contract is in the maintenance period.

### **Te Marua Site Development**

The contract for sealing the lower access road has been awarded to McCormack Asphalts Ltd. They have been installing kerb and channelling and preparing the road surface for sealing.

The contract for installation of a ford, pipe headwalls and rip-rap for bank toe protection has been completed and the contract is in the maintenance period. Quotations have been invited for the final stage of landscaping

### **Te Marua Lakes to Treatment Plant Pipeline**

Investigations into the relining of this pipeline are continuing.

### **Kaitoke Intake Controls**

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

### **Wainuiomata Reaction Tank**

The contractor has been attending to the outstanding items and completing the pre-commissioning checks.

### **Orongorongo Intake to Tunnel Pipeline**

The contractor attained a successful pressure test on the pipeline on 20 March. Connections have been made to the Orongorongo Intake and the pipeline through the Orongorongo Tunnel.

### **Waterloo Capacity Increase**

Minor vibration of the first pumpset has been corrected and this pump is now in daily operation. The remaining two motors have been delivered to site and grouted in position. Commissioning of these pumpsets will be undertaken in the week beginning 12 April 1999.

### **Orongorongo Pipeline Petone Esplanade**

The connections to the Waterloo system at Randwick and the Rahui reservoir rising main at Korokoro have been completed. A second scour has been installed adjacent to the sewer pumping station and a scour installed adjacent to Korokoro Stream.

### **Revenue Meter Project**

Acme Engineering Ltd has installed three of the first group of five electromagnetic flow meters.

The contract for installation of the second group of flow meters was awarded to J Juno Ltd. Design and purchase of the third group of flow meters is progressing.

### **Sar Street Pumping Station**

A replacement pump has been purchased for the Sar Street Pumping Station. The pump will be installed by the Operations Group.

### **Wainuiomata Pipeline Valve Chambers**

Design of access platforms for the Wainuiomata pipeline valve chambers is progressing. The platform will provide safer access into these chambers.

### **Plimmerton/Pukerua Bay Branch Pipeline Shut Off Valve**

Design of an automatic closing valve on this pipeline is progressing. The valve will be located adjacent to Paremata No.2 reservoir. It will close on high flow caused by a major break of the pipeline.

### **Wainuiomata River Bridge**

Connell Wagner have been approached to submit a proposal for arranging the removal of the old deck and strengthening of the abutments and central pier.

### **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 first phase of the pipework alterations is nearing completion. Work is about to start on the second phase. Five phases are proposed.

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# **Engineering Consultancy Group**

**(March)**

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# **Engineering Consultancy Group Review of Operations For the Period Ended 31 March 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 which 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 lifted the freeze on the commitment of new capital projects, but the available funding for this year has been significantly cut back. This will have an overall impact on the work flow for the group for the rest of the year. The level of Capex for 1990/00 has also been cut back, but this has not yet been assessed at the individual job level.

The group continues to manage parts of the water supply capital works programme for the City Council. Current projects underway are as follows:

### **3.2 Pipeline Projects**

Contracts have been awarded for pipeline replacement work in Bracken Road, Breaker Bay Road and Tirangi Road. Pipelaying is complete for all three contracts and work is progressing on transferring connections.

Design work is nearing completion for replacement mains in Ohiro Bay Parade, Helston Road and for various rider mains. However, it is still uncertain if all three of these contracts will be approved for construction.

### 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 construction of the extension of Weld Street to provide a legal access to private properties impacts on the two mains to the existing reservoir. The deviations required for these mains are being supervised.

### 3.4 **Karori South Reservoir**

The construction of this 800 cubic metre reservoir is now well underway. The concrete floor slab is complete, along with several of the wall panels.

### 3.5 **Grenada North High Level Zone**

The existing building has now been extended to cover the pump pit, and the building work is complete. Installation of the new pumps, pipework and electrical control panel is almost complete. When commissioned this pumping station will allow for the removal of the temporary pipework which was installed following the contamination incident in early 1998. 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 are being established at the Moa Point Sewage Treatment Plant and Kilbirnie Crescent. Network modelling is being undertaken to determine the response of the network to different reservoir levels.

### 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.

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# **Laboratory Services**

## **(March)**

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

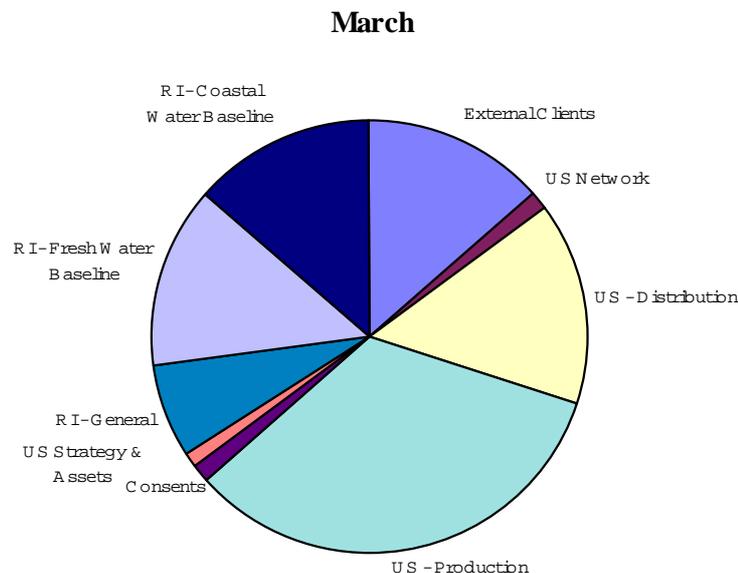
## 1. Items of Note

- The User Requirements document for the laboratory computer system was completed and a request for proposal advertised. To date we have received requests for information from 32 organisations (17 New Zealand, 1 UK, 8 USA, 6 Australia).
- The new method for the analysis of *Giardia* and *Cryptosporidium* is now being used to process all samples.
- The new filter system for use in the collection of *Giardia/Cryptosporidium* samples has been received. Quality assurance trials are completed and the filters will be used for all routine samples from April 1999. Some technical difficulties are still being addressed for field sampling.

## 2. Financial

Financial position for the year to date shows the Laboratory is meeting the budgeted surplus. The chart below shows the sources of revenue received by the Laboratory in March.

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.
- Test reports are being sent out within agreed time frames.

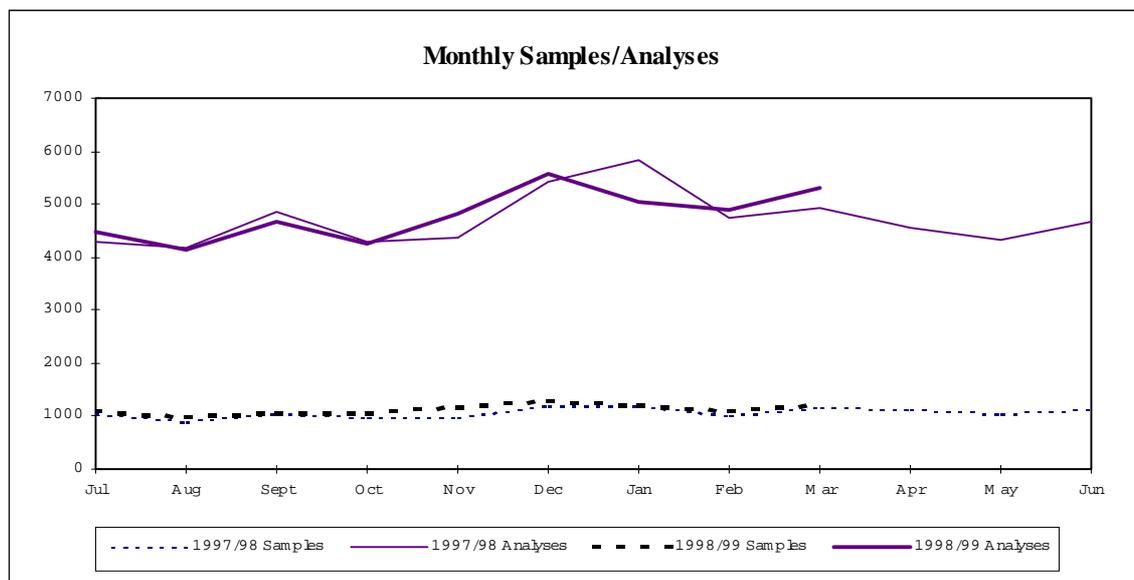
#### 3.2 Health and Safety

One staff member diagnosed with work related OOS continues to receive physiotherapy.

#### 3.3 Number of Samples analysed

##### March

- 1,209 samples
- 5,317 tests



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# **Plantation Forestry**

**(March)**

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

### 1. Log Harvest Contract

While not as good as January, February logging produced 5,042t for a royalty of \$73,664. Less acceptable was the March return of 2765 tonnes for \$28,325.

The effect of the conclusion of the logging of pruned trees in the Hukinga and the poor quality of some of the Pakuratahi stands are highlighted by the returns for the second fortnight of February. This trend continued through March.

Pakuratahi: 1134 tonnes for a royalty of negative \$1,193.

Hukinga: 735 tonnes for a royalty of \$20,553.

Most prices remained steady with only minor increases in export grades.

<b>February</b>			<b>March</b>		
<b>Pruned</b>	375.2t	7.4%	<b>Pruned</b>		
<b>S Grade</b>	279.0t	5.5%	<b>S Grade</b>	113.94	4.1%
<b>A grade</b>	377.0t	7.5%	<b>A Grade</b>	328.68	11.9%
<b>L grade</b>	28.32t	0.6%	<b>L Grade</b>	311.54	11.3%
<b>B grade</b>			<b>B Grade</b>		
<b>Pulp</b>	1,420t	28.2%	<b>Pulp</b>	681.9	24.7%
<b>Douglas Fir</b>	112.3t	2.2%	<b>Corsican</b>	201.8	7.3%
<b>Export</b>	2,405t	47.7%	<b>Export</b>	1127.6	40.8%
<b>Roundwood</b>	44.74t	0.9%	<b>Roundwood</b>		
<b>Total</b>	<b>5042</b>		<b>Total</b>	<b>2766</b>	
Average royalty	\$17.12/t		Average Royalty	\$10.24	
Total royalty	\$73,663.58		Total Royalty	\$28,325.84.	

### 2. Silviculture Contracts

In the current contract, 384.8 hectares out of a total of 556ha was completed by 31 March.

Pruning and thinning was carried out on the Tyson Block that is "owned" by Wellington Regional Council and Transit, and lies on the alignment of Transmission Gully. The cost will be recovered through a property management company.

### 3. **Plantation Forestry Operations**

The continued good weather has kept road maintenance to a minimum and there has been sufficient intermittent rain for the new plantings and to control the fire risk.

Preparations are underway for aerial releasing in late April or early May, to prepare for planting and to reduce weed pressure on last years' plantings.

Logging on the lower Incline has been completed between the ford and the access road to the river crossing. This section has been reinstated with the culvert that bypassed bridge 4 being removed. All skid site accesses have had the culverts removed and the water tables reinstated. All that remains to be done is to grass the area around Beehive Bend and remove the props from bridge 3.

Contractors are currently upgrading all water tables and cleaning culvert stilling basins prior to the onset of winter.

### 4. **Forest Access**

Full access has been maintained to all blocks.

It has been necessary to water the Valley View Road where it runs along the bank of the Hutt River to alleviate dust nuisance to residents in McLeod Street, Upper Hutt.

Resource Consent applications were lodged as follows

WRC	For culverts related to the construction of logging roads in Whakatikei For the construction of an access road into Pakuratahi East
UHCC	For the construction of an access road into Pakuratahi East
KCDC	For the harvest of Whakatikei Forest
Transit NZ	For the right to access State Highway 2 from Pakuratahi East Forest.

### 5. **Market Trends**

The domestic market remains steady with little price fluctuation. It is anticipated that prices may firm with the onset of winter and the consequent reduction of the volumes of logs available. The availability of export pulp markets is putting pressure on the domestic pulp markets and some price improvement may result.

Although export prices are basically flat with the price movements being in response to the movement in the dollar the outlook is for slowly firming prices. The availability of Kanematsu as a pulp outlet will be of great benefit to Wellington Regional Council especially ex Pakuratahi. While the Korean market is stagnant, China and India are available and there is no problem moving all available products from our Forests.

The logging of Radiata in Hukinga has ceased and it should be replaced by production from Whakatikei in mid April.

The helicopter logging of Douglas Fir in Hukinga commenced late March and should be completed by the end of April.

## 6. **Fire at Mangaroa**

On 11 February around 3 hectares of trees were destroyed by fire in the Mangaroa block. The fire was detected by a staff member, domiciled at the Upper Hutt Depot, on his way home. The staff member was on Fire Duty as well.

The fire was attended to by: Wellington Regional Council staff; NZ Fire Service; Hutt Valley Bush Fire Force and two helicopters.

The cause is still under investigation by Loss Adjusters, on behalf of our insurers, but it appears to be related to power lines that pass through the block.

## 7. **Public Attitudes**

We have always been aware that there was a segment of the public who delighted in obstructing authority but the actions of some of the public while the Helicopter logging has been taking place in the Hukinga simply defies logic.

Prior to the commencement of the logging, signs were placed at all public entrances advising the public that access would be denied while logging took place. Advertisements were also placed in newspapers. Despite the loggers placing additional signs when they commenced work, numerous groups have encroached onto the work sites placing both themselves and the logging crews in unnecessary danger. Many of these people acknowledge seeing the signs and chose to ignore them.

The worse example was a father and son on a “quad” who lifted the protection tape and drove under it onto the skid site as the helicopter approached with 4 tonnes of log suspended beneath it. Since this incident we have employed a person to stand on the approach track to turn people back. Many have still sought to continue despite his warnings.

Due to the costs associated with helicopter logging, the dependence on suitable weather and to minimise public disruptions, the decision was taken to work on a “seven day” basis in an effort to complete the task in the shortest possible time. Work was suspended over the Easter break.