
Water Supply

(February)

Operations Group

(February)

Operations Group Review of Operations For the Period Ended 28 February 1999

1. Items of Note

The past two months have produced extremely high demands on the Production plant. It is interesting to note that these high flows have been produced without any emergency situation developing.

An analysis of the transgressions reported during the February period indicated that repairs carried out to treatment equipment have been effective.

During the past two months work has commenced on the analysis of the treatment process at Te Marua using the Pilot Plant leased off Hunter Water.

2. Water Quality

A total of 536 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 6.5 and 8.3 m, and in the south lake between 5.4 and 7.6 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*
- South Lake: *Oscillatoria*, *Asterionella*

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

Dissolved oxygen and pH readings are also satisfactory.

Twenty four 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
	Intakes:	
	- Orongorongo River Intake	- low levels of <i>Giardia</i> but no <i>Cryptosporidium</i> detected.
	- Big Huia Intake	- low levels of <i>Giardia</i> and <i>Cryptosporidium</i> .
	- Wainuiomata River Intake	- low levels of both <i>Giardia</i> and <i>Cryptosporidium</i> detected.
	- Georges Creek Intakes	- low levels of both <i>Giardia</i> and <i>Cryptosporidium</i> detected.

In addition 12 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 February period. Transgressions reported by the Laboratory were:

- 4 low chlorine residual
- 4 high chlorine residual
- 2 low pH
- 3 high pH
- 2 low alkalinity
- 3 high fluoride

3. Supply Situation

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

Situation as at 10 March:

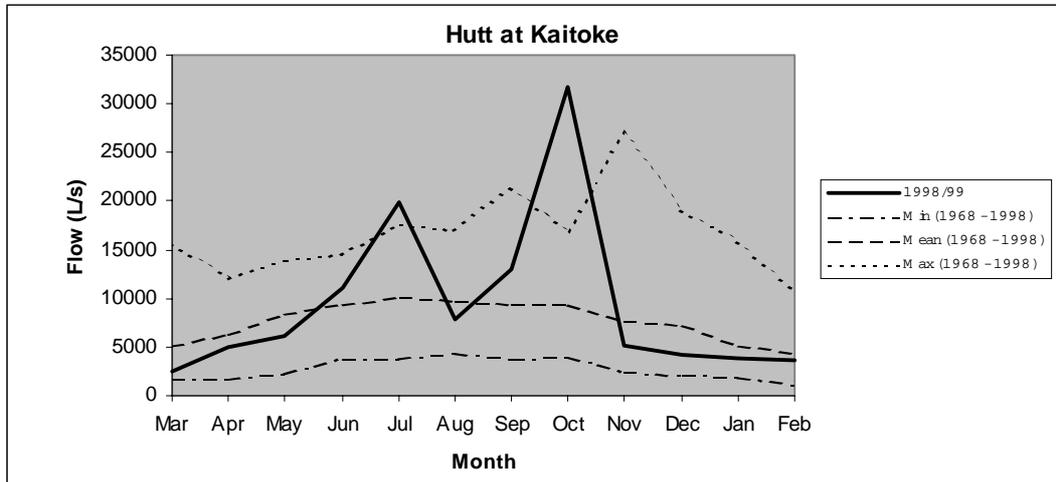
For Wellington:

Rain: near normal. Wind: less than normal. A few southerly changes. Return to northwesterlies in April but only moderate strength. Temperature about normal. Some frosts from mid to late March. Sunshine, about normal. Specials; possible strong cold southerly changes. Confidence; moderate to high.

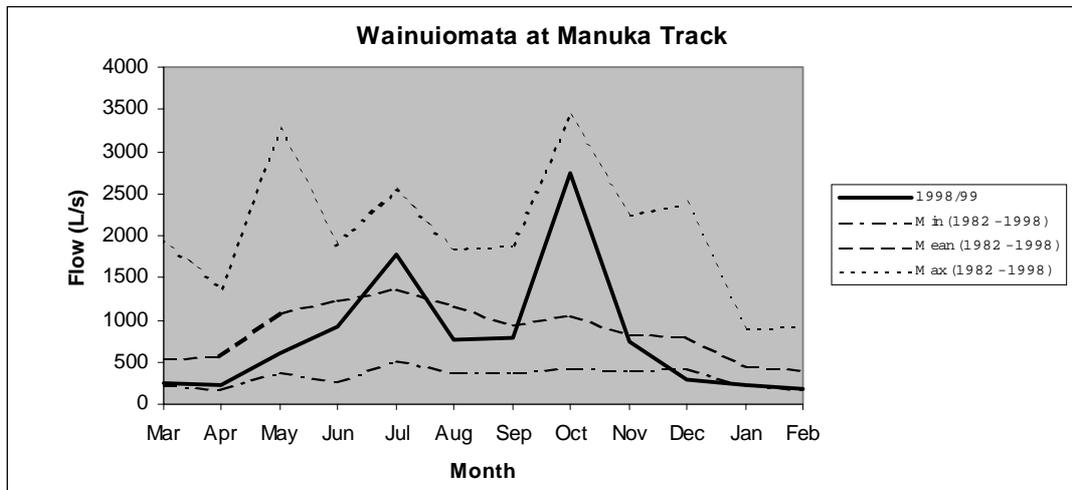
The golden summer of 1999 is now over and this region is getting ready for winter in typical fashion with the return of the cold fronts. There should be still be some high pressure systems bringing several days of clear wind-free weather, but after Easter these are fewer and less noticeable. Cold fronts, preceded by a period of

strong north or northwest winds, and followed by a period of showery southerlies, are expected about once a week. A few of the southerly changes could well be strong of even gale force. Sunshine and temperature should follow their normal variations.

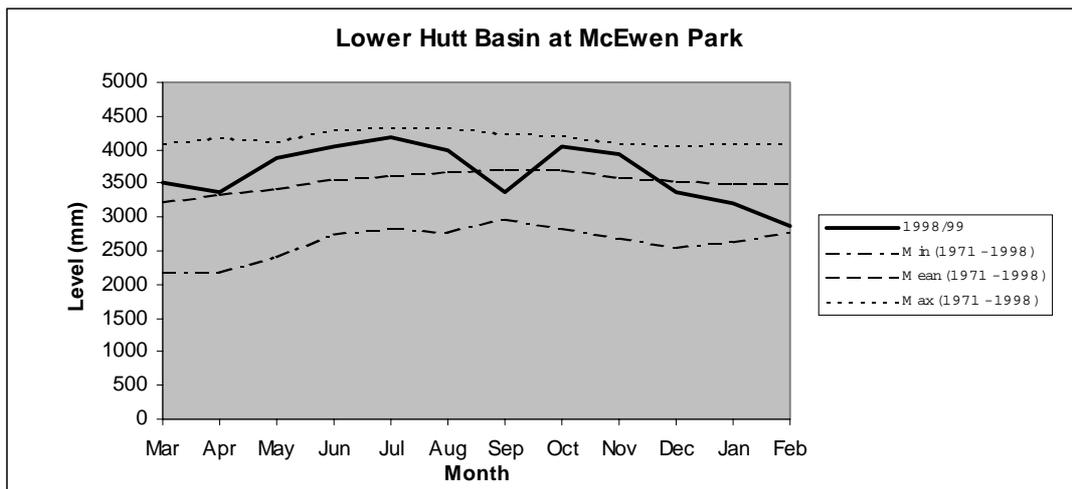
Hutt River Flows



Wainuiomata River Flows



Aquifer Levels



4. **Production**

4.1 **Te Marua**

Supernatant and Sludge Lagoons

Supernatant has been discharged to the Hutt River using the new installation. Due to the popularity of swimming holes in the vicinity of the discharge, care has been taken to minimise discharges during the summer.

Kaitoke Upgrade

Installation work by Te Marua staff is still underway but has been slightly delayed due to equipment deliveries.

Smart Lake Filling

The automatic lake filling system has now been commissioned and is proving to be very successful.

Boost and Treatment Pump Drive Shafts

The servicing of drive shafts is about to recommence after being delayed over the summer period.

Boost Pump 3

An updated control system for Boost Pup 3 is currently being installed. This will give better, more flexible control of either pressure or flow in the Hutt North system.

Chemical Tank High Level Alarms

Audible high level alarms are being fitted to the caustic and alum storage tanks to prevent any accidental overflows during delivery.

Plant Tours

5 February	Palmerston North City Council	3
9 February	NZ Water and Waste Association	40
25 February	Opus Water Treatment Plant Operators Training Course	14

4.2 **Wainuiomata Water Treatment Plant**

The plant has continued to produce quality water during the current period of dry weather but since 8 February has been limited to 10 ML per day due to the necessity to shutdown the Orongorongo catchment to enable the construction of the new pipeline.

Work continues on the construction of the contact tank at Wainuiomata. Problems have been experienced with the actual commissioning of the installation.

The employment of a ranger to monitor the activities within the catchment has had a beneficial effect on trespass and unofficial hunting activities.

Twice nightly patrols are being carried out by Metro Security. This will continue for the foreseeable future.

Work continues on modifying the software controlling the operation of the plant.

Work has commenced on the construction of a Pilot Plant to simulate the treatment process. Components from the Pilot Plant at Te Marua have been used to minimise the cost.

4.3 **Waterloo**

The Waterloo Treatment Plant has been running at maximum flows.

The capacity increase upgrade is continuing and the first Wellington pump has been installed and commissioned.

During the period alterations have been completed to the lime dosing equipment, these appear to have reduced the frequency of plant shutdowns.

4.4 **Gear Island**

During the period of high demand, Gear Island has continued to operate at maximum rate.

Modifications have been made to the Fluoride Treatment Plant.

5. **Distribution**

Electrical Section

Telemetry and Control

The new Woodridge Reservoir in Newlands has been brought into service.

Staffing

One of our electrical technicians, Wayne Keating, has transferred to the Production Department. Wayne has been replaced by Chris Appleby who is presently being trained and familiarised with his duties and the systems.

Thorndon Pump Station

The pumps at Thorndon Pump Station were checked and tested, and run to flush the OK main to Karori.

Pipeline Section

Gear Island Wellfield

A new magnetic flow meter has been installed in the collector main, and an additional scour installed near the aeration chamber.

New Rahui Reservoir Rising Main

The 1050 main was shut down and a new branch was cut in to supply the new Rahui Reservoir. At the same time a scour valve in the Korokoro valve chamber disintegrated and had to be replaced. Two other 400 mm branch valves were serviced. During the same shutdown, the Production Department modified the chlorine dosing point at the Gear Island valve chamber.

OK Main Cleaning and Testing

The section of OK main from Thorndon Pump Station to Karori was flushed on three separate occasions. Each time the main leaked in Glenmore Street near The Rigi. The last leak has not been repaired, and the problem has been handed to Asset Management for advice.

The section of OK main between Randwick and the new Rahui rising main is being flushed by the Engineering Consultancy Group. We are assisting them with this work.

General

A private supply for Parks and Recreation was installed at the Te Marua reserve.

6. Health and Safety

Total Injury/Illness/Incident Record:

Production: Incident – Wainuiomata Reaction Tank Filling
Non-serious Harm Injury – Lime splash into eye

Distribution: Non-serious Harm Injury – Hip strain

Network	Non-serious Harm – (2)	Upper back strain
	Non-serious Harm – (3)	Lower back strain
	Non-serious Harm	Neck strain
	Non-serious Harm	Shoulder strain

- A progress review was undertaken of the remedial work in the Wainuiomata/Orongorongo catchment area.

Wellington City Water Review of Operations For the Period Ended 28 February 1999

1. Items of Note

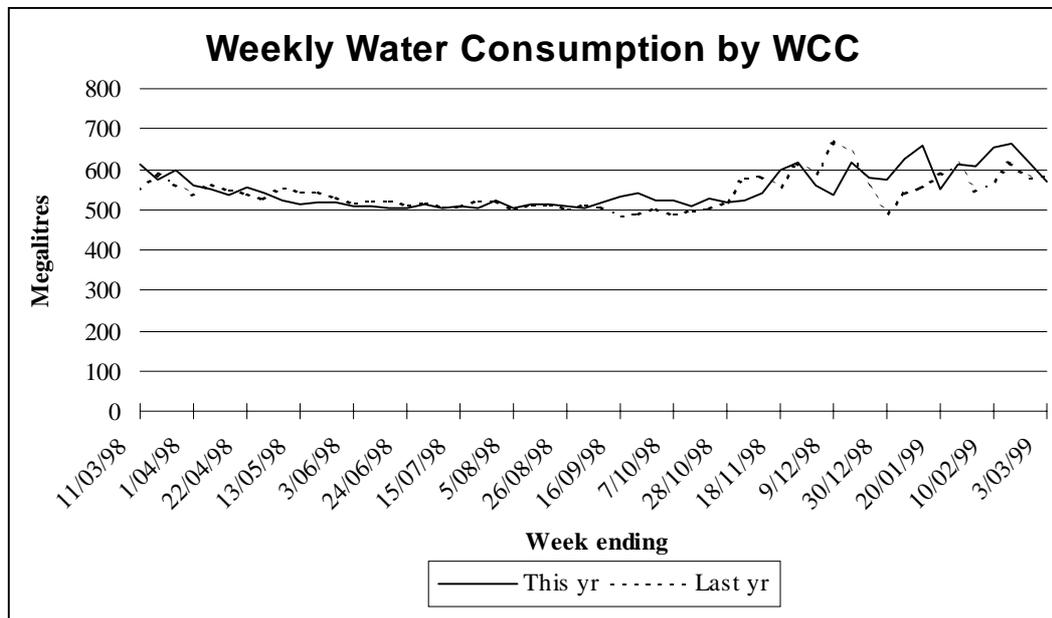
During the month the activities of the sub contractors working for Saturn continue to impact on the operation of the Network Group with 46 repairs being caused by their activities.

The overall performance has been hampered by delays in receiving manifolds from Wellington City Council.

The high levels of system demand have been met satisfactorily.

Problems have been caused by Wellington City contractors carrying out un-notified valving operations.

2. Water Supply (PT 30.1)



3. Financial

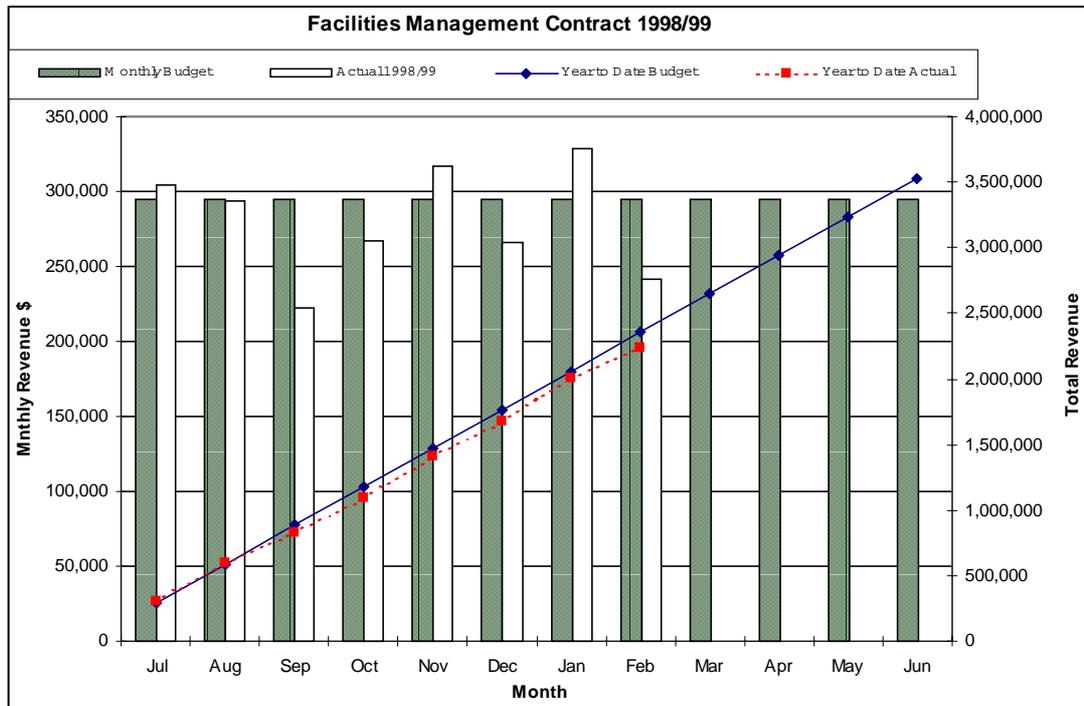
3.1 Facilities Management Contract

Contract Amounts : Wellington, including Tawa

Month	Actual \$	Budget \$	Variance %	Year to Date	Budget \$	Variance %

				\$		
February	241,44	294,31	-17.96	2,242,28	2,354,	-0.05

February: Expected outturn: \$3,419,538



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 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)

	February	Year to Date	Compliance (%) Year to Date
Number received	9	73	-
(PT 2.2) Within ability of Wellington City Water to control	2	29	-
(PT 2.1) Formal response within five days	9	68	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 107 enquiries were received during February.

	February
Counter enquiries	97 (+ 10
Proposals from other utilities	13
Plan records: - New services	26
Compliance with response time	100%

(PT 33.1)

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:

	February	
		Complaints
(PT 2.2)	Water quality	9
(PT 16.1.2)	Pressure	17
(PT 20.1)	Reinstatement	0
(PT 16.1.4)	No-water	25
	Contractors	0
	Other	13

All of the 17 “pressure” complaints were responded to and completed within the performance criteria. Twenty four of the 25 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 32 minutes.

6. Response Maintenance

6.1 Compliance

	February			
	Number of	Completed to	Compliance %	
(PT 9.1)	Stopcocks	485	413	85
(PT 9.1)	Hydrants	106	86	81
(PT 9.1a)	Valves	18	17	94
(PT 9.2)	Other Leaks	233	206	88
(PT 10.1)	Mark Outs	69	69	100
(PT 16.1.1)	Burst mains	9	8	88
(PT 2.1)	Water Quality	12	12	100
	Total	932	811	87

In addition to the above numbers, there were 46 repairs made to services/mains which had been damaged by other parties and 18 miscellaneous leaks attended to. There were a total of 23 new services connected.

It should be noted that the above results were achieved without having manifold stock on hand for a total of seven days this month.

6.2 Burst Mains (PT 16.1)

There were a total of nine burst mains during the month of February. They were as follows:

Murphy Street, Thorndon	01.2.99
44 Rothsay Road, Ngaio	02.2.99
232 Oriental Parade, Mt Victoria	03.2.99
Taranaki Street (Between Wigan and Able Smith Street)	10.2.99
Cnr Owhiro Bay Parade and Happy Valley Road	16.2.99
Churchill Drive, Crofton Downs	18.2.99
Cochrane Street (o/s RNZAF Fuel Terminal)	15.2.99
Lucknow Terrace, Khandallah	24.2.99
67 Bassett Road, Johnsonville	05.2.99

Eighty eight percent of the burst mains were attended to within 30 minutes and 100 percent repaired within eight hours. The one burst, which was not attended to within the 30 minutes, failed by one minute.

6.3 Supply (PT 16.1)

	February
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	35
Total Compliance	94%

6.4 Reinstatement (PT 20.1)

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

6.5 Shutdown Notification (PT 6.1)

There were 30 planned shutdowns during February. 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:

	February
Locate stopcocks	102
Leak location	116
Flow tests	2
Seepage/Investigations	7
Miscellaneous supply jobs	20

7. **Meters (PT 13.1)**

A total of 1,306 City and High Use meters were read and entered into the system by 23 February 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 **Staff Changes**

Wayne Keating has transferred to the Production department. He has been replaced with a new recruit Chris Appleby.

8.4 **Repairs**

The pump motor at Ruskin Road Pump Station burnt out. It has been re-wound and is back in service.

8.5 **Maintenance Checks (PT 17.4)**

Maintenance has been carried out as follows:

February	
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	February	Year to Date
Construction plans approved (lots/units)	0	14
Scheme plans approved	31	238
Subdivisions cleared (lots/units)	3	240

9.2 Development Projects

9.2.1 *Woodridge Reservoir*

Reservoir commissioned and put into service. No problems experienced or reported. Reservoir now operating satisfactorily. Disconnections of old reservoir and land issues being arranged.

9.2.2 *Westpac Trust Stadium*

North connection designed. Construction to commence soon.

9.2.3 *Churton North Reservoir*

Amended reservoir construction plans received. Financial negotiations continuing.

9.2.4 *Meadowcroft Grove*

Stormwater from Johnsonville West. Reservoir being dealt with.

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

- 318 Oriental Parade
- Upland Road – Cable Card End
- 24 Mallard Grove

9.2.6 *Domestic Services Priced*

- Signals & Speedlink Building
Waterloo Quay

Domestic Services (PT 12.2.) Recently Connected

- 369 Adelaide Road
- 41 Mulgrave Street
- Newlands Shopping Mall

9.3 Building Development Appraisals

	February	
	Commercial	Domestic
Building consents	1	41
PIMS applications	1	41
Compliance with response time	100%	100%

requirement		
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9.4 Land Information Memoranda

	February
Applications processed	32
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 Ln
- Chelmsford Street
- Johnsonville Road

10.2.2 *Bracken Road*

The contract for replacing the AC main has been awarded to Tatana Contracting Ltd. The contractor has installed approximately half the pipe along Bracken Road.

10.2.3 *Breaker Bay Road*

The contract for replacing the AC main has been awarded to HP Contractors. The contract start has been delayed pending approval of the contractors Health and Safety Plan.

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

The contract for replacing the AC main has been awarded to N Forsyth Ltd. The contractor is about to start on site.

10.2.5 ***Owhiro Bay Parade***

Contract documents are being prepared for the replacement of a section of the 150 mm Eternit main. This contract will not proceed to construction until WCC confirms finance is available for the contract works.

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***

The contract for the construction of the reservoir has been awarded to J Juno Ltd. The contractor has started pouring the floor slab.

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. This contract will not proceed to construction until WCC confirms finance is available for the contract works.

10.3.3 ***Lyndhurst Road Pumping Station***

The Contract is in the maintenance period.

10.3.4 ***Level Monitoring System***

The maintenance period for Stage IV has ended and the final payment made to the contractor.

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

The construction of the pumping station building extension is complete. Installation of the pumps, pipework and electrical panel is progressing.

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

10.3.6 ***Wadestown Reservoir***

Submissions have been received from consultants for arranging resource consents and undertaking the design of the proposed reservoir. The recommendation for engaging Montgomery Watson has been accepted.

10.3.7 ***Onslow Reservoir***

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

10.3.8 ***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.

Strategy and Asset Group

(February)

Strategy and Asset Group Review of Operations For the Period Ended 28 February 1999

1. Items of Note

Water consumption over the summer has been higher than the last few years.

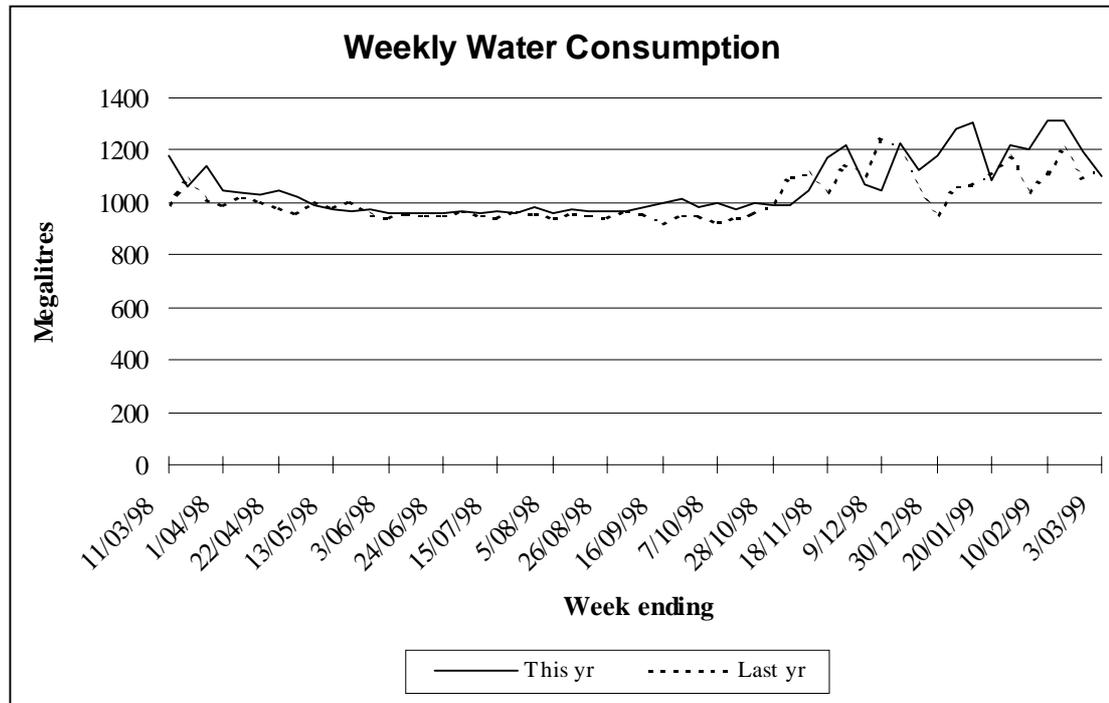
The water conservation campaign over the summer cost \$61,000. A maximum sum of \$70,000 was allocated.

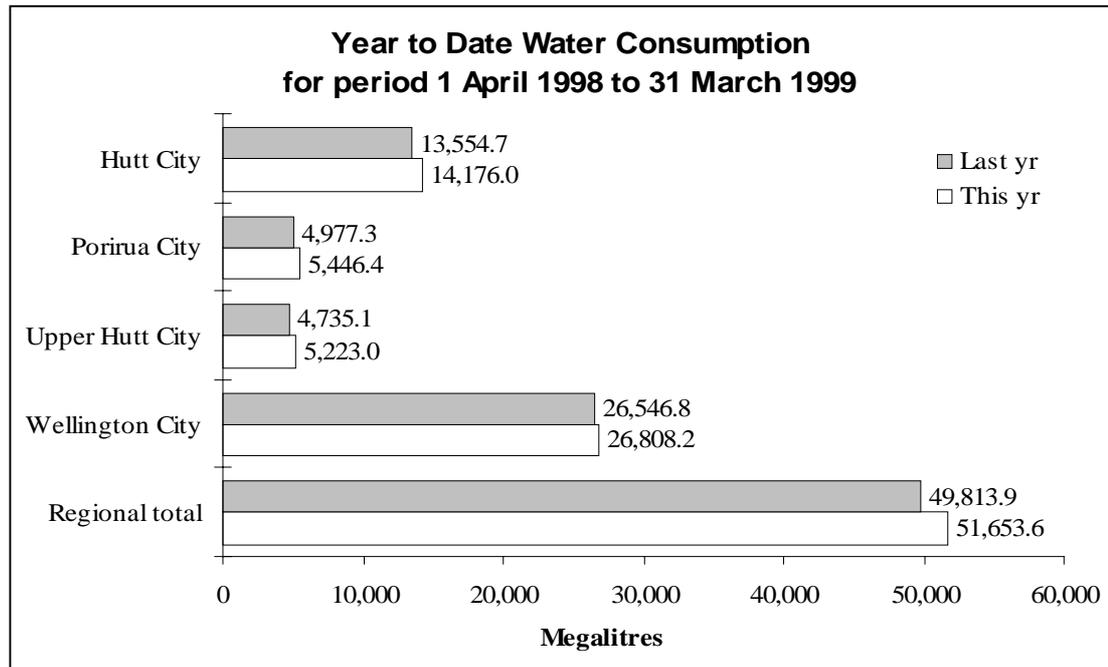
It is now two years since we issued an "Invitation to contribute" document to our customers concerning a Wholesale Water Supply contract. A contract has still not been concluded.

Hutt City are seeking a resource consent to use our lower dam at Wainuiomata. This is for river flushing purposes when river flows are low in summer.

There was a request at a recent special Utility Services Committee meeting for a paper on water pricing. This will be available for the next meeting of the Utility Services Committee.

2. Sales Volume





3. Asset Management

- Loading pipeline data into the Hansen Asset Management System is substantially complete. Checks for quality and completeness will be done. Data associated with production equipment assets is being collected and compiled on a spreadsheet in preparation for loading directly into Hansen. Information on structures has still to be compiled.
- Briefs have been prepared for all new projects in the 1998/99 Capital Works Programme.
- A process expert to take control of investigations into increasing the capacity of the Te Marua WTP has been employed and has commenced work planning optimisation trials.
- A ranger has been employed through Landcare to manage the Wainuiomata Catchment. The overall security of the catchment will be reviewed when the ranger has reported his initial findings. One surplus house at Wainuiomata is to be disposed of.
- A draft brief has been prepared for improvements to the Haywards reservoir, which is programmed for upgrading in 1999/00.
- Catchment vegetation management work undertaken to date has been reported by the Natural Forestry Department. Measures to control possums in the Wainuiomata and Orongorongo catchments are planned and have been separately reported.
- Good progress is being made on the 1998/99 Capital Works programme. Full year expenditure of \$5.33 M is forecast, a little below the budget of \$5.984 M.

- A consultant is preparing a Resource Consent Application for a new well penetrating the Moera Aquifer which is below the Waiwhetu aquifer. Preliminary engineering investigation work has also been undertaken. This currently untapped source will provide additional peak demand capacity, and provide additional security of supply.
- A Consultant has been commissioned to prepare Resource Consent Applications for surface water take consents at Kaitoke, Wainuiomata and Orongorogo. These “Notified Use” consents expire in October 2001.
- Beca Carter Hollings and Ferner have been commissioned to prepare a detailed brief for the proposed system optimisation model. This model will interrogate system data and water demand and optimise the operation of the system to minimise pumping and other costs.
- A consultant has been engaged for the Te Marua Pump Station standby generator project. Power factor correction will be included as part of this.

4. **Quality Assurance**

- Work is continuing on the 10 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.
- New fluoride dosing equipment has been installed at Wainuiomata and Waterloo, giving much improved control of fluoride levels. Work is underway to modify and improve the fluoride dosing equipment at Gear Island.
- The Wainuiomata Treatment Plant is discharging its supernatant to the river, rather than recycling it back to the head of the plant, until improvements to the wastewater treatment plant are completed. A short term consent is held for this.
- Marked fluctuations to the residual chlorine levels from the Wainuiomata Plant occurred in early February due to the very low throughput. Modifications to the chlorine equipment were made and the chlorine levels stabilised.

5. **Marketing**

Summer Water Conservation Campaign

Work for this campaign continued. Main activity involved:

- Press advertorial placed in newspapers mid January and early February.
- Daily radio advertising placed from 18 January to the end of February. Execution chosen daily dependent on weather conditions.

- Weekly Water Watch notices created and placed in the Contact newspaper from late January.
- Press release written warning the public to take particular care watering – February.
- Post campaign research brief written.

Photography for 1998-99 Business Report

Helicopter lifting work re pipeline replacement in the Orongorongos investigated and photographed – 2 days.

Water Group Staff Newsletter

Planning for a re-launch of the Water Group's staff newsletter timed for mid March.

EMS

Assisted in planning communication strategy for EMS implementation.

Customer Contact

- Water Watch customer briefing produced weekly.
- Leak detection funding applications for 1998-99 year received from Wellington City, Hutt City and Porirua City. Responses sent.
- Two queries re water quality from Hutt City investigated and responded to.
- Customer meeting arranged for 25 March.

Education

Arranged for nine groups to visit Te Marua or Wainuiomata water treatment plants. Four additional requests for resource material supplied.

Print Production

Reprint of supply interruption notification cards produced for Operations Group – Network.

Reprint of Water Group Report of Business Activity 1997-98.

6. Economics

Wholesale Water Database

A database which stores all the telemetered and manual meter readings from each of the treatment plants, reservoirs, and supply points is being developed. The resulting 'datamart' will make it easier to investigate and analyse the vast amounts of data that

the control system produces. User and functional specifications have been prepared. These documents provide a plan for developers to create the database. The completed specification documents are currently in the hands of three prospective Oracle developers who are considering them before offering a timetable and quote to construct the database.

Differential Pricing

A consultant was engaged to investigate and compare other logical methods for allocating Wholesale Water's fixed costs to our customers. The resulting discussion document will establish a source for future work into water pricing. Report has been completed and consultants asked to clarify some points.

1998 Benchmarking report

This is an annual comparison of water authorities in New Zealand using benchmarks designed by Water and Wastes Association working group. There are close to twenty participants and the results are collated by PriceWaterhouseCoopers.

The 1998 report is complete and key benchmarks will be presented to the committee.

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

Te Marua Site Rehabilitation

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 are expected to complete this work in March 1999.

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. The contract for the final stage of landscaping is being prepared by Pharazyn Landscape Design.

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 completing the remaining installation works and undertaking the pre-commissioning checks.

Orongorongo Intake to Tunnel Pipeline

The contractor started replacing the pipeline on 8 February 1999. The fine weather has permitted excellent progress allowing approximately 40 percent of the pipe to be installed by the end of February.

Waterloo Capacity Increase

Pipework, pump and control panel installation within the water treatment plant is complete. One motor has been installed and the pump successfully commissioned. The remaining two motors are due to arrive in 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 new scour has been installed adjacent to the sewer pumping station. Flushing to clean the main has commenced.

Revenue Meter Project

The contract for the installation of the first group of electromagnetic flow meters at the delivery points to the TLA reservoirs was awarded to Acme Engineering Ltd. The contractor will be starting work in early March.

Tenders have been invited for the installation of the second group of flow meters.

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

Investigations into improving the safety of the access platforms in the valve chambers has been initiated.

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. Plans have been prepared and orders placed for valves.

Engineering Consultancy Group
(February)

Engineering Consultancy Group Review of Operations For the Period Ended 28 February 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 about to commence 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

Wellington City Council has announced a freeze on the commitment of new capital projects. This may have a significant impact on the work flow for the group for the rest of the year. The level of Capex for 1990/00 is as yet unknown.

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. Work is well underway in Bracken Road with the other two contracts about to commence.

The pipeline replacement on The Terrace, between Bowen and Bolton Streets was successfully completed in January.

Design work is proceeding for replacement mains in Ohiro Bay Parade, Helston Road and for various rider main replacements. However, it is still uncertain if these contracts will be approved for construction.

Some work has been undertaken on the design of the replacement main in Taranaki Street between Manners and Buckle Streets. This project is now on hold.

3.3 Wadestown Reservoir

Submissions were received from consultants for the design of a replacement reservoir, capacity 1,800 cubic metres. The recommendation that Montgomery Watson be engaged has been accepted.

Preliminary pipework layouts have been prepared along with the design of pipeline deviations required for the extension of Weld Street. This will provide a legal access to private properties.

3.4 **Karori South Reservoir**

The construction of this 800 cubic metre reservoir is now well underway. Half of the existing group of tanks have been removed, and initial earthworks are complete. Work has commenced on the construction of the concrete floor slab.

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. Work is underway on the installation of the new pumps, pipework and electrical control panel. 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 and network modelling is being undertaken.

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 **Staff**

Sandra Kerr, Graduate Engineer, is now on maternity leave until later in the year. Her position will not be filled on a temporary basis.

Laboratory Services

(February)

Laboratory Services Department Review of Operations For the Period Ended 28 February 1999

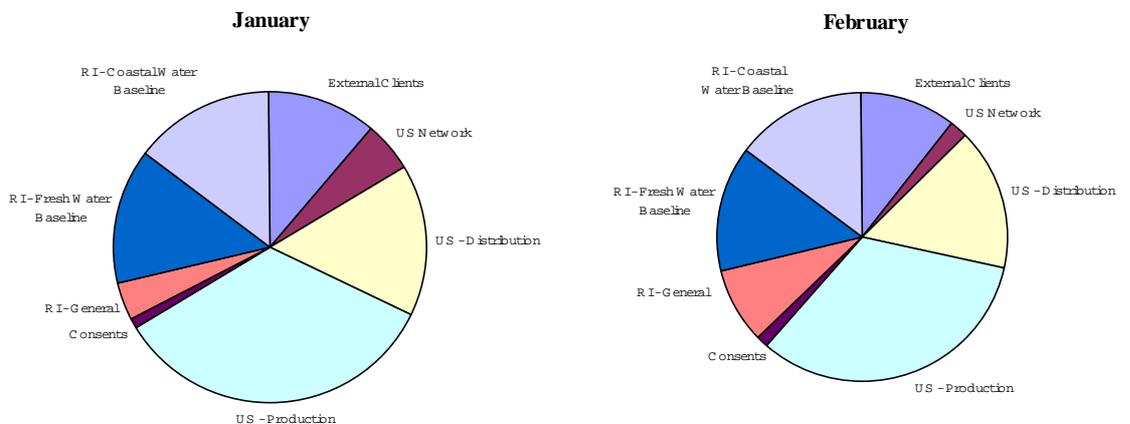
1. Items of Note

- A user requirement document has been drafted by our consultant as a first step in the process to replace the existing laboratory computer programme. It is anticipated this will be finalised in early March.
- The laboratory is trialing a new method for the analysis of *Giardia* and *Cryptosporidium* and good results are being achieved. It is expected that all samples will be analysed using this method from April.
- A new filter system has been ordered from England for use in the collection of *Cryptosporidium/Cryptosporidium* samples. The cost of the filter is significantly higher than the old system, however, it means that we will be using the best available method for the collection of samples and will be on a par with international methodology.

2. Financial

Financial position for the year to date shows the Laboratory is meeting the budgeted surplus. The charts below show the sources of revenue received by the Laboratory in January and February.

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 still receiving physiotherapy.

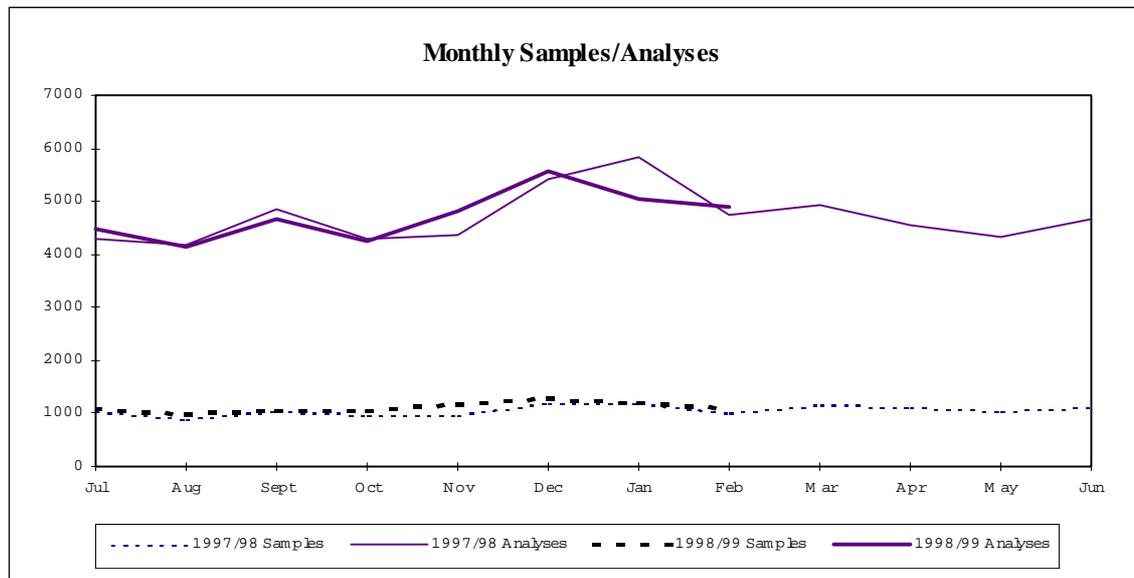
3.3 Number of Samples analysed

January

- 1,203 samples
- 5,034 tests

February

- 1,097 samples
- 4,898 tests



Plantation Forestry

(January)

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

1. Log Harvest Contract

Best month so far with a total of 7,012 tonnes harvested for a total royalty of \$116,218.

Pruned prices eased by \$15/tonne but this was offset by increases of \$2 - \$7 on export grades.

Output by grade was;

	January	
Pruned	511.6t	7.3%
S Grade	485.3t	6.9%
A grade	292.1t	4.2%
L grade	208.7t	3.0%
B grade	387.2t	5.5%
Pulp	2,532t	36.1%
Douglas Fir	115.2t	1.6%
Export	2,480t	35.4%

Total 7,012.5

Average royalty \$16.11/t
Total royalty \$116,218.

2. Silviculture Contracts

313.2 hectares out of a total of 556ha in the current contract had been completed by 31 January.

3. Plantation Forestry Operations

Good weather has reduced pressure on roads and allowed good progress with both harvesting and silviculture.

Although it has been necessary to put a fire ban in place the intermittent rain which has fallen has been enough to meet the requirements of the growing trees.

4. **Forest Access**

Full access has been maintained to all blocks.

Work continues on reinstating water tables.

There is little work remaining in the area of the lower Incline walkway and planning is underway to reinstate the running in as near original condition as feasible.

Still researching options for access to the Pakuratahi East block and thus no resource consents have been sought. Time on this project is becoming critical as it was hoped to tenders for harvesting awarded in time for a July start.

We have negotiated access through a neighbouring farm for the Whakatikei harvest. This should enable harvesting to commence in mid March and will avoid the roading costs (in excess of \$500,000) sought by the K.C.D.C.

5. **Market Trends**

The domestic market is still showing signs of softening with a reduction in Pruned prices. While other domestic prices remained unchanged pressure for a reduction is building.

Export prices firmed marginally. Whether this is a real increase or just currency fluctuations is difficult to tell. There appears to be plenty of demand with all “within spec” product going over the wharf.