
Greater Wellington Water

March/April 2005

Operations Group

March/April 2005

Operations Group Review of Operations for the Period Ended 30 April 2005

1. Items of Note

- Masterton District Council

The Contract with Masterton District Council for the management of Kaituna Water Treatment Plant commenced in April. The initial work is focused on reviewing the water supply infrastructure and associated operations, and the Public Health Risk Management Plans.

The required outcomes of these reviews are to provide recommendations aimed at:

- Improving performance of the treatment plant
- Improving treated water quality
- Reducing operational risks
- Addressing the outcomes of the Council's Public Health Risk Management Plans
- Contributing to the Council's Capital Works planning
- Compliance with *Drinking-Water Standards for New Zealand* and all other applicable legislation

It is pleasing to note that an early benefit we have been able to deliver is a reduction in the chemical supply pricing. The reduced pricing will result in a \$20,000 annual saving for Masterton District Council.

- Orongorongo Flood Damage

The severe rain event that affected Southern Wairarapa on 30/31 March also caused significant damage in the Orongorongo Catchment. A slip caused damage to the rail infrastructure at the eastern end of Tunnel No. 1 and scouring eroded the bank at the western end of Tunnel No 2, which displaced a section of pipe. Sections of boardwalk were washed out and others buried by considerable amounts of gravel. Photographs showing the damage are attached as Attachment 2.

Engineering Consultancy Group personnel and contractors are assisting with urgent work to restore the supply from this catchment.

- Waterloo Drive Failure

Two of the three electronic variable speed motor drives on the Wellington pumps failed within hours of each other on 7 April. One of

the drives (No. 2) has been refurbished and is back in service. A decision on whether to refurbish the second failed drive will be made after comparing the cost of replacement with the cost of refurbishment.

During the refurbishment of the No. 2 variable speed drive it was found that some of the printed circuit boards and components had a coating black “grime”, which may have contributed to the failure. The guess is that the grime is a concentration of air pollutants from the adjacent railway and roads. An air filtering system is being installed to prevent future contamination of the variable speed drive cabinets.

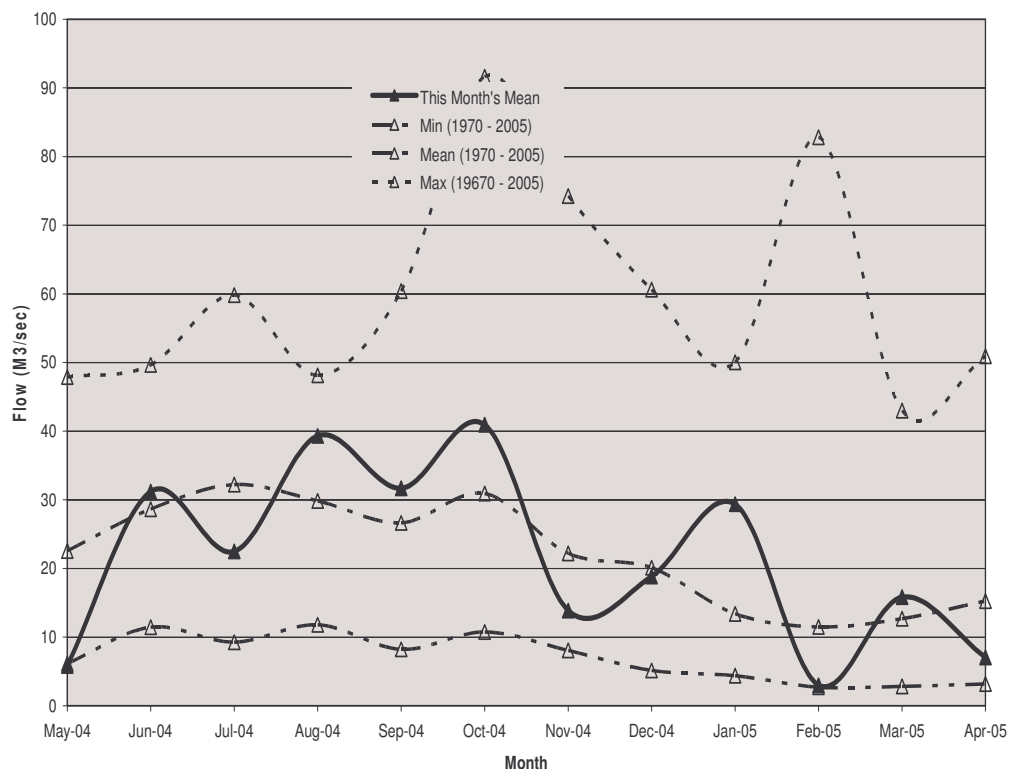
2. Supply Situation

Despite the March rain, the rest of the period has been unseasonably dry which, when combined with the Orongorongo Catchment being out of action, restricted the output of the Wainuiomata plant. Low levels in the Hutt River also restricted the Te Marua plant to around 80 MLD

With reduced output from Wainuiomata, Te Marua *and* Waterloo, we were forced to run Gear Island until the refurbished variable speed drive was back in service at Waterloo - a nervous time.

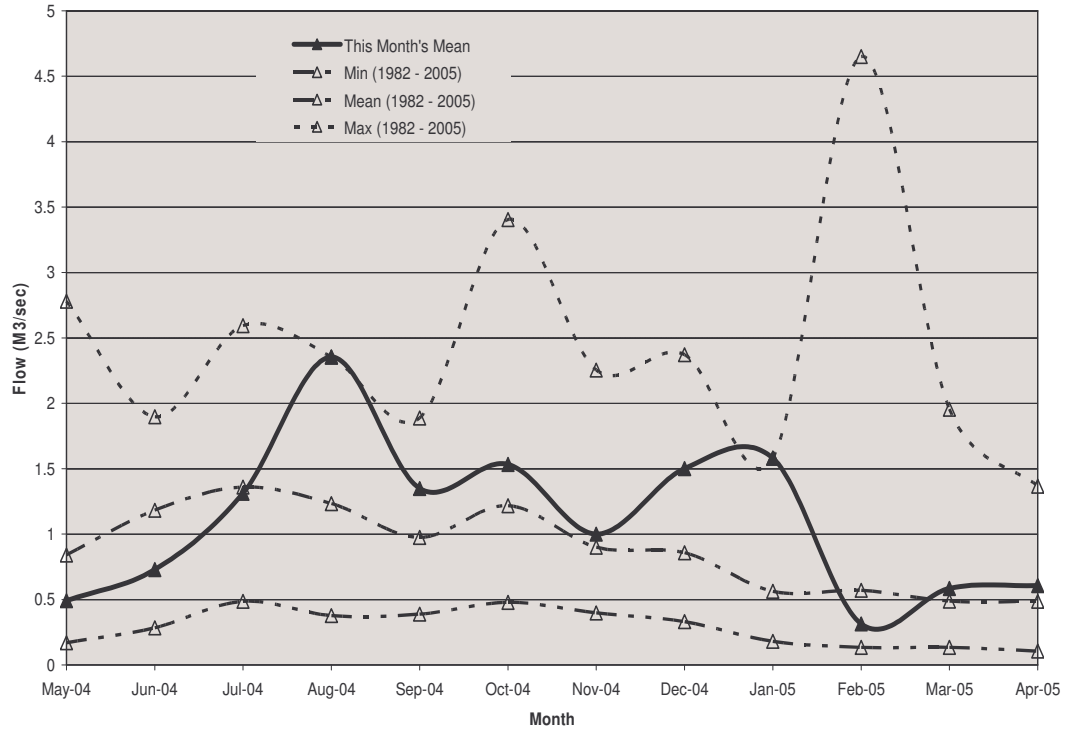
Hutt River Flows

The mean monthly flow in the Hutt River for March was above average and for April below average.



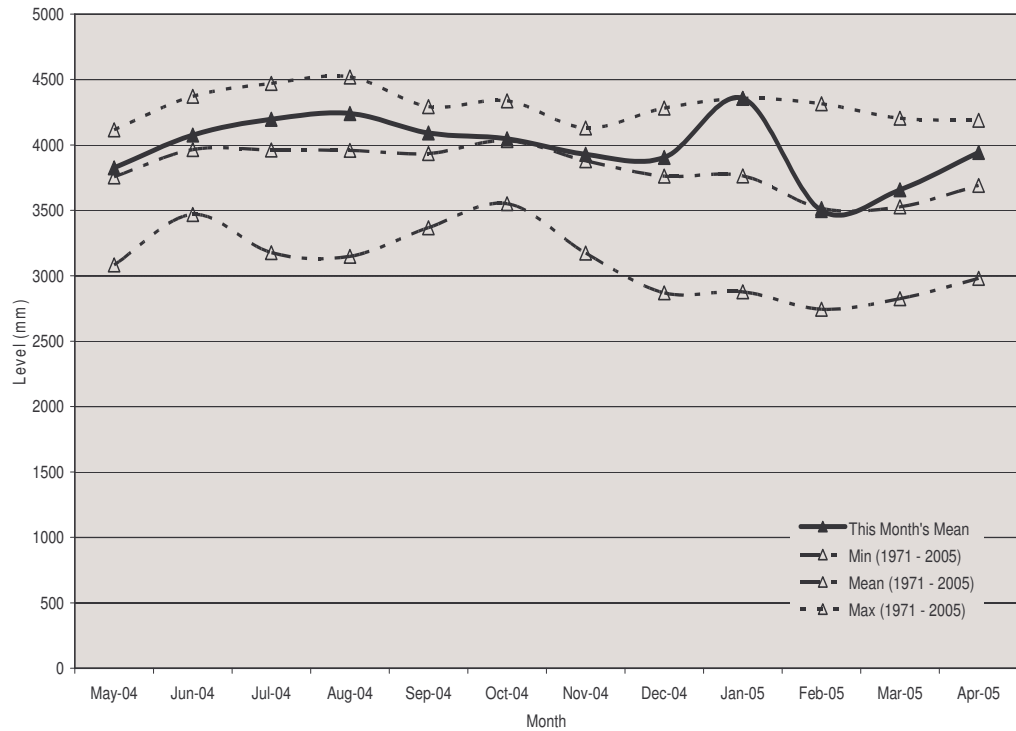
Wainuiomata River Flows

The mean monthly flows in the Wainuiomata River for both March and April were above average.



Aquifer Levels

During March the water level in the Waiwhetu aquifer was average. During April the water level was above average.



3. Treatment Plants

3.1 Wainuiomata

3.1.1 Quality

The treatment plant regrading audit was carried out.

3.1.2 Health and Safety

There were no accidents or incidents for the period

3.1.3 Environmental

- There was a minor overabstraction transgression at the Orongorongo source because of faulty telemetry equipment, which has since been replaced.

3.1.4 Operations and Maintenance

- The supernatant return control cabling was replaced because of rat damage
- The George Creek electromagnetic flow meter replaced
- The lime transfer pump failed and needed replacement
- Truss Bridge telemetry units were replaced
- PAC Bulk Tank No. 1 was repaired
- Equipment repairs are under way following flood damage

3.1.5 Plant Tours

There were two plant tours during the period:

- Scout group
- A group from the Ministry of Health, with an East Timorese diplomat

3.2 Waterloo and Gear Island Water Treatment Plants

3.2.1 Quality

There were no IOFs or transgressions for the period.

3.2.2 Health and Safety

There were no accidents or incidents for the period.

3.2.3 Environmental

- There were no environmental issues for the period.

3.2.4 Operations and Maintenance

- The Wellington No. 2 motor was removed and sent away for an inspection of the windings.
- The Wellington No. 2 variable speed drive failed and was refurbished.

3.2.5 Plant Tours

- There was one tour to Gear Island Water Treatment Plant for a group of Ministry of Health drinking water assessors.

3.3 Te Marua

3.3.1 Quality

- An incident occurred on 30 April, whereby a combination of power fluctuations and failure of the Telecom phone line caused high pH water to enter the distribution system.

The slug of “non-compliant” water in the wholesale water main was isolated and flushed back toward the treatment plant where it was discharged into the river. Unfortunately a small portion of the water entered Cruickshank Reservoir in Upper Hutt, which was about 90 percent full at the time.

Allowing for dilution, the Greater Wellington Regional Council (GWRC) laboratory has estimated the resulting pH and pH/FAC ratio in the reservoir to be well inside acceptable levels. Testing carried out at the time by Greater Wellington Water (GWW) staff and subsequent testing in the reticulation carried out by Upper Hutt City Council (UHCC) have shown no elevated pH levels.

Additional back-up measures have been identified and are being put into place to prevent a similar occurrence.

3.3.2 Health and Safety

- There are no accidents or incidents to report.

3.3.3 Environmental

- There were two occasions during the period where abstraction at the Kaitoke weir was recorded as being over the maximum allowable instantaneous value.

The details are being investigated.

3.3.4 Operations and Maintenance

- Numerous power quality issues and a lightning event caused several disruptions to the plant and numerous call-outs.
- Repairs are being carried out on the Kaitoke sand trap scour valve.

3.3.5 Plant Tours

There were three plant tours during the period. These included:

- GWRC induction tour
- Parks and Forests regional outdoor programme
- NZWWA induction group

4. Distribution

4.1 Health and Safety

- There are no accidents or incidents to report.

4.2 Environmental

- There were no environmental issues for the period.

4.3 Operations and Maintenance

- Johnsonville Pumping Station No. 2 variable speed drive was removed for repair.
- Karori Pumping Station Hutt Pump No. 1 control valve was repaired.
- Karori Pumping Station Hutt Pump No. 2 control valve was repaired.
- Karori Pumping Station Hutt Pump No. 1 main contactor was replaced.
- Lightning strikes damaged several telemetry units in the Hutt Valley.
- Refurbishments and renewals continued on the Porirua scours. Of 47 scours, 42 have been completed.
- Renewals and valve chamber installations carried on for the Porirua air valves. The Porirua low level branch line was completed.
- Ongoing supervision and mark-outs are still being provided for the Paremata/Plimmerton State Highway 1 upgrade.
- Clearing the Hutt north branch lines, artesian and Wainuiomata east pipeline easements was completed.

- The project was completed for the Lower George Creek electromagnetic flow meter.
- Cathodic protection work was carried out with NGC Ltd for various works on the 1,050 mm main at Petone Wharf/Trentham/Ngauranga interconnection and Ngauranga valve chamber.
- The culvert pipe and gabion baskets were installed and concreted in for the Judgeford exposed pipeline. This project is now complete.
- Pipework fabrication was completed for the Wainuiomata line valve in the OK main project.

4.4 Pipeline Leaks

- A leaking fire hydrant on the Waterloo to Gracefield pipeline was excavated, shut down and repaired.
- A leak on the Te Marua to Karori 900 mm - 750 mm main at the Ngaio roundabout was excavated and repaired.

Utility Services Division Health and Safety Data from July 2004 - Total Injuries

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	March 2005 - Chemical splash in eye
PRODUCTION (+ 4 OPS ADMIN)													
Hours worked	2,517	2316	3306	2005	2298	2410	1534	2368	2431	1980			
Employee numbers	15	15	16	16	16	16	17	17	17	17			
Incidents	0	0	0	0	0	0	0	0	1	0			
Days lost	0	0	0	0	0	0	0	0	0	0			
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0	0	0	6	0			
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0	0	0	4	0			
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0			
DISTRIBUTION													
Hours worked	1,195	1233	1861	1307	1407	1325	747	1213	1320	1079			October 2004 - Back strain
Employee numbers	8	8	9	8	9	9	9	9	9	9			October 2004 -- Cut finger
Incidents	0	0	0	0	0	1	0	1	0	0			December 2004 = Sprain/strain to trunk
Days lost	0	0	0	0	0	0	0	4	0	0			February 2005 = Sprain/strain hip joint
Incidence rate (number of incidents per 100 workers)	0	0	0	25	0	11	0	11	0	0			
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	15	0	8	0	8	0	0			
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	33	0	0			
ENGINEERING CONSULTANCY													
Hours worked	1,709	1710	2300	1388	1567	1605	800	1547	1728	1612			July -Sprain/strain trunk
Employee numbers	12	12	12	12	12	12	12	12	12	12			September - Sprain/strain hand
Incidents	1	0	0	0	0	0	0	0	0	0			September - Bruising
Days lost	0	0	0	0	0	0	0	0	0	0			
Incidence rate (number of incidents per 100 workers)	8	0	0	0	0	0	0	0	0	0			
Frequency rate (incidents per 10,000 hours exposure)	6	0	0	0	0	0	0	0	0	0			
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0			
UTILITY SERVICES SUPPORT													
Hours worked	755	784	916	964	1091	1027	529	986	968	859			
Employee numbers	7	7	7	7	7	7	7	7	7	7			
Incidents	0	0	0	0	0	0	0	0	0	0			
Days lost	0	0	0	0	0	0	0	0	0	0			
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0	0	0	0	0			
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0	0	0	0	0			
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0			
LABORATORY													
Hours worked	1,061	1125	1466	988	1002	1092	515	1002	968	1130			December 2004 = Hit finger
Employee numbers	7	7	7	7	7	7	7	7	7	7			March 2005 - Stress
Incidents	0	0	0	0	0	1	0	0	0	1			April 2005 - Stress
Days lost	0	0	0	0	0	0	0	0	0	21			
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	14	0	0	0	14			
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	9	0	0	0	9			
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	186			

STRATEGY AND ASSET

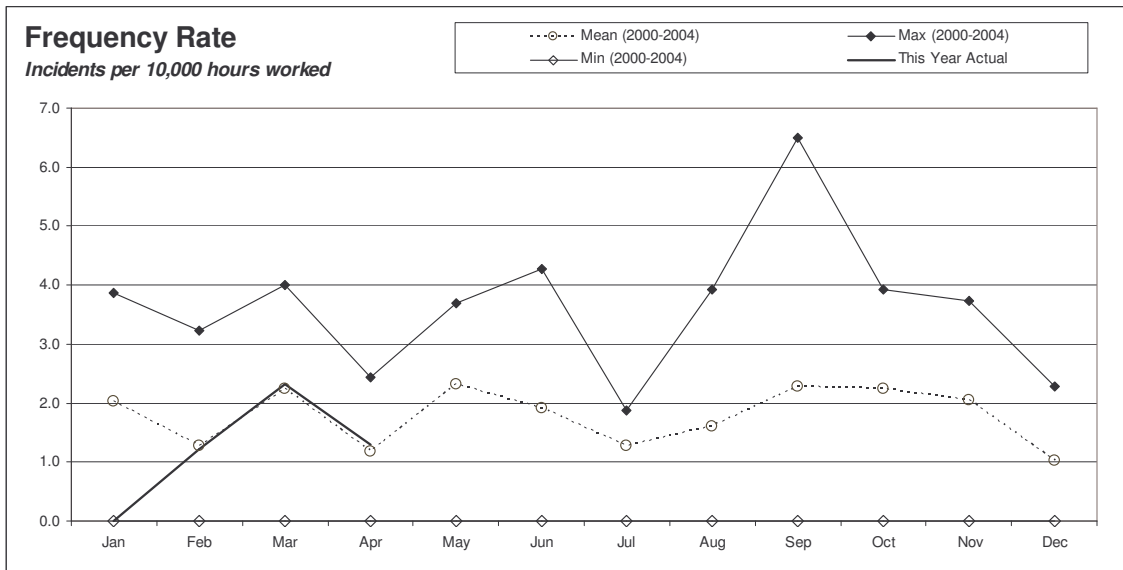
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	560	612	1096	736	784	748	344	696	708	640		
Employee numbers	5	5	5	5	5	5	5	5	5	5		
Incidents	0	0	0	0	0	0	0	0	0	0		
Days lost	0	0	0	0	0	0	0	0	0	0		
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0	0	0	0	0		
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0	0	0	0	0		
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0		

FORESTRY

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	423	450	572	422	492	542	115	423	489	445		
Employee numbers	3	3	3	3	3	3	3	3	3	3		
Incidents	0	0	0	0	0	0	0	0	0	0		
Days lost	0	0	0	0	0	0	0	0	0	0		
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0	0	0	0	0		
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0	0	0	0	0		
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0		

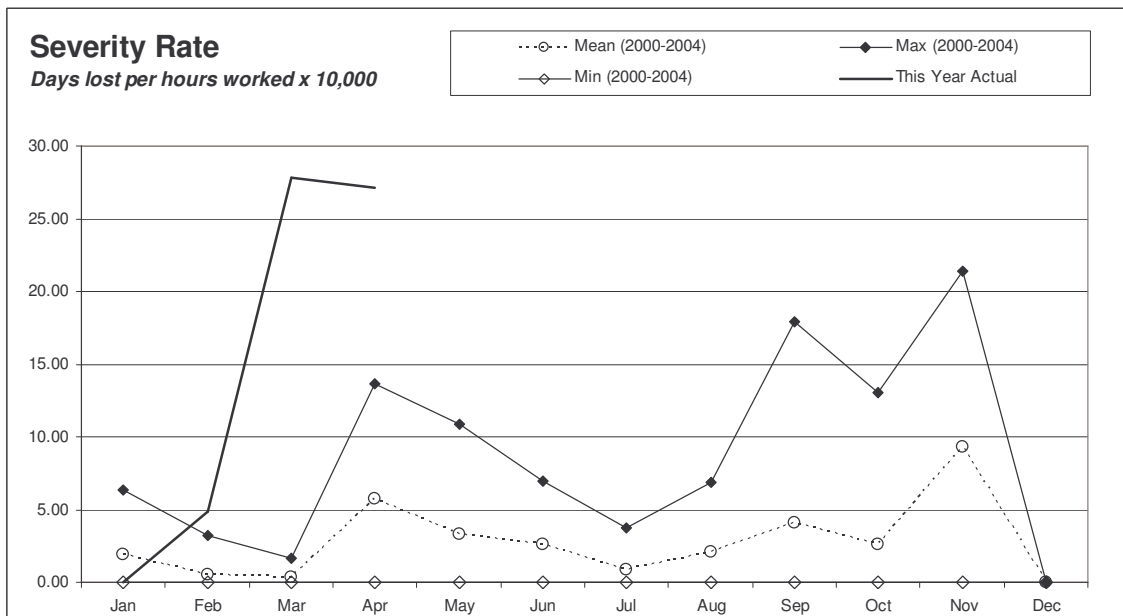
Utility Services Division Combined	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	8,219	8229	11516	7809	8641	8749	4582	8234	8612	7745		
Employee numbers	57	57	59	59	59	59	60	60	60	60		
Injuries	1	0	2	2	0	2	0	1	1	1		
Days lost	0	0	0.5	0	0	0	0	4	4	21		
Frequency rate (incidents per 10,000 hours exposure)	1	0	2	3	0	2	0	1	1	1		
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	5	5	27		

Incidence rate = (number of incidents/number of employees) x 100
 Frequency rate = (number of incidents/person hours worked) x 10,000
 Severity rate = (days lost/person hours worked) x 10,000



Incidents

One incident in July 2004
 Two incidents in September 2004
 Two incidents in October 2004
 Two incidents in December 2004
 One incident in February 2005
 Two incidents in March 2005
 One incident in April 2005



Lost Days

No lost days
 4 days lost
 24 days lost
 21 days lost

Strategy and Asset Group

March/April 2005

Strategy and Asset Group Review of Operations for the Period Ended 30 April 2005

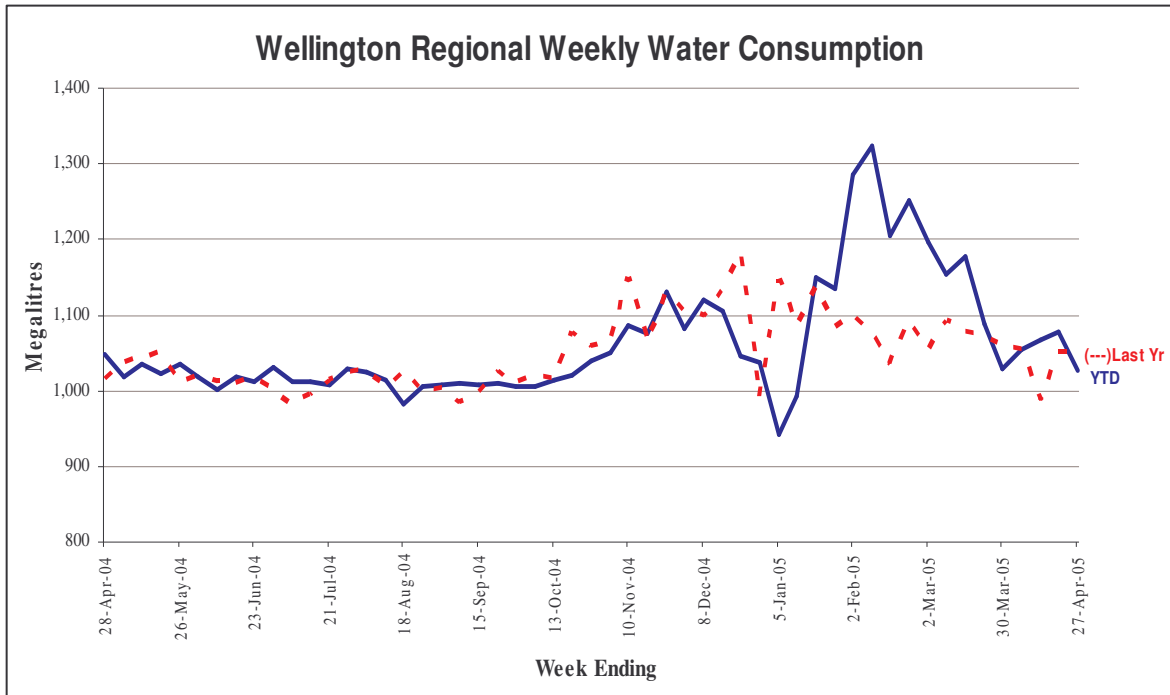
1. Items of Note

- Water consumption in the second half of February and March were reflective of the hotter drier conditions experienced in the latter part of summer and early autumn. This contrasts with the lower than normal usage in January.
- New Drinking-Water Standards for New Zealand are expected to be issued in July, with an implementation date of 1 January 2006. The impact on GWW is not significant.
- The Capital and Coast District Health Board at its recent meeting accepted, in principle, the need to have an emergency water supply available. On the basis of this decision, a draft agreement is to be prepared. The other two parties are Wellington City Council (WCC) and GWRC. The draft agreement and background information will be brought before the Committee for approval in due course.
- Seismic upgrading projects to the water supply infrastructure have been carried out over a number of years. In order to improve the seismic security at customer reservoirs, it is proposed to change the inlet from the bottom of the reservoir to a point above the mid-level of the reservoir. In the event the inlet pipe becomes detached from the reservoir during an earthquake, the maximum water loss from the reservoir would be the water above the top of the inlet pipe. The customers are currently being consulted about this change.
- Judgeford Golf Club is considering an underpass to link the two parts of the golf course under State Highway 58. If the work proceeds, it will require the wholesale water main to be altered. Discussions are continuing with the golf club's contractor about this work.
- The three year contract for the supply of electrical energy for the water supply facilities expires in September. Tenders will be called for a new four year contract in May.
- A policy is being prepared as to what is the appropriate level of protection for assets to guard against flood damage. It is expected a report will be submitted to the next Committee meeting.

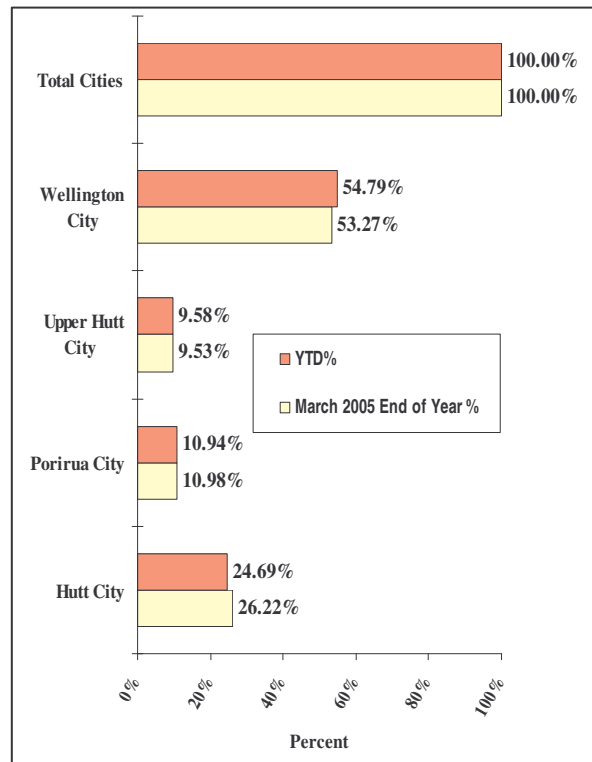
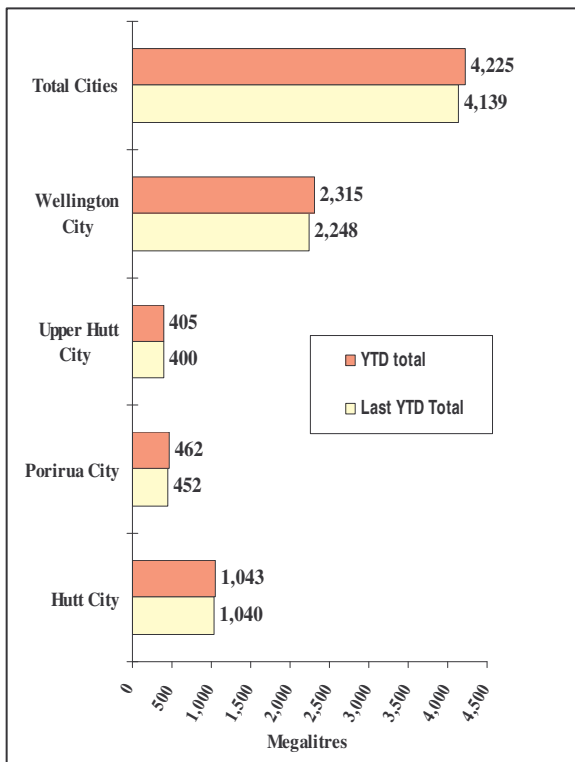
2. Sales Volume

Graphs detailing the sales volume information are on page 15.

Water Sold Over the Last 12 Months



Water Sold from 31 March to 30 April 2005



3. Asset Management

- The Capital Works budget for 2004/5 is \$5.312 million. The forecast expenditure to 30 June 2005 is \$3.9 million, with \$1.4 million to be carried forward into 2005/6 to fund projects that have been delayed. The more significant projects included in the Capital Works Programme are:
 - Construction of the Wainuiomata Catchment western boundary fence. Budget \$100,000. Clearing of the fence line is complete and all the fence posts erected. Forecast cost \$135,000.
 - Design of seismic strengthening of the Stuart Macaskill Lakes' intake towers. Budget \$30,000. The new seismic loading code, which is relevant to this work, was published in December and this project is now under way.
 - Rehabilitation of the Wainuiomata Lower Dam and creation of a wetland. Budget \$300,000. Tenders for this work have been received and are being considered.
 - Purchase of a spare pump for the Waterloo wellfield (two pump motors failed in 2003/4). Budget \$60,000. The pump has been delivered and special storage arrangements are under construction.
 - Further investigation of off-river storage at Wainuiomata. Budget \$100,000. A preliminary feasibility report indicates that the storage of a significant volume of water is impracticable. A report looking at the justification of this project will be prepared later in 2005. In the meantime further investigation work has been deferred.
 - Modifications to Te Marua Water Treatment Plant to facilitate independent treatment of lake and river water. Budget \$200,000. A report and detailed estimate is in preparation by a specialist consultant. Forecast expenditure \$150,000.
 - Installation of aeration equipment at Waterloo Water Treatment Plant to reduce lime use. Budget \$100,000. New blades to convert the existing mixers into aerators have arrived.
 - Relocation of the Kaitoke main on the Silverstream Bridge, including a contribution of \$60,000 to bridge strengthening. Budget \$150,000. Land Transport New Zealand approval has now been received and a consultant selected by UHCC. However, the project has been delayed and expenditure this year will be minimal. Forecast expenditure \$10,000.
 - Relocation of the Kaitoke main between State Highways 2 and 58 at Haywards. Budget \$800,000. Design work is proceeding, the bulk of the pipes have been delivered and Tenders for laying them will be called in May. Forecast expenditure \$600,000.

- New pumping station at Karori. Budget \$870,000. Tenders for this work closed in April and a Contract has been let. Forecast expenditure \$480,000.
- New pumping station at Point Howard. Budget \$367,000. Pumps delivered. Design complete. Tenders will be called early in May. Forecast expenditure \$122,000.
- Replacement of obsolete electronic control equipment at Te Marua Pumping Station. Budget \$145,000. Detailed investigations have shown that there are benefits in replacing the motor starters at the same time, at an additional cost of \$117,000.
- Renewal/upgrade of the telemetry system. Budget \$160,000. Most of this work is on hold pending the outcome of integration discussions with Capacity water management. Forecast expenditure \$42,000.
- Significant delays have occurred on several large projects, generally because of delays in obtaining consents and land entry agreements, and because of a lack of resources in the engineering consulting industry.
- Flood protection works to minimise the risk of damage to the Wainuiomata raw water main have been completed. A section of this main was washed out in the February 2004 flood.
- A consultant has been employed by WCC to design a new pumping station to be located near the northern landfill, which is intended to pump water to two new reservoirs to be located above Stebbings Valley, and in Lincolnshire Farms. This work is part of the Northern Wellington Growth Management Framework. The pumping station will pump water from the Kaitoke wholesale main and, on completion, will become a GWW asset. Therefore, officers are working closely with the consultant to ensure the work meets GWW requirements.

4. **Quality Assurance**

- Development of revised Drinking-Water Standards is nearing completion. GWW has a staff member on the Experts Committee considering the changes.
- Work on a new proposal by the Ministry for the Environment to establish a National Environmental Standard for drinking water sources has been delayed and the approach reassessed following the outcome of consultation meetings. The scope of the new Drinking-Water Standards has now been widened to include classification of raw water quality using *Cryptosporidium* numbers.
- A review of the grading of the Wainuiomata Water Treatment Plant is

currently being undertaken by the Hutt Valley District Health Board Drinking Water Assessor. The Drinking Water Assessment Unit has just received its formal accreditation and a public presentation of the certificate is planned at the Wainuiomata Water Treatment Plant early on 11 May, in conjunction with a presentation of the plant grading certificate.

5. Environmental

- Rehabilitation and lowering of the Wainuiomata Lower Dam spillway will provide an opportunity for the development of a wetland upstream. This opportunity is being jointly investigated with Landcare Division. Public consultation on the form of this development is being undertaken.
- A series of small “refuges” has been built on the face of the Orongorongo weir to facilitate the passage of climbing species such as the red-finned bully and the short jawed kokopu. A large flood on 30/31 March may have damaged some of these refuges.

6. Catchment Management

- The advertisement inviting hunters to enter the ballot for the annual hunt appeared in the papers in early January. In all, 72 entries were received and the ballot was conducted by the Police on 23 February. The hunt is programmed to take place between 25 March and 20 April.
- The successful Contractor for stage 3 of the boundary fence has commenced work. This stage should be completed by June 2005.
- Planning for the proposed 1080 poison project scheduled for this winter continues. This project will be one of three programmed for the Wainuiomata area, so care will have to be taken to identify the relevant project when dealing with enquiries from members of the public.

7. Marketing

- Summer demand for water
Analysis of summer demand for water relative to weather conditions for 2004/5 and the previous six years was undertaken. Water use on a per capita basis shows a gradually decreasing trend over the seven year period. The peak level of daily demand during summer 2004/5 was lower than the underlying weather conditions and previous experience indicated, which is encouraging.
- GWRC’s Web Site
A discussion paper about adding some live water supply data onto the web site was researched and written for consideration by Utility Services’ managers.

- Treatment Plant Tours for Schools
Work continued with Operations staff to review the tour routes and teaching aids used for treatment plant visits. The education consultant provided a list of options for improving the routes and teaching aids at the end of April. Which of these we will adopt will be considered shortly.
- Regional Public Health ceremony at Wainuiomata Water Treatment Plant
GWW was approached by Regional Public Health to hold the launch of its Drinking Water Assessment Unit at Wainuiomata in May. What was initially presented to us as a simple ceremony has grown to include an appearance by Associate Minister of Health Pete Hodgson. A significant amount of time has been spent planning for the event, including associated publicity, in liaison with Regional Public Health and Ministry of Health officials.
- Draft customer water supply agreement
The second draft of an agreement document provided by Capacity on behalf of our customers was reviewed and returned with comments. There remains a great deal of work to do to achieve an agreement that will be acceptable to both parties.
- Possum control in the Wainuiomata/Orongorongo Water Collection Area
Further planning work for an operation starting July 2005 was undertaken with the Landcare Division.
- Treatment plant visits
There were four treatment plant visits involving 75 visitors arranged during March and April.
- Media Releases
There was one media release made during the reporting period, in relation to our signing a contract with Masterton District Council to manage its water treatment plant and bulk distribution pipeline. An article summarising water supply relative to weather conditions during summer was written for GWRC's newspaper *Elements*.

8. Projects Undertaken by Engineering Consultancy for Strategy and Asset

- Wainuiomata/Orongorongo Catchment Fence
Construction of the third stage of the deer and stock fence along the western boundary of the water collection area is progressing satisfactorily.

- **Wainuiomata Lower Dam**

The Wainuiomata Lower Dam is maintained in a semi-drained state. Normal river flows pass through scour pipes beneath the dam. Regular flood flows exceed the capacity of the scour pipes, filling the reservoir behind the dam. This water takes some days to drain. Tenders have been invited to lower the spillway and allow a wetland area to be formed in the bed of the reservoir.
- **Kaitoke No. 2 Tunnel Sealing**

The Contract to seal the Te Marua end of the No. 2 Tunnel was awarded to Construction Systems Ltd. The work is programmed for mid-May 2005.
- **Wainuiomata and Gear Island Road Reseals**

Roads at Wainuiomata and Gear Island have been resealed. Some minor items included in the Contract are still to be completed.
- **Wainuiomata Water Treatment Plant Outlet Control Valve**

The replacement and relocation of this control valve is proposed. The detailed design work is proceeding. Installing a new control valve at Tunnel Grove will reduce the potential for pressure surges in the pipeline. It will prevent air being drawn into the pipe and reduce pumping costs at the Wainuiomata pumping stations.
- **Waterloo Wellfield Standby Well Pump**

A standby well pump has been purchased to allow rapid replacement of a failed pump. Arrangements are being made for the long-term storage of this standby pump.
- **Rerouting Te Marua to Karori Pipeline at Haywards**

The existing pipeline route from State Highway 2 to the Haywards Pumping Station is susceptible to earthquake induced landslide damage. The proposed route for a duplicate pipeline is through Transpower land. Tender Documents are being finalised for the installation of this new pipeline. The pipe has been ordered and is being delivered to a storage area in Manor Park.
- **Emergency Water Supply Points for Upper Hutt City Council**

Installation of emergency water supply points to supply water to Upper Hutt City without going through a service reservoir is being investigated.
- **Karori Pumping Station**

A replacement pumping station located on Northland Tunnel Road is proposed. Tenders for the construction of the building have been received and are being analysed.

- **Point Howard Pumping Station**
The underground pumping station at Hutt Park is being replaced. An application for the construction of the pumping station on the proposed site alongside Seaview Road has been submitted to Hutt City Council. Tender Documents for the construction of the building are being prepared.
- **Warwick Street Pumping Station**
Noise emissions from the Warwick Street Pumping Station exceed the levels specified in the Wellington City District Plan. Soundproofing for the pumping station is being designed.
- **Minor Seismic Projects**
Installation of a new line valve on the 525 mm pipeline at Moores Valley Pumping Station is nearing completion.
- **Wainuiomata River Intake Pipeline**
Rock protection has been placed along the riverbank adjacent to the Wainuiomata River intake pipeline.

Engineering Consultancy Group

March/April 2005

Engineering Consultancy Group Review of Operations for the Period Ended 30 April 2005

1. Work Carried Out for the Strategy and Asset Group

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

2. Work Carried Out for the Operations Group

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

3. Work Carried Out for Wellington City Council

3.1 General

The work carried out for WCC has picked up in recent months. Current projects under way are detailed in the following sections.

3.2 Aramoana Reservoir, Miramar

There is a storage deficit of 10 ML in the Low Level Zone of Wellington City. Of this storage, approximately 6.5 ML is required in the Eastern Suburbs (Miramar) and 3.5 ML in the Southern Suburbs (Island Bay).

The structure has been backfilled to partially bury the reservoir. The reservoir is about to be commissioned. Preparations are being made for the commencement of an extensive planting programme.

3.3 Mt Albert Reservoir

This 3.5 ML reservoir will be sited in Mount Albert Park within Berhampore Golf Course.

Contract Documents are now almost complete. We are awaiting WCC approval to invite Tenders.

3.4 Wellington City Council Flow Meters

Contract Works are complete for the installation of 10 flow meters in the reticulation system.

3.5 Automatic Shut-off Valves 2004/5

A Tender was accepted and work is under way on a Contract for the installation of automatic shut-off valves at various reservoirs.

3.6 Wakefield and Victoria Street Water Main Renewals

This is a major project which has required significant careful design and planning. Pipelaying extended from Cuba Street, along Wakefield Street and Victoria Street to Hunter Street. Arrangements were made to co-ordinate the work to minimise the impact from other drainage projects under way at the same time. The final connection at the Cuba/Wakefield Streets intersection was delayed to suit other projects in the area but was completed in time for extensive resurfacing to be carried out.

3.7 Northern Water Main Renewals

A commission was awarded to carry out the design of water main replacements in the northern suburbs. The design drawings are now complete.

3.8 Fox Street Water Main Renewal

Contract Documents were prepared for the renewal of this water main. Tenders were invited and a recommendation made.

4. Miscellaneous Projects

Kapiti Water Supply- Otaihanga Connection

The Engineering Consultancy Group has been engaged to design a connection to the Kapiti trunk main at Otaihanga Road. This new connection will give greater security of the water supply to Paraparaumu and Raumati. Construction plans for stage 1 have been completed and passed to Kapiti Coast District Council for implementation.

Laboratory Services

March/April 2005

Laboratory Services Department Review of Operations for the Period Ended 30 April 2005

1. Items of Note

- Laboratory finances improved to finish in the black at the end of the third quarter, a pleasing operating surplus recorded for this period, with trickles from both internal and external sources bolstering the revenue stream.
- We retained the Exide Technologies' contract for their Deposition Monitoring Programme for the 2005 year. Briefly, we analyse the fallout from their industrial discharges to the atmosphere as part of the terms of their Consent. This is the third consecutive year we have been awarded this work.
- We assisted the Masterton District Council by measuring the "plant life" in the Ruamahanga River adjacent to their sewage treatment plant ponds. This work is in conjunction with their investigation into the impact of nutrient infiltration from their ponds into the waterway.
- We have found it necessary to make several new staff appointments to cope with the laboratory workload. A Field Officer has been employed on a six month contract and an Assistant Field Officer on a casual basis. Laboratory finances remained about even, to finish in the black showing a small surplus for the year to date.

2. Business Summary

2.1 Quality

There were no requests for retesting samples and test reports were timely. However, there were some delays because of reduced staffing levels and work being subcontracted.

2.2 Health and Safety

There was one incident recorded for both March and April.

Plantation Forestry

March/April 2005

Plantation Forestry Department Review of Operations for the Period Ended 30 April 2005

1. Log Harvest Contract

Production has been maintained at a reasonably high level, with all crews settled on new skids. As would be expected, both Easter and Anzac Day holiday breaks reduced total production.

Crew 36 remained at Grattons completing the harvest of Block 3/03 and pulling the last of the windthrow in the Clarkes Creek block. This operation had the hauler at full stretch with a haul distance in excess of 800 m. Log 6 opened up the road line into block 4.01 and then prepared the main skid on block 5/01 in preparation for winter logging. Crew 4 has been both producing pruned logs to satisfy a niche market from ATS at Levin and road lining in preparation of later hauler logging. When they have completed this work, we will have five major skids prepared for when the harvest commences under the new Contract.

The weather remained reasonable and no significant damage occurred in the two “freshes” which went through. These actually assisted, as they removed a number of “dry weather” harvest operations in the Wairarapa from the market and turn a surplus as reported last meeting to an overall shortage of wood. As yet, this has not translated into increased prices but there is no problem disposing of logs and it appears that price increases may follow.

Export prices have remained relatively stable, with changes in shipping costs and forex tending to cancel each other out.

Production for March and April follows.

Output by Grade - Clarkes Creek/Reservoir Ridge [Crew 36 - Hauler]

Grade	March		April	
	Tonnes	%	Tonnes	%
S/A Grade	346.08	11.55	441.55	14.06
L Grade	306.54	10.23	378.24	12.04
R Grade	57.65	1.92	253.89	8.08
K Sawlog	614.81	20.51	645.59	20.56
Roundwood	0	0	0	0
K Rough	824.66	27.51	553.46	17.62
Pulp	451.39	15.06	444.87	14.17
Xport Pulp	396.03	13.21	422.68	13.46
Adjust			0	
Total	2,997.16		3,140.28	

Revenue for the period:

- \$39,912.14 at an average of \$13.32 per tonne for March
- \$51,331.44 at an average of \$16.35 per tonne for April

Output by Grade - Martins [Crew 6 - Ground Based]

Grade	March [4/01]		April [4/0 and [5/01]	
	Tonnes	%	Tonnes	%
S/A Grade	661.55	32.64	766.11	30.53
L Grade	160.79	7.93	312.84	12.47
R Grade	143.85	7.1	285.13	11.36
K Sawlog	708.83	34.97	422.46	16.83
Roundwood	26.8	1.32	30.53	1.22
K Rough	124.82	6.16	340.72	13.58
Pulp	0	0	94.48	3.767
O/S Pulp	0	0	0	
Xport Pulp	200.12	9.871	257.17	10.25
Total	2,026.76		2,509.44	

Revenue for the period:

- \$52,267.12 at an average of \$25.79 per tonne for March
- \$61,857.57 at an average of \$24.80 per tonne for April

Output by Grade - Puketiro [Crew 4 - Ground Based]

Grade	March [4/01]		April [4/0 and [5/01]	
	Tonnes	%	Tonnes	%
Pruned	274.44	38.66	274.44	38.66
Part Pruned	56.18	7.91	56.18	7.91
S/A Grade	0	0	0	0
L Grade	0	0	0	0
R Grade	0	0	0	0
K Sawlog	168.70	23.76	168.70	23.76
Roundwood	0	0	0	0
K Rough	210.63	29.67	210.63	29.67
Pulp	0	0	0	0
O/S Pulp	0	0	0	0
Xport Pulp				
Total	709.95		709.95	

Revenue for the period:

- \$26,015.76 at an average of \$36.64 per tonne for March
- \$18,753.34 at an average of \$33.67 per tonne for April

Total harvest was as follows:

- 5,733.87 tonnes for \$118,195.17 at an average of \$20.61 for March
- 6,206.74 tonnes for \$131,942.35 at an average of \$21.32 for April

2. Silviculture Contracts

A further 23.6 hectares out of a total of 257 hectares were completed in this period at a cost of \$14,685.25. To date 75.1 hectares have been completed. It is still anticipated that all silviculture will be completed before 30 June 2005.

3. Plantation Forestry Operations

Results from the foliage analysis carried out in February have been received and, as suspected, the results recommend the application of fertiliser. The total application will be in the vicinity of 23 tonne and we are investigating the most cost efficient method of applying the fertiliser. It is anticipated that this work will be carried out in late winter/early spring.

Most other activity has been related to Contract supervision as additional skids are prepared - for the logging operations over winter. This has been a little more difficult than usual, with a number of blocks included in the new Contract we have to monitor the progress of the crews to provide work until 30 August from other sources.

4. Forest Access

Maungakotukutuku access remains the only significant problem. There is 4WD access into Hukinga at the moment because of the difficulty in arranging a contractor. The contractor we usually use also works extensively for Flood Protection and they have been busy remedying the effects of the recent weather “freshes”.

We have laid further fines on Station Drive to maintain the surface of the rail alignment.

Some minor remedial work was required on two occasions on the hill between Blow Fly and Harris North. This road was extremely narrow when built and with reasonable volumes coming out it was inevitable that some driver would have trouble staying on the “windy and narrow”. The running surface was widened and subsequently additional metal spread when the surface became greasy. The balance of the route (20 km) to Totara Park has not required any maintenance but would not see the winter through without attention.

5. Market Trends

The domestic markets while remaining reasonably strong, and the earlier surplus of supply has disappeared. There are no problems selling logs and in fact some mills are “inventing” new grades to get logs to keep the mill working.

While the export market has “held”, Korea is predicted to go soft in the next three months and a reduction (as promised) in the forex and/or shipping would assist greatly. India and China are as always a little fickle, as they do not have the infrastructure to handle increased volumes should all the exporters abandon Korea at the same time.

5. Harvest Contract No. 1240 - 2005-2009

Tenders closed on 29 April 2005 for the potential harvest of 425 ha of Metro forests. At the same time Tenders were invited for the harvest of 100 ha of Reserve forest in the Wairarapa. The Tenders were called simultaneously so that a “best result for whole council” result can be achieved.

There were 7 bids for Metro forests and 8 for the Reserve forests. Officers are now commencing the Tender verification and analysis to enable the bids to be considered by the Forestry Management Group.

The term of the Contracts is 2 years, with two potential extensions of 12 months each.