Greater Wellington Water

Operations Group

Operations Group Review of Operations for the period ended 30 April 2006

1. Items of Note

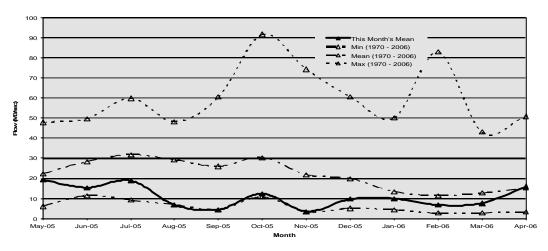
- A new Control Systems Technician started work with the group on 18 April.
- Finishing touches were made to the revised Incident Management System and new copies are ready for distribution.

2. Supply Situation

There were no supply issues for the period.

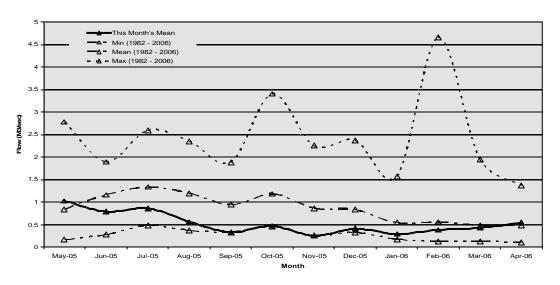
Hutt River Flows

The monthly flow in the Hutt River for March was below the mean. For April, the monthly flow was about the mean.



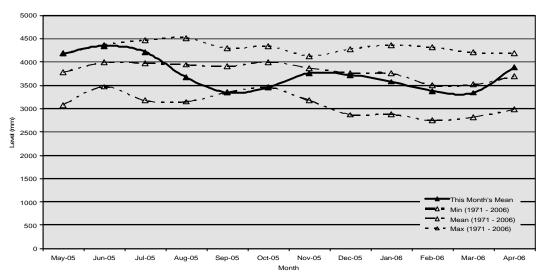
Wainuiomata River Flows

The monthly flow in the Wainuiomata River during March was below the mean. For April, the flow was just above the mean.



Aquifer Levels

The water level in the Waiwhetu aquifer in March was below the mean. For April, the water level was above the mean.



3. Treatment Plants

3.1 Wainuiomata

3.1.1 Quality

• There was an improvement opportunity form (IOF) for low fluoride because of the dosing plant being turned off late at night until maintenance was carried out during normal work hours the next day.

3.1.2 Health and Safety

• There were no accidents or incidents for the period.

3.1.3 Environmental

• There were no environmental issues during the period.

3.1.4 Operations and Maintenance

- The gatehouse valve inspection was carried out to check valve seating as
 required increased torque to close completely. The integrity of the seal
 was proven fine, so we need to look at valve replacement when the
 Tunnel Grove project begins. The concrete lining of the downstream
 pipe was also discovered to be severely depleted and will require
 replacement.
- Repairs need to be carried out on the centrifuge feed Pump No. 2 variable speed drive.

3.2 Waterloo and Gear Island Water Treatment Plants

3.2.1 Quality

• There were no IOFs or transgressions during the period.

3.2.2 Health and Safety

• There were no accidents or incidents during the period.

3.2.3 Environmental

• There was one environmental issue for the period. Water overflowed on to the street outside the treatment plant because of scour being open when the tank was being refilled.

3.2.4 Operations and Maintenance

- The Naenae Pump No. 1 discharge valve actuator has been reinstalled.
- Lime dosing and alkalinity trials commenced during the period, with a view to seeing if it is practical to reduce the chemical usage.

3.3 Te Marua

3.3.1 Quality

- There were no transgressions during the period.
- There were two IOFs during the period one for low finished water alkalinity and one for low finished water pH.

3.3.2 Health and Safety

• There were no accidents or incidents for the period.

3.3.3 Environmental

• There was one transgression for the period. Kaitoke abstraction was exceeded on 27 March 2006).

3.3.4 Operations and Maintenance

• There were problems with polyelectrolyte that affected process performance. The Te Marua outlet flow was shut down and out of specification water diverted to the lake.

4. Distribution

4.1 Health and Safety

• There were no accidents or incidents during the period.

4.2 Environmental

• There were no environmental issues for the period.

4.3 Operations and Maintenance

- Fabrication for the Kaitoke main deviation at Haywards was completed and a service installed at the Haywards scour for E Carson and Sons Ltd for filling and testing of the new 1,050 mm main.
- Two new butterfly valves were installed at Thorndon Pumping Station. Both 90° bends were reworked and installed along with new valve spindles.
- Pipe specials were fabricated for the Upper Hutt City emergency water supply point.
- The 200 mm cast iron pipeline from Ascot Park through to Paremata No. 2 was isolated and will be fully commissioned at a later date. New pipework was fabricated and installed, along with a new valve at the Ascot Park end. A line valve, scour valve and double air valve have been removed.
- Welding repairs to the bell housing on the Kaitoke weir sluice valve were completed.
- The 900 mm supply to Haywards Pumping Station was shut down so that a bypass valve could be renewed. The Kingsley branch line was also shut down so that the scour valve upstream of the pumping station could be renewed.
- The access track to the reservoir on the Linden branch line was upgraded.
- The two monthly scour valve exercise on the Hutt north and Hutt south lines was completed.

4.4 Pipeline Leaks

• There were two leaks during the period. A leak at Tunnel Grove on the 1,050 mm pipeline where a new 3.3 m section was installed with two new couplings. The other leak was along the Wainuiomata No. 1 branch line, where a new pipe section with a welding flange and coupling were cut in.

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Utility Services Division Health and Safety Data from July 2005 - Total Injuries

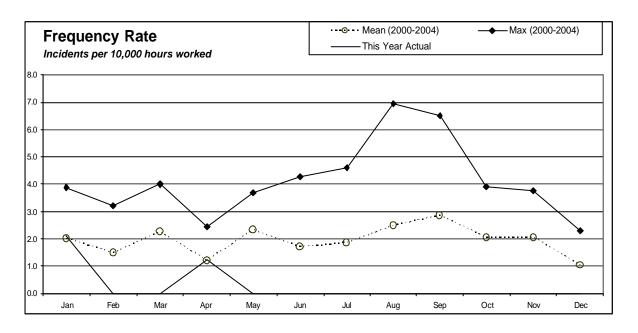
PRODUCTION (+ 4 OPS ADMIN)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul 2005 -Cut finger
Hours worked	24147	2316	2262	2313	3475	2429	1492	2105	2255	2224	,		Jul 2005 - Injured back
Employee numbers	16	16	16	16	16	16	16	16	16	16			Aug 2005 - Cut finger
Incidents	2	1	2	0	2	2	1	0	0	0			Sep 2005 - Bruised hand / Blistered hand on nylon rope
Days lost	0	0	0	0	0	0	0	0	0	0			Nov 2005 - Hit head on tank / Twisted knee from slipping on stairs
Incidence rate (number of incidents per 100 workers)	13	6	13	0	13	13	6	0	0	0			Dec 2005 - Lime in eye / Head in contact with live wires
Frequency rate (incidents per 10,000 hours exposure)	8	4	9	0	6	8	7	0	0	0			Jan 2006 - Slipped and hurt Achilles tendon
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0			
DISTRIBUTION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul 2005 - Vehicle accident [2 employees]) / Bruised finger
Hours worked	1227	1246	1332	1290	1977	1357	659	1229	1384	1259	,		Aug 2005 - Minor burns to hand / Bruised finger / Cut and small burn to wrist
Employee numbers	9	9	9	9	9	9	9	9	9	10			Sep 2005 - Cut hand on pipe / Cut hand and knee on pipe
Incidents	2	3	2	1	1	0	0	0	0	0			Oct 2005 - Cut finger on flange
Days lost	11	14	0	0	0	0	0	0	0	0			Nov 2005 - Burnt arm on cut pipe
Incidence rate (number of incidents per 100 workers)	22	33	22	11	11	0	0	0	0	0			
Frequency rate (incidents per 10,000 hours exposure)	16	24	15	8	5	0	0	0	0	0			
Severity rate (days lost to injury per 10,000 hours worked)	90	112	0	0	0	0	0	0	0	0			
ENGINEERING CONSULTANCY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	_
Hours worked	1840	1716	1732	1808	2628	1816	576	1300	1452	1476			
Employee numbers	12	12	12	12	12	12	12	10	9	9			
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 SUPPORT	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	_
Hours worked	951	1076	1008	961	1295	882	587	933	1083	977			
Employee numbers	7	7	6	6	6	6	6	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			

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LABORATORY Hours worked Employee numbers Incidents Days lost Incidence rate (number of incidents per 100 workers) Frequency rate (incidents per 10,000 hours exposure) Severity rate (days lost to injury per 10,000 hours worked)	Jul 1078 7 0 0 0 0	Aug 1142 7 2 0 29 18 0	Sep 1219 6 0 0 0 0	Oct 1156 6 0 0 0 0	Nov 1681 6 1 0 17 6 0	Dec 1343 6 0 0 0 0	Jan 845 6 0 0 0 0	Feb 1243 6 0 0 0 0 0	Mar 1196 6 0 0 0 0	Apr 1131 6 1 0 17 9	May	Jun	Aug 2005 - Bruised foot Aug 2005 - Sprained neck Nov 2005 - Bee sting on head Apr 2006 - Bruised finger in door
STRATEGY AND ASSET Hours worked Employee numbers Incidents Days lost Incidence rate (number of incidents per 100 workers) Frequency rate (incidents per 10,000 hours exposure) Severity rate (days lost to injury per 10,000 hours worked)	Jul 712 5 0 0 0	Aug 644 5 0 0 0	Sep 688 5 0 0 0 0 0 0 0 0	Oct 676 5 0 0 0 0 0 0	Nov 1152 5 1 0 20 9	Dec 700 5 0 0 0 0 0 0	Jan 408 5 0 0 0	Feb 664 5 0 0 0 0 0 0 0	Mar 768 5 0 0 0	Apr 696 5 0 0 0 0 0 0 0	May	Jun	Nov 2005 - Strained back while lifting boxes
FORESTRY Hours worked Employee numbers Incidents Days lost Incidence rate (number of incidents per 100 workers) Frequency rate (incidents per 10,000 hours exposure) Severity rate (days lost to injury per 10,000 hours worked)	Jul 433 3 0 0 0 0 0 0 0	Aug 466 3 0 0 0 0 0 0 0	Sep 455 3 1 0 33 22 0	Oct 470 3 0 0 0 0 0 0	Nov 627 3 1 0 33 16 0	Dec 453 3 0 0 0 0	Jan 142 3 0 0 0 0 0	Feb 245 3 0 0 0 0 0 0	Mar 438 3 0 0 0 0	Apr 447 3 0 0 0 0 0 0 0	May	Jun	Sep 2005 - Sprained and cut hand Nov 2005 - Stung by stinging nettle on hand

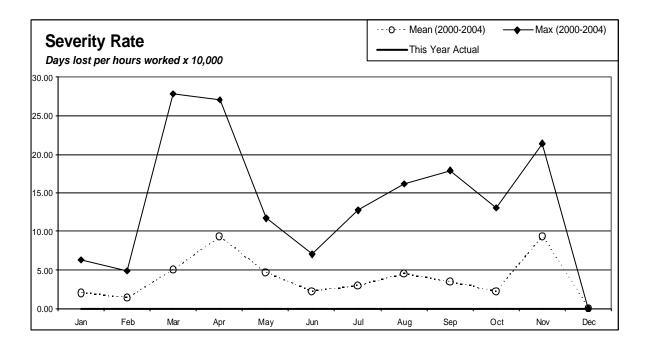
Utility Services Division Combined	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	8653	8651	8696	8673	12834	8980	4709	7718	8576	8209		
Employee numbers	59	59	58	58	57	57	57	56	55	56		
Injuries	4	6	5	1	6	2	0	0	0	1		
Days lost	11	14	0	0	0	0	0	0	0	0		
Frequency rate (incidents per 10,000 hours exposure)	5	7	6	1	5	2	0	0	0	1		
Severity rate (days lost to injury per 10,000 hours worked)	13	16	0	0	0	0	0	0	0	0		

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 January 2006 One incident in April 2006



Lost Days

0

Strategy and Asset Group

Strategy and Asset Group Review of Operations for the period ended 30 April 2006

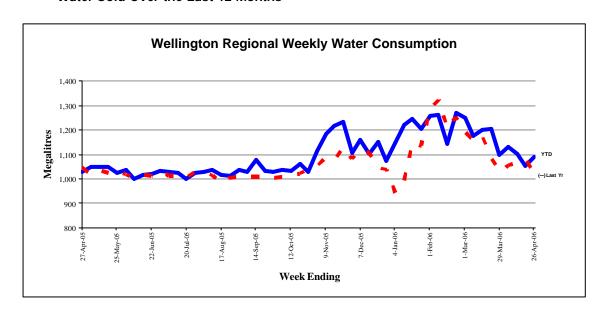
1. Items of Note

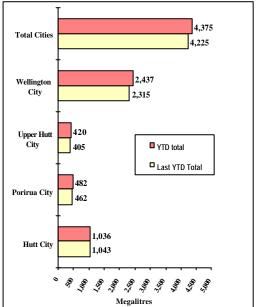
- Water use during March/April 2006 was about 3.5 percent higher than for the same period last year. The highest daily demand was 182 ML on 14 March 2006.
- Building work at the new Karori Pumping Station has been completed and pumps and pipework installed.
- Stage 2 planning, environmental and engineering studies for new major storage sources, and the Upper Hutt aquifer are being scoped and briefed.
- Work has begun on an underpass at Judgeford Golf Club. A major alteration to the Kaitoke to Karori main is required to facilitate this. The alteration work will be funded by the Judgeford Golf Club.
- Feedback has been provided into the community engagement review process.

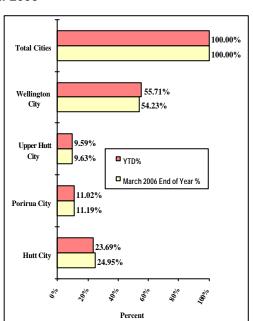
2. Water Usage

Consumption volumes for the year to date are approximately 3 percent up on last year but the distribution between territorial authorities is very similar.

Water Sold Over the Last 12 Months







Water Sold from 30 March 2005 to 30 April 2006

3. Asset Management

- The Capital Works budget for 2005/6 is \$5.937 million. Progress on the more significant projects included in the Capital Works Programme is as follows:
 - Work is well under way on construction of the forth (and final) stage of the Wainuiomata Catchment boundary fence. Budget \$100,000.
 - Modifications to the Te Marua Water Treatment Plant to enable lake and river water to be treated separately are close to completion. Budget \$300,000. Forecast final cost \$565,000.
 - Replacement and refurbishment of treatment plant equipment. Budget \$620,000. Forecast expenditure \$340,000.
 - Relocation of the Kaitoke main on the Silverstream Bridge. Budget \$140,000. Upper Hutt City Council (UHCC) has obtained a resource consent for the bridge strengthening works. However, the work has been delayed and the Greater Wellington Regional Council (GWRC) \$60,000 contribution will not be made until 2006/7. Forecast expenditure \$15,000.
 - Duplication of the Kaitoke main between State Highways 2 and 58 to improve the seismic resistance of this section of main has been completed and tested, although some tidy up work is still to be done.
 - Construction of the new Karori Pumping Station building has been completed and the pumps and pipework have been installed. Electrical equipment is currently being installed. Budget \$1,820,000.
 Forecast final cost \$2,011,000.

- Construction of the new Point Howard Pumping Station is well under way.
- Seismic protection. Work is proceeding on strengthening reservoir inlets, providing emergency connection points and other minor seismic protection works.

Additional funding of \$447,000 required to complete the Capital Works Programme this year was approved at the March Policy and Finance Committee meeting.

- Construction of a new pumping station building at Grenada, being undertaken by Wellington City Council (WCC), is complete. Pipework and pumps will be installed over the next few weeks. The project is part of the WCC Northern Suburbs Development Plan and will be taken over by GWRC on completion.
- Work has begun on the construction of an underpass at Judge ford to enable golfers and maintenance workers to cross State Highway 58 safely. To facilitate this work, the Kaitoke to Karori main will be raised locally. This work is being funded by the Judgeford Golf Club. Officers have spent considerable time working with the contractor to develop a practicable method of undertaking the work, since the main can only be shut down for a few hours.

3. New Sources

- Studies of the potential to take water from the Upper Hutt aquifer are progressing. Stage 2 includes the installation of two exploratory wells to confirm the availability of water, a computer model to study the potential impact on flows in the Hutt River and the impacts on other aquifer users, and environmental studies of streams fed from the aquifer.
- Preliminary environmental, planning, geological, hydrological and engineering studies have been completed on possible water storage sites at Pakuratahi, Skull Gully and Whakatikei. These preliminary studies are aimed at identifying matters that will require more detailed study to confirm the feasibility, productivity, cost and environmental impacts of dams if they were built at these sites. A detailed scope for these phase 2 studies is to be developed next month. Additional sites at Kaitoke and in the Pakuratahi Valley upstream of the Rimutaka Rail Trail are also being considered.
- Consultants have been engaged to undertake studies of the Hutt River to determine the environmental impact of reducing the minimum low flow downstream of the Kaitoke weir. A methodology for habitat studies has been developed, following a workshop with stakeholders, including the Department of Conservation, Fish and Game New Zealand and officers from the GWRC Environment Division. The draft methodology has been circulated to stakeholders and a peer reviewer for comment.

4. Quality Assurance

- The new *Drinking-Water Standards for New Zealand:2005* came into force on 31 December 2005. New reporting mechanisms complying with the new Standard have been in place at Te Marua since 30 November and at Wainuiomata since 19 December 2005. Raw water sampling of the plant inlets is also in place. Monitoring in the wholesale distribution network, except the Lower Hutt/Petone unchlorinated zone, is to be changed to continuous chlorine testing as soon as equipment is upgraded. In the meantime, direct testing for *E. coli* will continue. A public notice regarding plumbosolvency (the tendency of soft water to dissolve lead from tap fittings) has been published. There have been no enquiries from the public received to date.
- A revised proposal by the Ministry for the Environment to establish a National Environmental Standard for drinking water sources has been notified for submissions. A submission on behalf of the Council as a whole has been prepared by Environment Division staff. The Ministry has published a summary of submissions but its response to these submissions is not yet clear. From the water supply point of view the National Environmental Standard will provide enhanced opportunity for water suppliers to have input into resource consent applications and permitted use rules that could potentially affect the quality of source water taken for public water supply.
- The A1 grading for the Wainuiomata Water Treatment Plant has been reconfirmed. Te Marua achieved compliance with all aspects of the *Drinking-Water Standards for New Zealand 2000* in 2004 and 2005, including aesthetic requirements, and is expected to also receive an A1 grading. However, staff changes at Hutt Valley District Health Board have delayed consideration of gradings of the other plants and the wholesale distribution zones. Te Marua, Waterloo and Gear Island Water Treatment Plants are currently listed as ungraded.

5. Environmental

- The ISO 14000 Environment Management System is being updated to bring it into line with the new ISO 14001:2004 Standard. The changes required are minor but must be in place before 15 May 2006.
- Rehabilitation and lowering of the Wainuiomata Lower Dam spillway to provide an opportunity for the development of a wetland upstream has been delayed because of the high cost of the work proposed.
 - The engineering of the project has been re-evaluated and altered to reduce the cost. Construction in 2006/7 is envisaged.
- Design work has begun on a larger culvert for Sinclair Creek, just upstream of the Wainuiomata River intake. The existing culvert is regularly overtopped making the road impassable, and acts as a barrier to

- fish. It is to be replaced with a much larger culvert which will allow fish to move up Sinclair Creek. Construction is planned in 2006/7.
- Power factor correction equipment is being installed at the Gear Island and Wainuiomata Water Treatment Plants, and at Ngauranga Pumping Station. This equipment will improve electrical efficiency and reduce energy use.
- Three sentinel wells are to be drilled along the Petone Foreshore and equipped with instruments that will provide early warning of saline intrusion into the Waiwhetu aquifer. This work is being undertaken jointly with the Resource Investigations Department. Investigation and design work is about to begin.

6. Catchment Management

- The successful Contractor for the catchment fence at Wainuiomata has erected all the posts and is expected to commence erecting the netting in the next fortnight.
- There was only one catchment tour, with 10 Orongorongo walkers and 8 walkers on the shorter Wainuiomata tour. Tours were suspended during the "roar" hunt.
- The "roar" hunts were successfully completed, with only one incident where a hunter "surfaced" on the Wairarapa side of the main ridge line. The hunter did the right thing and immediately advised his whereabouts and arrangements were made to for him to return by road.
- A total of 3 deer, 7 goats and 2 pigs were culled during the hunt.
- The usual instances of accidental and deliberate trespass and vandalism in the vicinity of the Wainuiomata Water Treatment Plant continue, and are dealt with by the Ranger as they arise.

7. Marketing

- Draft Wellington Water Management Plan. A brief is being developed for a consultant to peer review the cost benefit analysis work for the demand management options in regard specifically to our supply area (analysis adapted from Auckland, which has different circumstances).
- Source Development and Water Management Communication. A communication strategy paper was written and presented to the Utility Services Committee in April, outlining a proposed way forward.
- Water Supply History Update. Review of the first draft text was completed. Some checking of facts and minor rewriting is now required from the Consultant.
- Water Supply Service Level Agreement. Review of a revised draft of the

agreement, received from Capacity (March) identified several substantial concerns that had again been overlooked. A copy of this draft marked with our outstanding concerns has been prepared and a meeting arranged with Capacity (early May) to work through these points.

- Live Water Supply Data on the Internet. A project to display live data from our treatment plants and supply system on the GWRC Internet site was progressed. The developer has delivered the system map that will carry the data. A graphing capability for historic data is now being developed "in-house" with Information Technology.
- Intranet Development. Work was started on identifying Water Supply content for GWRC's Intranet upgrade *GWENNIE*.
- Community Engagement Review. Feedback was provided on the terms of reference, objectives and key results areas for the community engagement review process. This work is ongoing.
- News Releases. Two releases were made that GWRC's bulk water supply measures up to health standards (in response to a story that many New Zealanders were drinking water that did not measure up) and that our investigation of options to meet future water needs is timely, as annual water use across our supply area hit a 14 year high.
- Treatment Plant Visits. A busy couple of months, with seven tours hosted, involving over 200 visitors.
- Chinese Delegation Visit. A presentation was prepared and given to a delegation from the Songliao Water Resources Commission (China) on water management issues. This group was hosted in New Zealand by the Ministry for the Environment, which requested our involvement.

8. Projects Undertaken by Engineering Consultancy for Strategy and Asset

• Kaitoke Intake Repair

Bars have been placed over the infiltration gallery access manhole. This work is complete.

• Wainuiomata/Orongorongo Catchment Fence

The Contractor has made good progress with the erection of the posts for the final stage of the fence. The Contractor is expected to complete the work in May.

• Future Water Source Pipelines

The route of a possible pipeline from the Pakuratahi Dam site to Te Marua Water Treatment Plant is being investigated and a report prepared.

The route of a possible pipeline from the Whakatikei water treatment plant site to the Te Marua to Karori pipeline is being investigated.

• Wainuiomata Water Treatment Plant Outlet Control Valve

The new control valve for installation in the Tunnel Grove valve chamber has been received. Electrical installation details are being prepared. Replacement of air valves on the Wainuiomata pipeline is being investigated to reduce the effects of air slam. Installation of the control valve is programmed for August 2006.

• Waterloo Lime Dosing

The possible siting of a lime water tank at the Waterloo Water Treatment Plant is being investigated.

• Power Factor Correction Equipment

An order has been placed for the supply of power factor correction equipment to be installed at three facilities - Wainuiomata Water Treatment Plant, Gear Island Water Treatment and Ngauranga Pumping Station. The installation specification has been prepared.

• Wainuiomata Pumping Stations Variable Speed Drives

Arrangements are being made to install variable speed drives at Wainuiomata No. 1 Pumping Station.

The variable speed drives will even flows and improve efficiency of the pumps.

• Duplicating Te Marua to Karori Pipeline at Haywards

The Contractor has completed the pipeline and achieved a satisfactory pressure test. Installation of valves and pipework at the connection point alongside State Highway 2 has commenced.

• Emergency Water Supply Points for Upper Hutt City Council

The pressure reducing valve has been received for a proposed cross connection at the Fergusson Drive/Camp Street intersection. Arrangements are being made for the installation in June.

• Judgeford Golf Course Underpass

The Judgeford Golf Club is proceeding with construction of an underpass beneath State Highway 58. Arrangements are being made to lift the Te Marua to Karori pipeline.

• Pukerua Bay Bypass Pipeline

Drawings have been prepared for the installation of a bypass pipeline around the Pukerua Bay Reservoir.

This is programmed for installation next financial year.

• Karori Pumping Station Replacement

Installation of the pumpsets and pipework inside the building is complete. The switchboard has been fabricated and the electrical installation work is progressing.

• Karori Pumping Station Replacement - External Pipelines

The Contactor installing the pipelines between the pumping station and existing mains has completed the installation and is arranging the pressure test.

• Existing Karori Pumping Station Decommissioning

Planning is under way for the decommissioning of the existing Karori Pumping Station.

• Point Howard Pumping Station

The construction of the new pumping station alongside Seaview Road is progressing satisfactorily.

• Lincolnshire Pumping Station and Reservoir

Advice is being provided to the designers of the Lincolnshire Pumping Station and Reservoir.

Engineering Consultancy Group

Engineering Consultancy Group Review of Operations for the period ended 30 April 2006

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. Other projects are as follows:

 Proposed GWRC/WCC/Capital and Coast District Health Board Reservoir

This project is being managed by WCC. There has been no requirement for input during this reporting period.

• Stuart Macaskill Lakes Tower Strengthening

The peer review of the proposal to strengthen the lake towers has been completed. Further analysis of the structure is being recommended.

• Wainuiomata Mainland Island

The pest control operation is proceeding. A strategic plan is being developed to clearly identify the aims, goals and management of the area.

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

The Engineering Consultancy Group is undertaking the following projects for Capacity:

Northern Water Main Renewals

Detailed design of the pipeline installation in Churton Drive is being finalised.

• Ngaio and Wadestown Water Main Renewals

Drawings for the replacement of water mains in seven roads in Ngaio and Wadestown have been prepared. A design report has been drafted.

Rajkot Terrace Pumping Station

Design work has started for replacement of the Rajkot Terrace pumpsets.

4. Work Carried Out for Flood Protection

Current projects under way are:

• Norfolk Street Floodgate

Minor defects with the construction of the floodgate have been identified and the Contractor instructed to remedy them.

• General Draughting Work

The Engineering Consultancy Group is providing most of the draughting services for Flood Protection.

5. Corporate Projects

• Pandemic Preparation

Various emergency supplies have been purchased and stockpiled for use as required. Investigations are under way to provide a web site that is accessible to staff from their homes, so that information can be disseminated.

Human resources procedures are being developed, e.g., when to send people home. A corporate plan is also being developed with each department identifying key actions that will occur at various stages of a pandemic.

Laboratory Services

Laboratory Services Department Review of Operations for the period ended 30 April 2006

1. Items of Note

- Laboratory finances finished in the black at the end of the third financial quarter and for the year to date.
- We herald the appointment of Hamish Harding as the coming of the long awaited Laboratory Microbiologist. Although Hamish has an engineering qualification, he does have laboratory analytical experience and brings associated skills that will bolster our stocks.
- Brent Hutchby resigned from his position as Laboratory Field Officer.
 We were inundated by the response to this advertised position and have yet to make an appointment.
- We await the outcome of our proposal for the Environment Division tendered work in connection with the Sample collection and analytical services for surface water and groundwater quality monitoring programmes 2006-2009

2. Business Summary

2.1 Quality

There were no requests for retesting samples. Most test reports were timely but there were some delays because of staffing numbers, equipment repairs and, as a consequence, with some work having to be subcontracted. .

2.2 Health and Safety

There were one minor incident but no time lost to injury this period.

Plantation Forestry

Plantation Forestry Department Review of Operations for the period ended 30 April 2006

1. Log Harvest Contract

Generally these were two good months only spoilt by a slow period in the Hukinga Forest because of difficult terrain. We were fortunate that, with some basic "Kiwi ingenuity", the logging Contractor was able to complete the harvest of the block without further road construction. The slow progress in the Hukinga Forest was compensated somewhat by good production, by the crew working in the easier contours of Martins block in Pakuratahi West.

Although the New Zealand dollar started to ease during this period, the promising start did not continue and thus, in a very nervous market, pruned prices did not reflect the gains in the currency. Towards the end of the period the New Zealand dollar had regained around 4 cents, confirming the wisdom of those who took a very conservative view on prices. Despite this, demand for domestic sawlog remained strong and there were regular examples of insufficient product to enable local mills to work at full production.

The hauler crew has completed harvesting in the Hukinga and is currently setting up in Puketiro (Dick's Yard). The ground based crew has continued in Pakuratahi West and should complete the Martins blocks towards the end of May. Following this they will harvest the western half of the Glider Club block before returning to Valley View to complete Longspur.

The Marryatt crew, which worked in the Council estate up until last spring, has returned and will commence the harvest of residual stands at Ladle Bend on the rail trail. These stands, which were ravaged by wind throw in the February 2004 storm, represent an ongoing risk to user of the rail trail and it will be good to finally remove the risk. The Historic Places Trust has approved the harvest methodology for those areas that may impact on the rail alignment.

A couple of years ago we went some way down the track on a proposal to log an old stand within the Mangaroa block through a neighbour's land. The proposal did not come to fruition. The land has now been sold and the new owner has approached us with a modified proposal. Over the next month we will work through their offer to assess the financial result. If this is satisfactory, we would programme the harvest for mid-spring.

Production for March and April is shown in tables 1 and 2 on page 26.

Table 1 - Pakuratahi West- Output by Grade - Martins

	March	2006*	Apri	I 2006
Grade	Tonnes	%	Tonnes	%
Pruned	0	0	0	0
Short Pruned	0	0	0	0
S/A Grade	1,208.31	30.29	719.33	31.51
L Grade	0	0	12.08	0.53
R Grade	625.77	15.69	461.85	20.23
K Sawlog	963.46	24.16	514.09	22.52
Roundwood	88.92	2.23	144.78	6.34
K Rough	443.75	11.13	231.76	10.15
Dom Rough	140.23	3.52	29.71	1.30
Pulp	65.04	1.63	0	0
O/S Pulp	0	0	0	0
Export Pulp	453.17	11.36	169.40	7.42
Firewood		_	0	0
Total	3,988.65		2,283.00	

^{*} Includes 5 weeks as Rayonier altered their accounting cycle

Revenue for March was \$100,968.43 at an average of \$25.25 per tonne Revenue for April was \$70,305.79 at an average of \$30.78 per tonne

Table 2 - Output by Grade - Hukinga

	March	2006	Apri	I 2006
Grade	Tonnes	%	Tonnes	%
Pruned	0	0	0	0
Short pruned	0	0	0	0
S/A Grade	828.45	23.43	437.87	29.41
L Grade	0	0	0	0
R Grade	441.85	12.49	160.35	10.77
K Sawlog	837.08	23.67	394.44	26.50
Roundwood	0	0	0	0
K Rough	623.45	17.63	244.85	16.45
Dom Rough	25.86	0.73	0	0
Pulp	325.89	9.22	81.52	5.48
O/S Pulp	13.80	0.39	0	0
Export pulp	439.99	12.44	169.60	11.39
Total	3,536.37		1,488.63	

Revenue for March totalled \$72,353.90 at an average of \$20.91 per tonne Revenue for April totalled \$37,003.94 at an average of \$24.86 per tonne

Total revenue for March was \$173,326.19 at an average of \$23.21 per tonne Total revenue for April was \$107,309.73 at an average of \$28.45 per tonne

2. Silviculture Contracts

The Contractor continues to strive to complete all the allocated tasks before the end of the financial year. There are currently three employees plus the Contractor. If the three employees can be retained, the Contractor's completion target should be met.

One Contractor has completed 83.1 ha, with a further 66.50 ha deferred because of insufficient growth. These will be rescheduled for treatment at a later date.

The other Contractor has completed 91.50 ha out of 114.60 ha.

3. Plantation Forestry Operations

Staff members continue to monitor the ongoing harvesting operations, with the odd deviation into wind farm and dam matters as potential bidders and contractors access the forested areas to assess potential sites. Generally these visits take place without problems and do not impact on the main harvest activity.

A decision has now been made to move a crew into Puketiro, so the access road has been tidied up with a coat of fines on the Valley View side and a grade on the Puketiro side. The two most difficult corners on the climb through Rallywoods have been resealed with millings. We are keen to avoid the complaints of excessive tyre wear that emanated from the trucks operating into and out of the Hukinga Forest.

Staff members hosted a field trip to Summit Yard, Hukinga and Puketiro on the Sunday following the recent Institute of Forestry Conference. Although only 28 took part in the trip, they were joined by a large group of four wheel drive enthusiasts from the Cross Country Vehicle Club who assisted with transport on the Hukinga part of the trip, as a river crossing was involved. All appeared to enjoy the day out. It was an ideal opportunity for these two diverse groups to mingle and share ideas.

4. Forest Access

Maungakotukutuku access remains the only significant problem, with the only access requiring two crossings of the Maungakotukutuku Stream.

All main routes are accessible, with only autumn gorse growth, together with the ever present Himalayan honeysuckle, intruding on access.

5. Market Trends

Although the dollars has not continued its fall, it is still 6 cents below the January figure and this has stimulated the export prices.

Unfortunately, as has happened on earlier occasions, this has been tempered by an increase in shipping costs. These are now back into the low US\$40s after dropping as low as US\$35. Nevertheless, there has still been a consistent gain with 53 grade prices over \$70 per tonne and Indian pulp prices in the low \$40. The pulp price is a full \$10 above the domestic price.

Domestic sawlog prices have increased \$1-\$2 per tonne, with some mills lowering the specifications rather than accepting a price increase. Unfortunately there has not been an equivalent move upward in pruned prices. The Feilding price is \$120, with \$135 at Dannevirke, subject to a trial load. Both these prices are marginal, given the distance of the cart involved.

Rayonier have offered to sell JNL both part pruned logs and "run of bush" logs. At present, prices have not been agreed but JNL has inspected the trees and expressed satisfaction with what they saw.

We need to take advantage of the export prices now as, come July with the rainy season in Korea, demand will followed shortly thereafter with easing prices.