

---

# Greater Wellington Water

June/July 2006

---

---

# Water Supply

June/July 2006

---

# Water Supply

## Review of operations for the period ended 31 July 2006

### 1. Items of Note

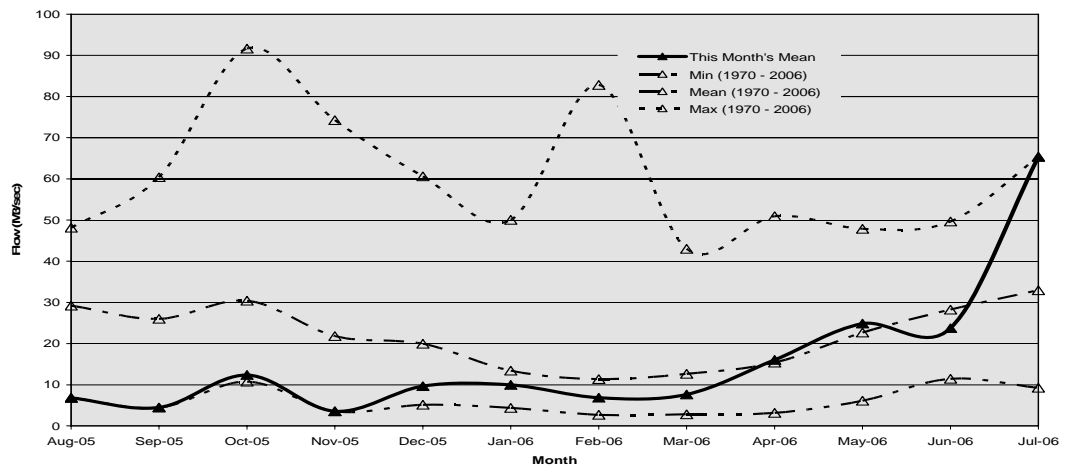
- A two day introductory reliability centred maintenance training course was held.
- The engagement of an additional pipelines foreperson has been delayed because of a lack of suitable applicants. During the last recruitment attempt we received only four applications and the only likely candidate was not interested in the salary package.

### 2. Supply Situation

There were no supply issues for the period.

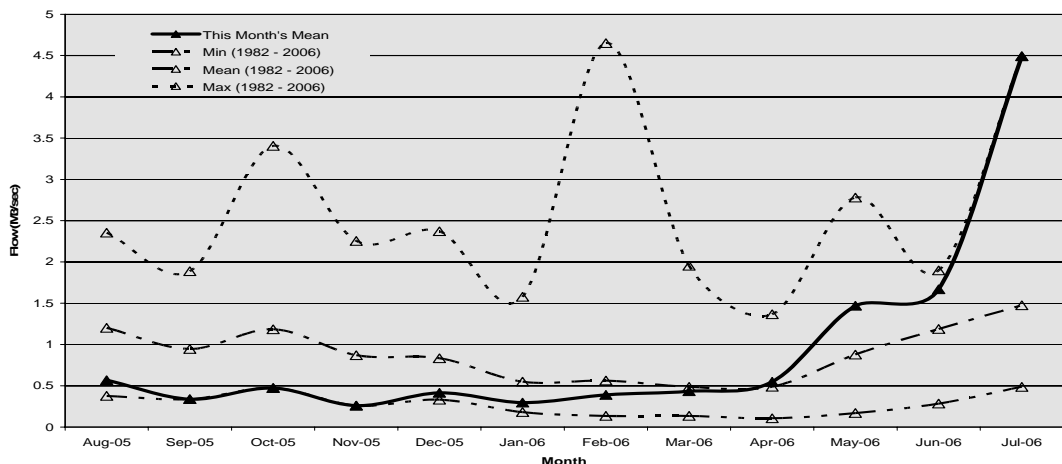
#### Hutt River Flows

The monthly flow in the Hutt River for June was just below the mean. For July, the monthly flow was at the maximum.



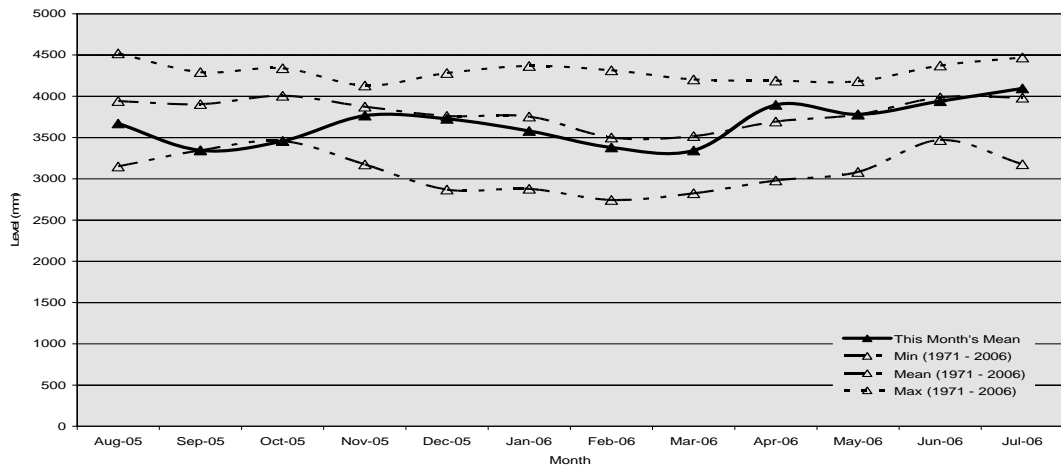
#### Wainuiomata River Flows

The monthly flow in the Wainuiomata River during June was well above the mean. For July, the monthly flow was at the maximum.



## Aquifer Levels

The water level in the Waiwhetu aquifer in June was about the mean. For July, the water level was about the mean.



## 3. Treatment Plants

### 3.1 Wainuiomata

#### 3.1.1 Quality

- There were no improvement opportunity forms (IOFs) or transgressions during the period.

#### 3.1.2 Health and Safety

- There were no accidents or incidents for the period.

#### 3.1.3 Environmental

- There was one spill during the period. A lime process waste tank overflowed. This incident was investigated and there was no environmental impact.

#### 3.1.4 Operations and Maintenance

- A replacement lime batching tank weight indication transmitter was installed.
- Arborist contractors completed their work on the Orongorongo slip.

### 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 were no chemical spills or accidental discharges during the period.

### 3.2.4 Operations and Maintenance

- The Penrose variable speed drive required a replacement control card.

## 3.3 Te Marua

### 3.3.1 Quality

- There were no transgressions during the period.

### 3.3.2 Health and Safety

- There were no accidents or incidents during the period.

### 3.3.3 Environmental

- There was one IOF for the period when the Porirua Low Level Reservoir overflowed on 6 July 2006 (TM274).

### 3.3.4 Operations and Maintenance

- Commissioning of the split stream operation is under way.

## 4. Distribution

### 4.1 Health and Safety

- There were two incidents during the period. One employee cut their hand. Another employee slipped and suffered a bruised leg and forearm, and a sprained back.

### 4.2 Environmental

- There were no environmental issues for the period.

### 4.3 Operations and Maintenance

- The pipework for stage 2 of the Haywards Hill pipeline deviation project was completed and installed. This allowed water from Te Marua to flow through the new 1,050 mm deviation. The anchor block was removed and pipework fabrication began for stage 3.
- The 900 mm main on the Silverstream Bridge was shut down for installation of a new stainless steel tie-bolt on the bridge.
- New branch and bypass valves were installed on the 900 mm main for the Upper Hutt emergency water supply point.
- Some minor leaks were repaired inside the new Karori Pumping Station and the new Messines and Kelburn delivery mains were valved for commissioning.

- The Contractor has installed the first stage of the Judgeford culvert crossing.
- For the Staithes Drive, Whitby, deviation, Water Supply employees worked with the Contractor to locate the 300 mm pipeline at both ends for the installation of the new 375 mm pipeline and the new anchor block details. The new 375 mm pipeline deviation was tested and failed twice. A third attempt was successful.
- The two monthly Hutt north/south scour valves were exercised and the six monthly reading for private supplies was completed. Annual exercising and servicing of the air valves at the Wainuiomata Water Treatment Plant was carried out.
- The Waterloo Water Treatment Plant was shut down for removal of the faulty Naenae Pump 3 discharge valve. Repairs were also completed on the broken stormwater drain.
- Refurbishment of the Moores Valley Pumping Station was completed and Wainuiomata No. 1 Pumping Station is nearing completion. Operator training was completed for Moores Valley, Wainuiomata No. 1 and the new Karori Pumping Stations.

#### 4.4 Pipeline Leaks

- Repairs were completed on the Judgeford Golf Club private supply and repair work started on a leak in Tinakori Road, Thorndon.

## Utility Services Division Health and Safety Data from July 2005 to June 2006 - Total Injuries

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
<b>PRODUCTION (+ 4 OPS ADMIN)</b>													Jul 2005 - Cut finger / Injured back
Hours worked	24147	2316	2262	2313	3475	2429	1492	2105	2255	2224	3396	2397	Aug 2005 - Cut finger
Employee numbers	16	16	16	16	16	16	16	16	16	16	16	16	Sep 2005 - Bruised hand / Blistered hand on nylon rope
Incidents	2	1	2	0	2	2	1	0	0	0	2	0	Nov 2005 - Hit head on tank / Twisted knee from slipping on stairs
Days lost	0	0	0	0	0	0	0	0	0	0	0	0	Dec 2005 - Lime in eye / Head in contact with live wires
Incidence rate (number of incidents per 100 workers)	13	6	13	0	13	13	6	0	0	0	13	0	Jan 2006 - Slipped and hurt Achilles tendon
Frequency rate (incidents per 10,000 hours exposure)	8	4	9	0	6	8	7	0	0	0	6	0	May - Cut finger / Strained back
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0	0	0	0	0	0	0	
<b>DISTRIBUTION</b>													Jul 2005 - Vehicle accident [2 employees] / Bruised finger
Hours worked	1227	1246	1332	1290	1977	1357	659	1229	1384	1259	2056	1453	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	10	10	Sep 2005 - Cut hand on pipe / Cut hand and knee on pipe
Incidents	2	3	2	1	1	0	0	0	0	0	1	0	Oct 2005 - Cut finger on flange
Days lost	11	14	0	0	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	10	0	May 2006 - Hit in face with reinforcing steel
Frequency rate (incidents per 10,000 hours exposure)	16	24	15	8	5	0	0	0	0	0	5	0	
Severity rate (days lost to injury per 10,000 hours worked)	90	112	0	0	0	0	0	0	0	0	0	0	
<b>ENGINEERING CONSULTANCY</b>													
Hours worked	1840	1716	1732	1808	2628	1816	576	1300	1452	1476	2168	1508	
Employee numbers	12	12	12	12	12	12	12	10	9	9	10	10	
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	
<b>UTILITY SERVICES SUPPORT</b>													
Hours worked	951	1076	1008	961	1295	882	587	933	1083	977	1436	981	
Employee numbers	7	7	6	6	6	6	6	7	7	7	7	7	
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	Aug 2005 - Bruised foot
Hours worked	1078	1142	1219	1156	1681	1343	845	1243	1196	1131	1646	924	Aug 2005 - Sprained neck
Employee numbers	7	7	6	6	6	6	6	6	6	6	7	7	Nov 2005 - Bee sting on head
Incidents	0	2	0	0	1	0	0	0	0	1	0	0	Apr 2006 - Bruised finger in door
Days lost	0	0	0	0	0	0	0	0	0	0	0	0	
Incidence rate (number of incidents per 100 workers)	0	29	0	0	17	0	0	0	0	17	0	0	
Frequency rate (incidents per 10,000 hours exposure)	0	18	0	0	6	0	0	0	0	9	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	

STRATEGY AND ASSET	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Nov 2005 - Strained back while lifting boxes
Hours worked	712	644	688	676	1152	700	408	664	768	696	1064	7572	
Employee numbers	5	5	5	5	5	5	5	5	5	5	5	5	
Incidents	0	0	0	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	0	0	20	0	0	0	0	0	0	0	
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	9	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	Sep 2005 - Sprained and cut hand
Hours worked	433	466	455	470	627	453	142	245	438	447	588	440	Nov 2005 - Stung by stinging nettle on hand
Employee numbers	3	3	3	3	3	3	3	3	3	3	3	3	Jun - Strained knee whilst pruning
Incidents	0	0	1	0	1	0	0	0	0	0	0	1	
Days lost	0	0	0	0	0	0	0	0	0	0	0	0	
Incidence rate (number of incidents per 100 workers)	0	0	33	0	33	0	0	0	0	0	0	33	
Frequency rate (incidents per 10,000 hours exposure)	0	0	22	0	16	0	0	0	0	0	0	23	
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 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	12353	8454
Employee numbers	59	59	58	58	57	57	57	56	55	56	58	58
Injuries	4	6	5	1	6	2	0	0	0	1	3	1
Days lost	11	14	0	0	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	2	1
Severity rate (days lost to injury per 10,000 hours worked)	13	16	0	0	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



## Utility Services Division Health and Safety Data from July 2006 - Total Injuries

<b>PRODUCTION (+ 4 OPS ADMIN)</b>	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	2473												
Employee numbers	16												
Incidents	0												
Days lost	0												
Incidence rate (number of incidents per 100 workers)	0												
Frequency rate (incidents per 10,000 hours exposure)	0												
Severity rate (days lost to injury per 10,000 hours worked)	0												
<b>DISTRIBUTION</b>	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul 2006 - Cut hand / Slipped and fell against ute
Hours worked	1423												
Employee numbers	10												
Incidents	2												
Days lost	0												
Incidence rate (number of incidents per 100 workers)	20												
Frequency rate (incidents per 10,000 hours exposure)	14												
Severity rate (days lost to injury per 10,000 hours worked)	0												
<b>ENGINEERING CONSULTANCY</b>	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	1531												
Employee numbers	10												
Incidents	0												
Days lost	0												
Incidence rate (number of incidents per 100 workers)	0												
Frequency rate (incidents per 10,000 hours exposure)	0												
Severity rate (days lost to injury per 10,000 hours worked)	0												
<b>UTILITY SERVICES SUPPORT</b>	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	1035												
Employee numbers	7												
Incidents	0												
Days lost	0												
Incidence rate (number of incidents per 100 workers)	0												
Frequency rate (incidents per 10,000 hours exposure)	0												
Severity rate (days lost to injury per 10,000 hours worked)	0												

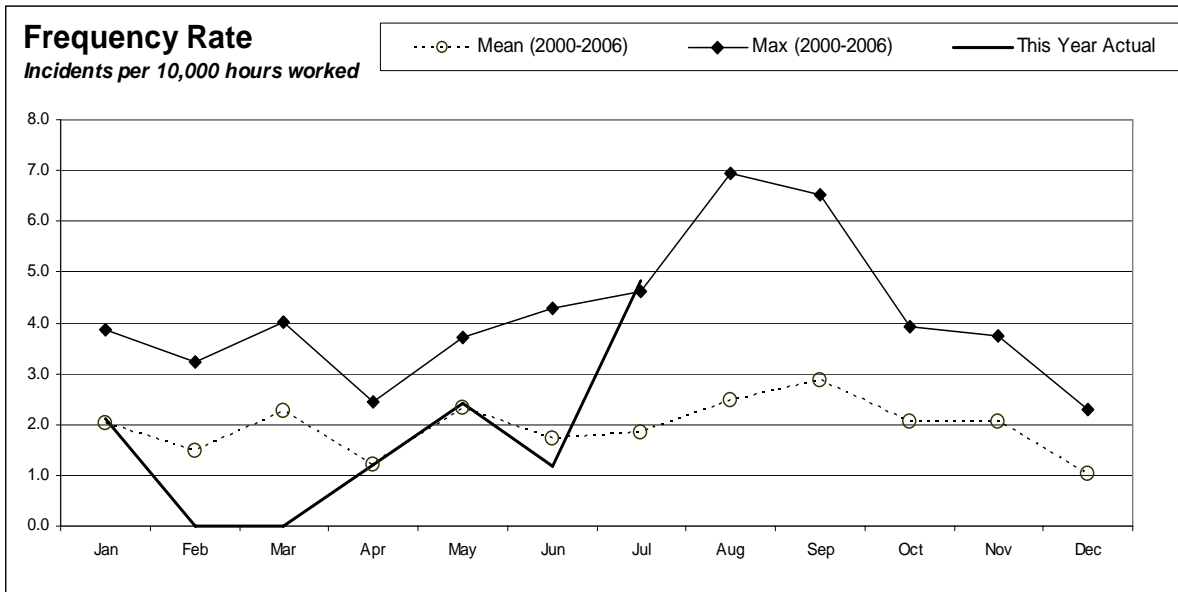
LABORATORY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	833											
Employee numbers	7											
Incidents	0											
Days lost	0											
Incidence rate (number of incidents per 100 workers)	0											
Frequency rate (incidents per 10,000 hours exposure)	0											
Severity rate (days lost to injury per 10,000 hours worked)	0											

STRATEGY AND ASSET	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	528											
Employee numbers	5											
Incidents	0											
Days lost	0											
Incidence rate (number of incidents per 100 workers)	0											
Frequency rate (incidents per 10,000 hours exposure)	0											
Severity rate (days lost to injury per 10,000 hours worked)	0											

FORESTRY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Hours worked	466												Jul 2006 - Slipped and strained leg Jul 2006 - Tripped on vine and hurt knee and back
Employee numbers	3												
Incidents	2												
Days lost	0												
Incidence rate (number of incidents per 100 workers)	67												
Frequency rate (incidents per 10,000 hours exposure)	43												
Severity rate (days lost to injury per 10,000 hours worked)	0												

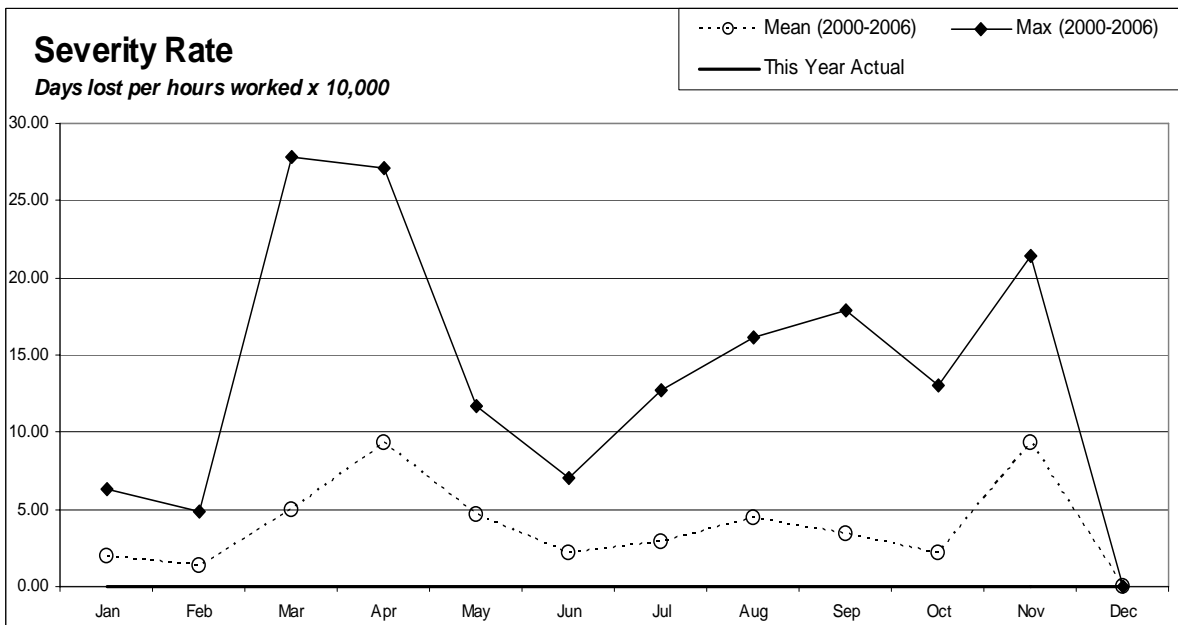
Utility Services Division Combined	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	8288											
Employee numbers	58											
Injuries	4											
Days lost	0											
Frequency rate (incidents per 10,000 hours exposure)	5											
Severity rate (days lost to injury per 10,000 hours worked)	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  
 Two incidents in May 2006  
 One incident in June 2006  
 Four incidents in July 2006



#### Lost Days

0

---

# Strategy and Asset Group

June/July 2006

---

# Strategy and Asset Group Review of Operations for the period ended 31 July 2006

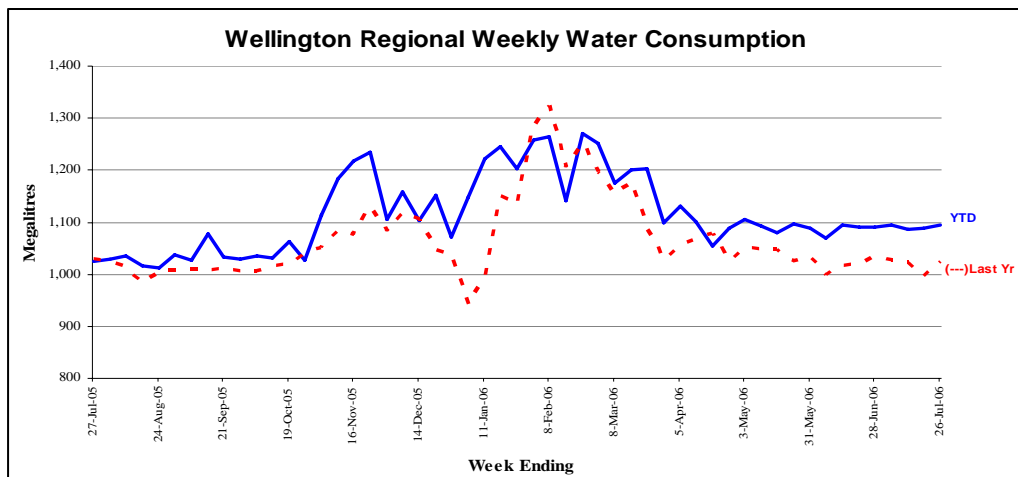
## 1. Items of Note

- Water use since 1 April 2006 was about 5.5 percent higher than for the same period last year. Wellington City use is up by 10 percent and Porirua City by 4 percent.
- The final cost of the 2005/6 Capital Works Programme was \$6.387 million compared to the revised budget approved in January of \$6.384 million.
- Construction of the new Karori Pumping Station has been completed and Karori pumps have been commissioned. Vibration experienced in the Kelburn pumps is being investigated by the supplier.
- More than 12 months after the grading of the Wainuiomata Water Treatment Plant, the other treatment plants and the wholesale distribution network have not been graded by Hutt Valley District Health Board.
- Stage 2 planning, environmental and engineering studies for new major storage sources, and the Upper Hutt aquifer are under way.
- The Wellington Water Management Plan discussion document on background and options is being peer reviewed by an external consultant.
- A submission on the Health (Drinking-Water) Amendment Bill has been drafted. See separate Report No. 06.412.

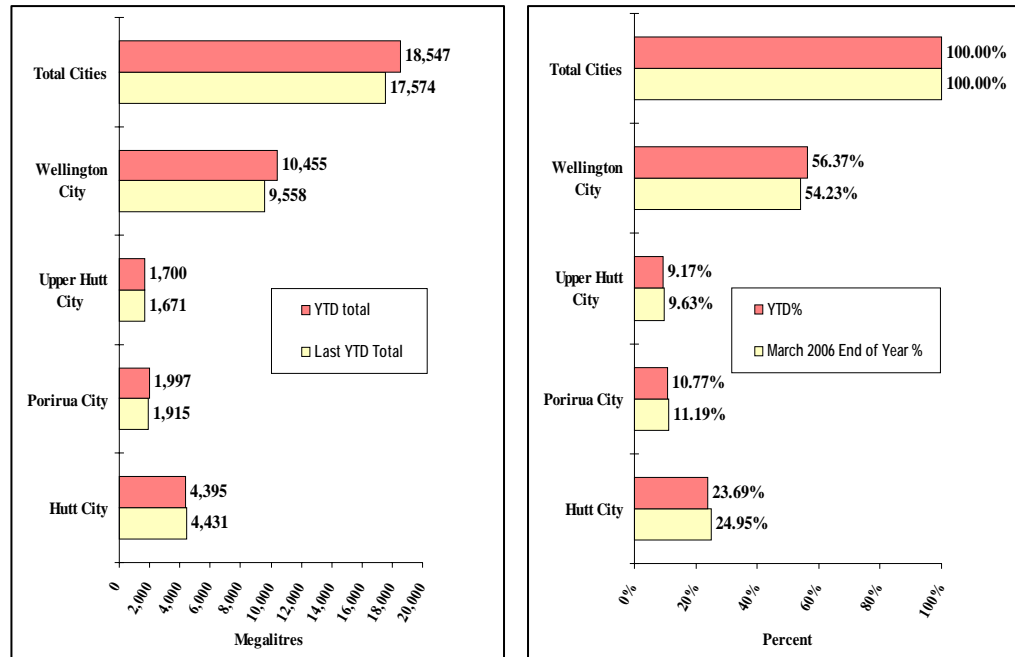
## 2. Water Usage

Consumption volumes for the supply (from 1 April 2006) year to date are approximately 5.5 percent up on last year. The bulk of this increased use has occurred in Wellington City (up 10 percent). Porirua City use has also increased by over 4 percent.

Water Sold Over the Last 12 Months



### Water Sold from 30 March 2005 to 31 July 2006



### 3. Asset Management

- The Capital Works budget for 2005/6 was \$5.937 million, revised to \$6,384,000 in February. Final total cost for the year was \$6,386,859. Milestones achieved were as follows:
  - Completion of the Wainuiomata Catchment boundary fence. This means that the Wainuiomata Catchment, and the mainland island, is fenced along the northern and western boundaries.
  - Completion of modifications to the Te Marua Water Treatment Plant to enable lake and river water to be treated separately.
  - A start has been made by Upper Hutt City Council on strengthening the Silverstream Bridge. This strengthening work will improve the security of the Kaitoke to Thorndon pipeline
  - Completion of the duplication of the Kaitoke to Karori pipeline between State Highways 2 and 58. This duplication will improve the seismic resistance of this section of main.
  - Completion of the new Karori Pumping Station, which will provide much greater security for the supply to Karori and Kelburn in the event of an earthquake. It is currently partway through commissioning.
  - Substantial progress on construction of the new Point Howard Pumping Station. This project will provide greater security for the supply to Point Howard and Eastbourne.
- The capital work budget for 2006/7 is \$6.23 million. Key projects

include improvements to the Wainuiomata Lower Dam, installation of sentinel wells on the Petone Foreshore, replacement or upgrading of the control system at Te Marua, construction of a portable powdered activated carbon plant to combat taste and odour problems, construction of a small sewer to pipe Wainuiomata centrate to the Wainuiomata sewage system, replacement of the water main on Silverstream Bridge (timing to be confirmed), completing the Point Howard Pumping Station, upgrading the Thorndon Pumping Station, a start on an optimiser for the Te Marua system, and improvements to the telemetry system.

- Construction of a new pumping station building at Grenada being undertaken by Wellington City Council is complete. Pipework and pumps are being installed and the switchboard has been manufactured. The project is part of the Wellington City Council Northern Suburbs Development Plan and will be taken over by Greater Wellington Regional Council on completion. Therefore, officers are working very closely with the consultant employed by Wellington City Council to ensure the completed project meets Greater Wellington Water requirements.
- Work is under way on the construction of an underpass at Judgeford 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. The culvert has been installed and the raising of the pipeline is programmed for late August.

#### 4. New Sources

- Stage 2 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, investigation of water quality and contamination risks, and environmental studies of streams fed from the aquifer.
- Phase 2 studies of possible water storage dams are also under way. The studies include work on environmental, ecological, heritage and botanic impacts, detailed aerial photography, more detailed geologic and engineering studies and costing work. A workshop covering fish and ecology issues was held with stakeholders on 16 June, and another covering heritage and recreational issues associated with the Pakuratahi valley on 28 June.
- 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 Greater Wellington Regional Council's Environment Division. A second workshop to confirm the methodology is planned for 15 August.

- Work has been completed on establishing the relationship between reductions in water demand, the deferral of new source development and the effect on the water supply levy. This information will be given to customers' staff at a meeting planned for September.

## 5. Quality Assurance

- Compliance with the new *Drinking-Water Standards for New Zealand 2005* is being achieved at all plants. However, mechanisms for formal reporting and assessment have not yet been updated by the Ministry of Health. Raw water sampling of the plant inlets is also in place. However, monitoring of source water, which is essentially voluntary, will not be undertaken until discussions between the New Zealand Water and Wastes Association and the Ministry of Health have resolved how this should best be done. 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. The Hutt Valley District Health Board has requested the installation of an additional monitoring station at Pukerua Bay and this is being investigated. In the meantime, direct testing for *E. coli* will continue.
- A revised proposal by the Ministry for the Environment to establish a National Environmental Standard for drinking water sources provides an enhanced role for water suppliers in the consideration of resource consent applications and permitted use rules which may impact on source water. The Ministry for the Environment is presently finalising the standard in the light of submissions received.
- The A1 grading for the Wainuiomata Water Treatment Plant has been reconfirmed. Information supporting the grading of the Te Marua plant was submitted to the Hutt Valley District Health Board several months ago. However, staff changes at the Hutt Valley District Health Board have delayed consideration of gradings of the other plants and the bulk distribution zones. Te Marua, Waterloo and Gear Island plants are currently listed as ungraded. A recently circulated 2006 Register of Community Drinking Water Supplies shows that almost all the water supplies around the country are presently ungraded.
- The *Health (Drinking Water) Amendment Bill* has had its first reading and been referred to the Health Select Committee. A submission on the Bill has been drafted and is separately reported.

## 6. Environmental

- The ISO 14000 Environment Management System has been updated to bring it into line with the new standard ISO 14001:2004. A formal



certificate giving accreditation through to November 2008 has been received.

- Rehabilitation and lowering of the Wainui 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 2006/07 is funded.
- Design work has begun on a larger culvert for Sinclair creek, just upstream of the Wainuiomata 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 stream. Construction is planned in 2006/07.
- Power factor correction equipment has been purchased for the Gear Island and Wainuiomata Water Treatment Plants, and the Ngauranga Pumping Station. The equipment will be installed during the next two months. 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 has begun.

## **7. Catchment Management**

- During May contract hunters carried out a check on the Judas goats within the Wainuiomata/Orongorongo Catchment. During this hunt they culled 14 goats, 7 pigs and 3 deer. The hunters were of the view that, while deer and goat numbers were continuing to fall, there was an increase in pig numbers.
- A helicopter hunt was carried out from the Hutt Catchment through into the Akatarawas. No goats were encountered in the catchment but 8 deer were culled. These were all found on Quoine Ridge, so they may be entering the area from Department of Conservation land to the north.
- The proposed tour on 16 July was cancelled because of flooding in the area.
- The road into the Orongorongo Valley is passable but with a number of minor slips and some blocked water tables. Arrangements are under way to remove the large slip that damaged the intake pipe between the weir and the tunnel, and this machine will be used to carry out road repairs on completion of the slip clearance.
- There has been a washout on the walking track opposite the weir at

Orongorongo. While it is still possible to walk through the area, some form of more permanent repair will be necessary in the medium-term.

- Rainfall for June at Wainuiomata was 262 mm and for July 631 mm. At Orongorongo the figures were 289 mm for June and 642 mm for July. The July figures are the highest recorded for many years.
- Instances of accidental and deliberate trespass and vandalism in the vicinity of the Wainuiomata Water Treatment Plant continue. These are dealt with by the Ranger as they arise.

## **8. Projects Undertaken by Engineering Consultancy for Strategy and Asset**

- **Wainuiomata Lower Dam**  
Revised Drawings and Contract Specification are being reviewed in preparation for advertising the Contract to lower the dam spillway.
- **Petone Foreshore Sentinel Wells**  
The siting of three sentinel wells along the Petone Foreshore is being investigated.
- **Future Water Source Pipelines**  
Routes and estimates for pipelines from alternative dam sites in the Pakuratahi Valley are being investigated.  
  
A report on the route of a possible pipeline from the Whakatikei water treatment plant site to the Te Marua to Karori pipeline is being prepared.
- **Wainuiomata Water Treatment Plant Outlet Control Valve**  
Installation of a new control valve in the Tunnel Grove valve chamber is being arranged. 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 has been delayed because of construction work required on other projects.
- **Power Factor Correction Equipment**  
Power factor correction equipment to be installed at three facilities - Wainuiomata Water Treatment Plant, Gear Island Water Treatment and Ngauranga Pumping Station has been received and arrangements made for the installation.
- **Wainuiomata Pumping Stations Variable Speed Drives**  
Variable speed drives have been installed at Wainuiomata No. 1 Pumping Station. Commissioning the controls is proceeding. The variable speed drives will even flows and improve efficiency of the pumps.

- **Duplicating Te Marua to Karori Pipeline at Haywards**  
The installation of valves and pipework at the connection point alongside State Highway 2 is nearing completion. A slip alongside the pipe route adjacent to State Highway 2 is being cleared.
- **Emergency Water Supply Points for Upper Hutt City Council**  
Installation of the emergency cross connection at the Fergusson Drive/Camp Street intersection is proceeding.
- **Judgeford Golf Course Underpass**  
The Judgeford Golf Club is constructing an underpass beneath State Highway 58. Work is proceeding to lift the Te Marua to Karori pipeline.
- **Rerouting Paremata Main at Staithes Drive**  
A developer is replacing a length of the Paremata main. The pipe has been installed and tested. Arrangements are being made to connect the new pipeline into the existing 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 in October 2006.
- **Karori Pumping Station Replacement**  
Commissioning of the pump controls is proceeding. The Messines Road pumps are now supplying water to Karori.
- **Existing Karori Pumping Station Decommissioning**  
Planning is under way for the decommissioning of the existing Karori Pumping Station. A drawing detailing alterations to the pipework has been prepared.
- **Point Howard Pumping Station**  
The walls and roof of the new pumping station alongside Seaview Road are complete. An external planter box and access stairs are being constructed.
- **Lincolnshire Pumping Station and Reservoir**  
Advice is being provided to the designers of the Lincolnshire Pumping Station and pipelines for installation of the pumpsets and pipework.

---

# Marketing

June/July 2006

---

## Marketing

### Review of operations for the period ended 31 July 2006

#### 1. Items of Note

#### 7. Marketing

- Draft Wellington Water Management Plan. Three Consultants submitted proposals to peer review the draft technical report for the Plan. Opus has been selected and will conduct their review during August.
- Water Supply History Update. The Consultant's second draft text was reviewed and returned with some minor changes still required. A shortlist of photos has been identified and a brief sent to designers for the layout and printing of the booklet. Final photo selection and caption writing will be undertaken with the historian and designers, once a quote has been accepted.
- Water Supply Service Level Agreement. A further minor stage of changes has been completed. The body of the agreement - developed in conjunction with Capacity on behalf of the four customers - is now ready to be shared with all customers. The schedules to the agreement, covering specific levels of service for water supply quantity and quality, are still to be completed.
- Increased water supply to Wellington. Trend analysis of our bulk water supply data has been carried out to try and identify more precisely the timing and causes of the significantly higher water supply totals this year. While the higher water use became obvious in April, this work suggests that the increase may date back to January. This analysis has been provided to Capacity, to assist with their investigations.
- Collection of data and background information was started for the Water Supply annual report for 2005/6.
- A sign was produced and installed at the new Karori Pumping Station, which is undergoing commissioning trials.
- One news release was made about the wholesale water levy for 2006/7 being held at the same level as for 2005/6.
- Treatment Plant Visits. Eight visits hosted, involving some 310 visitors.

---

# Engineering Consultancy Group

June/July 2006

---

## Engineering Consultancy Group Review of operations for the period ended 31 July 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 Greater Wellington Regional Council/Wellington City Council/Capital and Coast District Health Board Reservoir  
Capital and Coast District Health Board is investigating ways to reduce the water consumption and ways to be more self-sufficient for water supply in an emergency.
- Stuart Macaskill Lakes Tower Strengthening  
Arrangements are being made to remove concrete cores from the lakes' towers for testing. This will confirm the strength of the existing structure and assist with the decision on whether the towers need to be upgraded.

### 2. **Work Carried Out for Water Supply**

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

Arrangements are being made to clear the slip that has damaged the pipeline in the Orongorongo Valley. The slip material has settled and is less active. Quotations are being obtained from contractors to do this work.

### 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  
Tenders for the replacement of water mains in seven roads in Ngaio and Wadestown have been analysed.
- Salford Street Water Main Replacements  
Design and drawings for the replacement of a section of the water main in Salford Street, Newlands are being prepared.

- Rajkot Terrace Pumping Station

Design work is proceeding for replacement of the Rajkot Terrace pumpsets. Pressures in the Onslow zone are being analysed to ensure the increased flow rates will not detrimentally affect the water pressure in the area.

#### **4. Work Carried Out for Flood Protection**

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

#### **5. Corporate Projects**

- Pandemic Preparation

A draft corporate pandemic plan has been circulated to the working group for review.



---

# Laboratory

June/July 2006

---

## Laboratory Review of operations for the period ended 31 July 2006

### 1. Items of Note

- Laboratory finances finished in the black, with a small surplus for the 2005/6 year. We await the July financials but are quietly confident that the final numbers will be positive.
- We wound up several significant contracts at year end. Internally, the Environment Division Rivers Sample Collection 2003-2006 Contract and, externally the Porirua City Water Testing 2003-2006 Contract both ended.
- However, moving on into the new financial year, we have picked up extra protozoa (*Cryptosporidium* and *Giardia*) testing work externally and internally. It is pleasing to also be involved in the water quality testing for the Upper Hutt aquifer investigation.

### 2. Business Summary

#### 2.1 Quality

There were no requests for retesting samples and most test reports were timely.

#### 2.2 Health and Safety

There were no accidents or incidents during the period.

---

# Forests Department

June/July 2006

---

## Forests Department Review of Operations for the period ended 31 July 2006

### 1. Metro Forests

#### 1.1 Log Harvest Contract

June started with the early arrival of the winter rains, which seem to have continued unabated. Despite this, we harvested 5,885 tonnes in June and 5,740 tonnes in July. While these figures appear good, the local mills are still desperate for wood and some are working short weeks being unable to source sufficient logs.

It was necessary to move the crew logging the Glider Club stand at Pakuratahi West when, despite operating on ridgelines, the block became too wet. This crew moved back to Valley View to complete the Longspur block and then to commence the Parry's Bush blocks. These blocks are only 7 km and 8 km from Totara Park gate and thus the cart is not too daunting.

The hauler crew remained in Dick's Yard, Puketiro, and spent a short period logging out of the lower ground where tree quality improved but returned to the windswept trees adjacent to the road to end the month.

The third crew completed the tidy up at Ladle Bend and then moved to Maire Creek. They will remain here clearing a remnant stand until late August, when they will move to Hukinga to complete two further remnant stands.

Production for June and July is detailed in tables 1 to 4.

Table 1 – Pakuratahi West- Output by Grade –Glider Club

Grade	June 2006		July 2006	
	Tonnes	%	Tonnes	%
S Grade	586.45	586.45	97.97	14.17
L Grade	260.24	260.24	152.89	22.12
R Grade	325.91	325.91	151.21	21.87
K Sawlog	698.67	698.67	46.84	6.78
K Rough	509.15	509.15	67.18	9.72
Dom Rough	0	0	0	0
Pulp	61.75	61.75	62.39	9.02
O/S Pulp	0	0	0	0
Export Pulp	429.07	429.07	112.86	16.32
Total	2,871.24		691.34	

Revenue for June was \$63,143.32 at an average of \$22.09 per tonne and July \$14,293.84 at an average of \$21.04.

Table 2 - Puketiro- Output by Grade - Dick's Yard

Grade	June 2006		July 2006	
	Tonnes	%	Tonnes	%
Pruned	65.37	3.28	227.64	8.52
Part pruned	85.26	4.28	224.55	9.15
S Grade	317.17	15.92	646.62	24.19
L Grade	154.57	7.76	243.2	9.10
R Grade	232.14	11.65	179.52	6.72
K Sawlog	191.75	9.62	209.92	7.85
Roundwood	0	0	0	0
K Rough	434.96	21.83	393.88	14.73
Dom Rough	0	0	0	0
Pulp	237.91	11.940	168.31	6.300
O/S Pulp	0	0	0	0
Export pulp	273.41	13.72	379.75	14.20
<b>Total</b>	<b>1,992.54</b>		<b>2,673.39</b>	

Revenue for June totalled \$26,019.01 at an average of \$13.05 per tonne and for July \$50,789.54 at an average of \$19.00 per tonne.

Table 3- Ladle Bend- Output by Grade

Grade	June 2006		July 2006	
	Tonnes	%	Tonnes	%
Pruned	0	0	0	0
Part pruned	15.31	1.50	0	0
S Grade	580.89	56.88	276.46	34.84
L Grade	87.20	8.54	14.84	1.87
R Grade	87.21	8.54	152.03	19.16
K Sawlog	96.63	9.46	121.34	15.29
Roundwood	0	0	0	0
K Rough	81.35	7.97	81.77	10.31
Dom Rough	0	0	0	0
Pulp	13.49	1.32	78.23	9.86
O/S Pulp	0	0	0	0
Export pulp	0	0	8.39	1.06
Firewood	59.24	5.80	60.34	7.61
<b>Total</b>	<b>1,021.32</b>		<b>793.40</b>	

Revenue for June was \$29,330.31 at an average of \$27.93 per tonne and for July \$16,736.40 at an average of \$21.42

Table 4- Longspur- Output by Grade

Grade	July 2006	
	Tonnes	%
Pruned	0	0
Part pruned	0	0
S Grade	298.80	19.22
L Grade	228.83	14.72
R Grade	134.35	8.64
K Sawlog	170.18	10.95
Roundwood	0	0
K Rough	378.42	24.34
Dom Rough	0	0
Pulp	44.48	2.86
O/S Pulp	0	0
Export pulp	299.48	19.26
Firewood	0	0
Total	1,554.54	

Total revenue for July was \$26,674.09 at an average of \$17.16 per tonne.

Total revenue for June was \$118,492.39 at an average of \$20.18 and for July \$ 108,936.80 at an average of \$19.11

## 1.2 Ladle Bend Harvest

When the logging crew was engaged to undertake the harvest of the remnant trees at Ladle Bend, it was accepted by all parties that it would be a far more difficult exercise than a “normal” forest harvest. The increased difficulties arose from the requirements of the Historic Places Trust, the high level of recreational activity in the area, and the high proportion of windthrown trees which were only suitable for firewood if they could be recovered. For these reasons, it was agreed that part of the block would be logged at an increased logging rate to recognise the length of haul to the skid and the difficulties and precautions required with the wind throw. The balance was logged on a daily rate basis to recognise the elements of double handling and specific felling techniques around the Rail Trail, and the embankments of the Ladle Bend Bridge. The daily rate costs amounted to \$36,000, which has to be discounted by the “saved” log and load costs for the logs sold. This will not come close to covering the full costs. The task was accomplished safely and without damage to either the Rail Trail or the bridge embankments. All trees have now been removed and a potential risk to users eliminated.

## 1.3 Silviculture Contract

To date, 186.1 ha of an adjusted total of 197.7 ha (2005/6 year).

Green Gold Forestry Contractors was the successful Tenderer for the 2006/7 Silvicultural Contract. This is for a total of 117.3 ha divided into 10 discrete tasks. A total of four Tenders were received.

To the end of July a total of 102,000 seedlings had been planted. This would equate to 68 ha.

#### **1.4 Plantation Forestry Operations**

Considerable time was involved escorting potential wind farm tenderers around the Puketiro site. There have not been any incidents between the logging trucks and the Tenderers and, apart from having to walk further than anticipated because of the never ending rain, the whole process has been relatively trouble free.

The same rain has resulted in ongoing patch up work on the roads, as the trucks either break through the formation or loose traction and cause corrugations. If these are not dealt with immediately, in a short time they will escalate to the point where the trucks cannot pass.

In general, the road is fine for the logging trucks but the build up of “fines” between the truck wheel ruts are making it difficult for the managers’ vehicles with a narrower track!

The road access into Maire Creek is coping with the low volume of traffic.

#### **1.5 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 but, with the continuing wet weather, many of the tracks outside the “logging road” network remain impassable. This should not cause any disruption to normal forest operations.

#### **1.6 Market Trends**

Domestic prices have continued to edge upwards, with a significant undersupply of logs causing the mills to purchase lower grade logs, which they would normally ignore, just to keep the mills in production. Some mills are working short weeks because of a lack of log supply. We are not in a position to take advantage of this shortfall, as current production levels are as much as our infrastructure can cope with at this time of the year.

The dollar, after appearing to ease, has consistently gained ground. At the time this report was written it is at 64.22 cents to the New Zealand dollar, a level it has not previously reached since last March. This, together with the volatility of fuel prices, has undermined any gains achieved in the Korean and Indian markets.

Shipping continues to be a problem, with August ships going out at \$US42/tonne. This is still more than double the costs of 18 months ago.

## **2. Reserve Forests**

### **2.1 Tauanui Logging**

Logging production was limited to 1,459 tonnes because of weather conditions and severance of road access. Five days' access to the site was lost. Logging for the month was at a very cheap rate because of forwarding down the road to a nearby skid. As a result, the net return was very good at \$38.55 per tonne (compared with an average of \$30.00 per tonne for the last year).

However, the Logging Contractor has given notice that they will cease operations at the end of August/mid-September as a result of the breakdown in negotiations over the base logging rate. We were prepared to negotiate to cover reasonable fuel price increases, whereas the Contractor was seeking additional machinery rates to cover an additional machine that they have introduced into their operation.

Negotiations for a replacement Logging Contractor are under way.

### **2.2 Tauanui Road Access**

Apart from minor slips and slumps, the majority of the Tauanui access withstood the July storm events very well. There were no serious problems within the reserve. However, a major slip came out of the Pirinoa 8B block and over the road. In addition, a major problem developed where the Tauanui River escaped from its course and flowed down the road through the Pirinoa 8A block. As well as road repairs, significant protection works were required.

The entire length of the road has been graded.

### **2.3 Silviculture**

Thinning of regeneration has continued in both Hiwinui and Tauanui.