Greater Wellington Water

Operations Group

Operations Group Review of Operations for the Period Ended 31 March 2004

1. Items of Note

- The numbers of algae in Lake 2 have continued to decline after being at relatively high levels throughout the summer. It is planned to drain Lake 2 during April.
- With the exception of the Wainuiomata Water Treatment Plant access bridge, the majority of repair and cleanup work caused by the February storms has been carried out.
- Operational support to Masterton Water Treatment Plant is ongoing but less frequent since the Masterton District Council engaged an additional plant technician.

2. Supply Situation

The Stuart Macaskill Lakes are full. There have been no issues with supply for the period.

Hutt River Flows

The mean monthly flows in the Hutt River for the period were average.



Wainuiomata River Flows



The mean monthly flow in the Wainuiomata River was above average.

Aquifer Levels

The water level in the Waiwhetu aquifer was at the maximum.



3. Treatment Plants

3.1 Wainuiomata

3.1.1 Quality

There are no quality issues to report.

3.1.2 Health and Safety

There are no health and safety issues to report.

- 3.1.3 Operations and Maintenance
 - Both the 11 kV power supply to the Wainuiomata intake and the Wainuiomata intake pipeline have been reinstated and the Wainuiomata source is back in service.
 - Planning is under way for shutdown maintenance to be carried out during installation of the new PLC and telemetry equipment in April.

3.1.4 Plant Tours

There were two tours during the period - one for Greater Wellington Regional Council consents staff and one for Massy University students.

3.1.5 Projects

- The PLC replacement software has now been factory tested. The project programme has been pushed out by about 10 days because of the factory testing taking longer than the supplier anticipated.
- Upgrading the Wainuiomata River intake is still on hold because of poor weather.
- Relocation of the supernatant monitoring equipment is complete.
- Refurbishment of the Orongorongo shed is still on hold because of poor weather.

3.2 Waterloo and Gear Island Water Treatment Plants

3.2.1 Quality

There are no quality issues to report.

3.2.2 Health and Safety

There are no accidents or incidents to report.

3.2.3 Operations and Maintenance

- Refurbishment of the emergency mobile generators is progressing well.
- The communications cable to Thorndon has failed and, as a consequence, pressure control and water quality trending capabilities for this site has been lost. Pressure control for the Wellington pumps is now carried out from the Kaiwharawhara pressure transmitter. Full control and trending will be restored toward the end of April when the new radio telemetry equipment is installed.
- Naenae Pump No. 3 has been repaired and returned to site.
- Routine cleaning and disinfection of reservoir B has been carried out.
- New seals have been fitted to one of the Gear Island chemical boost pumps and are being assessed for adequacy.

3.2.4 Plant Tours

There were no tours during the period.

- 3.2.5 Projects
 - Waterloo aeration trials are in progress.
 - The scope of the Waterloo fluoride panel refurbishment is in progress.
 - The trial of a chlorine gas flow meter at Gear Island will commence in April.
 - Improvements to the Gear Island Pumping Station ventilation are complete.

3.3 Te Marua

3.3.1 Quality

There are no quality issues to report.

3.3.2 Health and Safety

There are no accidents or incidents to report.

3.3.3 Operations

• The high flow exercise has been delayed because of poor river conditions and is now planned for mid-April.

3.3.4 Plant Tours

There were no tours for the period.

3.3.5 Projects

- Supply and installation of CO₂ gas flow meters and control valves will commence in May.
- A preliminary report has been received from Beca Carter Hollings and Ferner Ltd on the viability of running the plant in split stream mode.
- Work has commenced on the preparation of an up-to-date control philosophy for the plant.

4. Distribution

4.1 Quality

There are no quality issues to report.

4.2 Health and Safety

There are no health and safety issues to report.

4.3 Operations

- All scheduled maintenance activities were carried out as planned:
- Pump alignment issues at Haywards Pumping Station have been cleared
- There were three pipeline leaks repaired during the March period.

4.4 Projects

- Repairing the damaged paint work on the main to the Te Marua Water Treatment Plant has been delayed because of bad weather.
- The installation of pressure transmitters is ongoing.
- Remote data-logger installation is complete.
- The provision of safe access to valve chambers on the 1,050 mm main is progressing.

Utility Services Division Health and Safety Data July 2003 to June 2004 - Total Injuries

PRODUCTION (+ 4 OPS ADMIN)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	3,516	2,380	2,520	2,336	2,287	3,434	1,667	2,365	2,496	0	0		0 Aug = Achilles tendon/foot sprain
Employee numbers	18	18	18	18	15	16	16	16	16	0	0		0 Sep = cut finger pulling out nail
Incidents	0	1	1	0	0	0	0	1	0	0	0		0 Nov = Graze/minor bruising on hip after knocking steel pipe support
Days lost	0	0	0	0	0	0	0	0	0	0	0		0 Feb = Superficial injury to nose
Incidence rate (number of incidents per 100 workers)	0	6	6	0	7	0	0	6	0	0	0		0
Frequency rate (incidents per 10,000 hours exposure)	0	4	4	0	4	0	0	4	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	0		0
DISTRIBUTION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jan = Hit in eye with rust splatter - 1 day lost
Hours worked	1,760	1,389	1,277	1,362	1,285	1,581	697	1,167	1,177	0	0		0 Feb = Bruised Achilles tendon
Employee numbers	8	8	8	8	9	8	8	8	8	0	0		0
Incidents	0	0	0	0	0	0	1	1	0	0	0		0
Days lost	0	0	0	0	0	0	1	0	0	0	0		0
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0	13	13	0	0	0		0
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0	14	9	0	0	0		0
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	14	0	0	0	0		0
ENGINEERING CONSULTANCY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	2,388		1,764	1,739	1,629	2,396	968	1,736	1,816	. 0	0		0
Employee numbers	12	12	12	12	12	12	12	12	12	0	0		0
Incidents	0	0	1	0	1	0	0	0	0	0	0		0
Days lost	0	0	0	0	0	0	0	0	0	0	0		0
Incidence rate (number of incidents per 100 workers)	0	0	8	0	8	0	0	0	0	0	0		0
Frequency rate (incidents per 10,000 hours exposure)	0	0	6	0	6	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	0		0
UTILITY SERVICES SUPPORT	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Sep = Strained knee and shoulder
Hours worked	1,572		1,060	1,072	836	1,276	496	776	804	. 0			0 Nov = Cut finger
Employee numbers	. 8	. 8	8	8	7	<i>,</i> 7	7	7	7	0	0		0
Incidents	0	0	0	0	0	0	0	0	0	0	0		0
Days lost	0	0	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	0		0
Frequency rate (incidents per 10,000 hours exposure)	0	0	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	0		0
LABORATORY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Sep = Strained knee - 2 days lost
Hours worked	1,558		1,149		1,003	1,523	809	1,079	1,218	. 0	•		0 Sep = Strained Back
Employee numbers	7	, 7	, 7	7	7	, 7	7	7	6	0	0		0 Sep = Bruised knee and finger
Incidents	0	0	3	1	1	0	1	0	0	0	0		0 Oct = Cut finger
Days lost	0	0	2	0	0	0	0	0	0	0			0 Nov = Burnt hand and finger
Incidence rate (number of incidents per 100 workers)	0	0	43	14	14	0	14	0	0	0			0 Jan = Bruised finger (shut in car door)
Frequency rate (incidents per 10,000 hours exposure)	0	0	26	10	10	0	12	0	0	0	0		0
Severity rate (days lost to injury per 10,000 hours worked)	0	0	17	0	0	0	0	0	0	0	0		0
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STRATEGY AND ASSET	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	992	792	804	740	572	792	256	420	628	0	0	0	
Employee numbers	5	5	5	5	5	5	5	5	5	0	0	0	
Incidents	0	0	0	0	0	0	0	0	0	0	0	0	
Days lost	0	0	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	0	0	
Frequency rate (incidents per 10,000 hours exposure)	0	0	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	0	0	
FORESTRY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun S	ep = Fractured skull
		0											
Hours worked	944	637	649	509	408	647	270	473	482	0	0	0	
Hours worked Employee numbers	944 3	•	649 3	509 3	408 3	647 3				0	0	0 0	
	944 3 0	•		509 3 0	408 3 0	647 3 0			482	0 0 0	0 0 0	0 0 0	
Employee numbers	944 3 0 0	•		509 3 0 0	408 3 0 0	647 3 0 0			482 3	0 0 0 0	0 0 0 0	0 0 0 0	
Employee numbers Incidents	944 3 0 0 0	•		509 3 0 0 0	408 3 0 0 0	3 0			482 3 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0	
Employee numbers Incidents Days lost	944 3 0 0 0 0	•	3 1 0	3 0 0	408 3 0 0 0 0	3 0			482 3 0 0	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0	

Utility Services Division Combined		12 Month Average	Aug	12 Month Average	Sep	12 Month Average		12 Month Average		12 Month Average	Dec	12 Month Average	Jan	12 Month Average	Feb	12 Month Average	Mar	12 Month Average	Apr	12 Month Average	May	12 Month Average	Jun	12 Month Average
Hours worked	12,730		9,111	8,710	9,223	•		8,808	8,019	8,811	11,648	9,117	5,162	8,825	8,016	8,802	-	•	_	Average	way	Average	Juli	Average
Employee numbers	61	58	61	59	61	59	61	59	58	59	58	59	58	59	58	59	57	59						
Injuries	0	1	1	1	6	2	1	2	3	2	0	2	2	2	2	2	0	2						
Days lost	0	4	0	4	2	3	0	2	0	0	0	0	1	1	0	1	0	0						
Frequency rate (incidents per 10,000 hours exposure)	0	2	1	2	7	2	1	2	4	2	0	2	4	2	2	2	0	2						
Severity rate (days lost to injury per 10,000 hours worked)	0	5	0	5	2	3	0	2	0	1	0	1	2	1	0	1	0	1						

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

Two incidents in January 2004 Two incidents in February 2004



Days Lost

One day lost in January 2004

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Strategy and Asset Group

Strategy and Asset Group Review of Operations for the Period Ended 31 March 2004

1. Items of Note

- The water consumption year for billing purposes ended on the last Wednesday in March. Customers are now being asked to raise any issues before the figures are finalised. However, the preliminary figures indicate that the total consumption for the year at 55,747 ML was 318 ML less than the previous year.
- The Wellington Regional Water Board Functions Bill has had to be readvertised because of a technical error and this will occur in April. It is hoped that the Bill will be introduced into the House of Representatives in May.
- The external consultants reviewing the Lower Wainuiomata Dam have completed their report. It indicates that the various options for either creating a wetland or cutting a channel through the dam do not vary greatly in cost. The report is being discussed with colleagues in the Landcare Division.
- The excessively wet summer meant there was no need for conservation advertising during the period and work will start next quarter on reviewing what will be appropriate for a campaign in the 2004/5 summer should it prove more favourable from a weather perspective.
- Consultants are currently quoting to investigate off-river storage possibilities near the Wainuiomata Water Treatment Plant.
- The severe weather in February tested the water supply infrastructure and the major damage was to the centre pier of the road bridge leading to the Wainuiomata Water Treatment Plant and damage to the water main between the Wainuiomata River intake and the water treatment plant. Other asset damage was relatively minor.
- The Ministry of Health is well advanced with its consultation process for reviewing the Drinking-Water Standards for New Zealand. There is some concern that the new Standard may not reward the very high quality water produced at the Te Marua Water Treatment Plant.
- Progress is being made with Wellington City Council on investigating a large combined reservoir within the city that may also provide emergency storage for Wellington Hospital. It is expected that consultants will be jointly appointed in April to carry out some feasibility work.

2. Sales Volume



Water Sold Over the Last 12 Months

Water Sold from April to 31 March 2004



3. Asset Management

- The Capital Works budget for 2003/4 is \$5.111 million. Forecast expenditure up to 30 June 2004 is \$3.92 million. Progress on the major projects is as follows:
 - Kaitoke weir improvements The unusually wet summer and consequent high river levels mean that this work is unlikely to proceed this financial year.
 - Wainuiomata Catchment northern boundary fence stage 2 (budget \$100,000). The work is under way and good progress is being made.
 - Modification to the Orongorongo intake (budget \$55,000). The work is substantially complete.
 - Replacement of control equipment at Wainuiomata Water Treatment Plant (budget \$100,000). The new controller has been completed and has been successfully bench tested. The plant will be shut down during April to enable installation of the new control system. Additional costs of \$20,000 have arisen from difficulties experienced during bench testing and in connecting to the existing operator interface unit.
 - Relocation of the Pukerua Bay branch onto the new Paremata Bridge (budget \$400,000). This work is well advanced and the pipes are in position on the bridge. Connections to the existing main at each end of the bridge will be made in April. Transit New Zealand has agreed to fund 35.5 percent of the cost of this work.
 - Replacement of the OK main between the Wainuiomata Tunnel and the water treatment plant (budget \$1,250,000). This work is complete and the access road has been re-sealed.
 - Relocation of the Karori Pumping Station (budget \$600,000). Following lengthy discussions with Wellington City Council officers and the detailed investigation of six sites, a preferred site has now been identified. A resource consent application will be submitted to Wellington City Council in July or August
 - Construction of a new pumping station to house the Point Howard pumps (budget \$417,000). Land has been acquired, design is proceeding and the new pumps have been ordered.
- Proposals have been sought from consultants for the investigation of off-river storage at Wainuiomata. This storage would enable this plant to operate when the rivers are dirty and during periods of very low river flows.
- A proposal has been received from NIWA consultants for a project to predict summer water demand and provide early warning of possible shortfalls. The system would involve use of long range weather forecasts and is considered to be very innovative. However, the cost is

significant and the proposal is being given careful consideration.

- The raw water main at Wainuiomata damaged by the floods in February has been repaired. Flood protection works to minimise the risk of a recurrence are being designed. Repairs to the access bridge also damaged are in the hands of the insurance assessor and are being actively investigated by a consultant engineer. The insurer will also meet the cost of the temporary Bailey bridge.
- Maunsell Ltd is working on the revision of the Wholesale Water Asset Management Plan. A first draft has been received and is being reviewed.
- A commission to revalue wholesale water assets has been awarded to Knight Frank Ltd. The same company, then under the name Rolle Hillier Parker, undertook the 1999 valuation.

4. Quality Assurance

- Development of a revised Drinking Water Standard is continuing. Greater Wellington Water has a staff member on the Experts Committee considering the changes. A public meeting is to be held on 15 April and public submissions close on 30 April.
- Work is continuing on a new proposal by the Ministry for the Environment to establish a National Environmental Standard for drinking water sources. The linkage between this Standard and the new Drinking Water Standard is important but, to date, unclear. Greater Wellington Water staff will closely monitor the development of these Standards.
- A programme of testing for aggressive water in consultation with the customer territorial authorities has been completed. The results have been analysed and a report is in preparation. The main finding has been that the test results are very inconsistent.

5. Environmental

• Consultants have completed a safety review of the lower Wainuiomata Dam. Preliminary indications are that to bring the dam up to currently accepted safety standards or to remove it altogether will cost approximately \$600,000. The options presented in the report will be discussed with Landcare Division staff and a preferred option identified.

6. Catchment Management

• There were eight incidents of trespass intercepted by the ranger and water treatment plant staff. While most incidents were resolved

amicably, one involved abuse from a regular offender, the Police showed great interest in another, and one individual was trespassed after admitting poaching.

- The goat control operation was completed, with a total of 41 goats and 1 deer culled. Of the 41 goats, 14 were shot on adjoining Department of Conservation land, which suggests that this may be a constraint to eliminating goats entirely.
- Minor slips on internal roads were cleared following the February storms and the repairs to the Wainuiomata intake pipe and associated roading was completed.
- The next stage in the boundary fence commenced with a new contractor on 5 March. Progress and work standard to date have been satisfactory.
- The balloted hunt in the Wainuiomata/Orongorongo Catchments commenced on 27 March and continues until 20 April. Eighty hunters in all have been granted access.
- Rodent/mustelid monitoring shows rat numbers have fallen to that recorded in August, while mustelids have increased. Data for a full year has been gathered and further monitoring will be aimed at identifying the "natural" fluctuations in populations, so a better understanding of their impact on the catchment can be obtained.
- Forty-eight walkers took park in the Wainuiomata guided tour on 21 March.
- There is concern over the stability of the area above the road on the approach to the Kaitoke weir. To date we have had the large tree on top of the bank checked by an arborist and no problem exists at this time. Arrangements have been made to have Tonkin and Taylor Ltd review their earlier report on the stability of the bank. This is due in early May. In the meantime staff do not approach the area during severe weather events and a patrol is conducted immediately thereafter. Staff are also advised not to stop on this section of road.

7. Marketing

- Daily tracking of water use, source water levels and weather conditions was continued for comparative purposes, despite record rainfall levels and low demand for water during February.
- Work was continued on new water supply interpretation signs for Kaitoke Regional Park. Regional Parks has developed new signage for the park around the theme of water relating to its activities at Kaitoke. The new Water Supply signs will complement and be consistent with Parks' work.

- A divisional communication plan was started. The plan will link Utility Services' water activity with the Council's communication strategy adopted on 30 June 2003.
- Communication material was prepared and Hutt City Council consulted in relation to closure of the public water tap at Gear Island from 1 May 2004. he tap is not needed now that Hutt City Council has opened a new facility that serves the same purpose.
- Water Supply Agreement. A further meeting was held to discuss changes that we require to the draft contract that was put forward by the water supply customers. We will need one further meeting to complete a first full revision of the draft contract. Up to this point discussions have been with an officer from Wellington City Council (now transferred to Capacity, the new joint water management venture between Wellington City and Hutt City Councils) who is representing the interests of the four customer councils in drafting a supply agreement. Once the first revised draft is completed, further consideration of content will be needed both within Greater Wellington Water and among the customers. This work is continuing.
- There were two treatment plant visits during March, involving some 140 adults and children. Three additional visits were arranged for later in the year.
- Greater Wellington Water did not make any media releases during March. Newspaper coverage of Greater Wellington Water included a report in *The Hutt News* of Greater Wellington's draft annual plan, including that the water levy would not increase for the eighth year in a row (*Hutt ratepayers will fork out \$1 a month more to GWRC*). An article (*Graffiti in our city*) in *The Hutt News* of 2 March listed Greater Wellington as the contact point for reporting graffiti on water supply facilities and pipes.

8. Projects Undertaken by Engineering Consultancy for Strategy and Asset

• Orongorongo River Intake

Internal dividing walls have been installed, the floor screens modified and the sedimentation chamber scour valves replaced. High river flows are preventing completion of some minor items for this upgrade.

• Wainuiomata/Orongorongo Catchment Fence

The Contract for erection of the second stage of a deer and stock fence along the northern boundary of the water collection area is progressing satisfactorily. • Kaitoke No. 2 Tunnel Access Footbridge

A Contract has been awarded to refurbish the footbridge at the Te Marua end of the No. 2 Tunnel.

• Wainuiomata Water Treatment Plant Outlet Control Valve

A report on the replacement and relocation of this control valve has been prepared.

• Waterloo Well Pump Control Valves

Arrangements are being made to replace the first of the Waterloo well pump control valves.

• Refurbishment of the OK Main, Petone

Negotiations are continuing with the Contractor to finalise the cost of the work.

• State Highway 1 Bridge at Paremata

The new pipe has been erected on the bridge. Installation of the connecting pipework to the existing main is proceeding.

• 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. Alternative routes for this pipeline are being assessed.

• Orongorongo Pipeline Replacement

The new pipeline from the tunnel to the Wainuiomata Water Treatment Plant has been commissioned. The access road to the tunnel has been resealed.

• Karori Pumping Station

A site options report has been completed for the replacement of this pumping station to a more secure site. The preferred site is located on Northland Tunnel Road adjacent to an electrical substation. The structural design consultant is preparing a preliminary design report.

• Point Howard Pumping Station

The underground pumping station at Hutt Park is being replaced. Land purchase arrangements are being finalised for the proposed site alongside Seaview Road. The pumpsets have been ordered. The structural design of the building is proceeding. • Pinehaven Pumping Station

New pumpsets have been delivered for Pinehaven Pumping Station. The Contract for the fabrication and installation of the electrical control equipment for the new pumps has been awarded. Pipework modifications are proceeding.

• Minor Seismic Projects

A number of minor seismic protection projects are being attended to. These include:

- Assessment of the performance of the Mangaroa Bridge.
- Installing a non-return function on the Gracefield Reservoir inlet control valve.
- Wainuiomata River Intake Pipeline

The flood on 16 February 2004 caused 27 m of this pipeline to collapse into the river. The pipeline has been reinstated. Permanent riverbank protection works are being designed.

• Wainuiomata Water Treatment Plant Access Bridge

The central pier on this bridged dropped by approximately 300 mm in the flood on 16 February. A Bailey bridge has been erected over the damaged bridge. The insurance assessor has commissioned a consultant engineer to advise how to repair the bridge.

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Engineering Consultancy Group

Engineering Consultancy Group Review of Operations for the Period Ended 31 March 2004

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 Wellington City Council is significantly less than in previous years. Current projects under way are detailed in the following sections.

3.2 Rugby, Sussex and Cable Streets

Wellington City Council has approved the design report. Because these are busy streets and partly State Highway, some construction work will need to be carried out at night. Route selection is complete and connection details are being prepared.

3.3 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 floor has been completed and work is under way with preparing wall formwork.

3.4 Mt Albert Reservoir

The non-notified consent has been received and the draft design report is being assessed. This 3.5 ML reservoir will be sited in Mount Albert Park within Berhampore Golf Course.

3.5 Onslow Reservoir

There are two reservoirs on the Onslow site.

The rectangular western reservoir has been demolished and a new larger reservoir of 4.5 ML capacity has been built on the same site. The structure is now complete. Filling for testing purposes was carried out. Some leaks were observed and repaired, and the reservoir chlorinated. Backfilling is now under way.

Until the new reservoir is commissioned, the whole zone is being supplied from the very small circular reservoir. This has required close co-operation between GWW operational staff and the Wellington City Council system controllers but has been carried out without interruption to the supply to consumers.

3.6 Warwick Street Pumping Station

This pumping station includes pumpsets for both Wellington City Council and GWW, supplied by a common electrical and controls panel. The Engineering Consultancy Group has been commissioned by Wellington City Council to arrange for the replacement of the two Wellington City Council pumps that deliver to Wadestown Reservoir and the installation of a combined electrical control panel.

The first old pumpset has been removed and preparations made for the installation of the new unit.

4. Miscellaneous Projects

4.1 Hutt River at Belmont

John Morrison is the Engineer to the Contract for this project. The Contract bas been awarded and construction work is under way, with the debris fences and the groynes now complete and a start made on the rock facing section.

4.2 Kapiti Water Supply- Lindale Underpass

At the request of Kapiti Coast District Council, an investigation into an alternative deviation of the water main was carried out. The diversion would be down to the lower ground level. Kapiti Coast District and the project consultants are now considering the alternative.

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Laboratory Services

Laboratory Services Department Review of Operations for the Period Ended 31 March 2004

1. Items of Note

- Laboratory finances for this period were in the red again this being the bad news. The good news is that, despite this fact, the year to date deficit has "improved upon the six month forecast figure.
- Jane Taylor, a laboratory technician of 10 years standard, resigned from Council mid-March to take up a similar position in her hometown and was sent off with our best wishes. She will be missed, particularly her involvement with the State of the Environment sampling project, as well as being the safety officer and social club president. We will be seeking to fill the considerable void in the responsibility ranks that Jane's departure has caused.
- We have employed Carl McMillan as a laboratory field officer on a "casual employment agreement" to cover staffing shortfalls.
- The planned purchasing of several items of major equipment was earlier placed on hold while the future direction of the laboratory was being considered. The *Giardia/Cryptosporidium* microscope upgrade has now been suspended until clarification is made regarding the testing requirements of the new *Drinking-Water Standards for New Zealand*. These will have a direct bearing on the specifications and significant cost of any new instrument. The autoclave (steriliser) replacement has dragged on as we have been casting further afield, as well as looking at alternatives for logistical reasons. It is anticipated that progress will be made early in the next quarter.

2. Business Summary

2.1 Quality

There were no complaints regarding the quality of our work, or any requests for retesting, and test reports for timely.

2.2 Health and Safety

There was no incidents during the period.

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Plantation Forestry

Plantation Forestry Department Review of Operations for the Period Ended 31 March 2004

1. Log Harvest Contract

While the New Zealand dollar started to ease in relation to the United States dollar, freight rates continued to rise and the market for pruned logs, other than to JNL in Masterton, remained in the doldrums.

The Korean market has now reached saturation and as a consequence Rayonier has moved their export volumes into China. Nominally this should not result in a reduction in price but shipping remains the unknown.

The February storms prompted a major alteration to the cutting plan in order to salvage any windthrown logs that were old enough to be merchantable. The main contractor offered to split his logging crews and over the month of March we logged on at least 7 separate skid sites. At present we have three crews operating in windthrown logs. During this period we were able to complete the harvest in Hukinga, which was suspended in December after JNL suspended its agreement to purchase pruned logs.

Production for the month was lower than anticipated because of the additional time and care required when working among windthrown logs. It is likely to be the end of June before all merchantable logs have been recovered.

A consequence of the storms is the closure on a regular basis of the local sawmills and Centreport through lack of room. With all forest estates in the same boat, there is a concentrated drive to salvage what they can.

Production for the March period is as follows:

Output by grade at Reservoir Ridge/Clarkes Creek was:

Grade	Tonnes	%
Pruned Domestic	115.88	2.53
Pruned Export	0	0
Run of Bush	894.81	19.54
S/A Grade	640.04	13.97
L Grade	90.4	1.97
R Grade	241.67	5.28
K Sawlog	633.94	13.84
Roundwood	0	0
K Rough	1,284.22	28.04

Pulp	637.47	13.92
O/S Pulp	41.56	0.91
Total	4,579.99	

Total revenue - \$116,319.65 at an average of \$25.40 per tonne.

2. Silviculture Contracts

All silviculture is now complete. The next proposed activity will to replant the harvested areas. This will commence as soon as the weather is suitable after 1 June.

3. **Plantation Forestry Operations**

As the markets have remained fickle and with the February storms on top, most staff effort has been directed to repairs to the roads and assisting the logging crews as they made interim arrangements to log windthrown logs.

Overall the roads got off relatively lightly - firstly, as nine of the major routes suffered serious damage and logging was able to continue and, secondly, the damage elsewhere could be repaired in our time. There is very little remaining to be done.

Staff have continued to supervise up to four logging crews and the silvicultural contractors as they were used to assist with the post-storm cleanup.

Some preventive maintenance was carried on the Maungakotukutuku Bailey bridge and the abutment protection upstream of Cook Bridge was restacked. This protection is made up of concrete blocks and these will have to be secured before winter. We are also looking at our options to protect the opposite abutment on the same bridge where high water levels can scour the clay face under the abutment.

4. Forest Access

Apart from storm damage, all main roads are in good condition and only minimal maintenance has been required.

The contractors are constructing a number of shunt roads" to access the windthown logs in Clarkes Creek.

It now appears that logging will have to remain centred on the Clarkes Creek/Reservoir Ridge area for winter, as it is now too late to return to Puketiro even if pruned prices recovered. As we now have approval to log the Martin's block, this is available as additional volume should the Valley View harvest be completed before spring.

There is still no acceptable access to Maungakotukutuku Forest. We have

replaced the gate following requests from walking groups that had been bothered by quad riders and four wheel drive vehicles. While carrying out post-storm inspections, this gate was found opened with the lock missing. Arrangements were made to relock the gate with chain. Overnight the chain was cut in two places and additional padlocks inserted.

5. Market Trends

The domestic sawlog market is holding well, especially given the additional volumes available following the storm. While JNL are still offering good prices for pruned logs, we are unable to secure ongoing confirmed access and prices elsewhere are far too low to justify moving back into pruned stands. We are fortunate to have been able to negotiate a "run of bush" grade from JNL for partial pruned logs and to move some fully pruned logs through Forest Asset Management. Locally we are offered \$120 per tonne and prices in central North Island have crept up to \$135 per tonne. Hopefully they are on the move at last.

A glitch appeared during the month when, firstly, Renalls at Masterton failed to pay their February invoices and a few days later went into receivership. This was of great concern as, for many months of the year when there is no export market, Renalls are the only outlet for pulpwood. Fortunately Panpac in Napier, which purchases the wood chip from Renalls, stepped in and purchased the logs directly, with Renalls contracted to chip and deliver the chip to Napier. Renalls also purchased higher grade logs that were sawn in their sawmill. The Receiver has maintained this operation in the hope of selling it as a going concern.

At the time Renalls failed Rayonier were owed a significant sum of money for wood supplied. While some of this wood was ours, our contract guaranteed payment when the tree was severed from the stump. Although we suffered no financial loss, we could not insist that Rayonier continue to supply to Renalls, so we were relieved when alternative arrangements were made.

The proposal to harvest 10 ha of the Mangaroa block through a neighbour's property has become stalled after a third party wanted \$25,000 to permit us to use a right-of-way. Discussions are under way to see if a compromise can be found.