

---

# Water Supply and Parks

## September/October 2009

---

## Parks

### Review of operations for the period ended 31 October 2009

#### 1. **Manager's comments**

The Parks Network Strategy and the timetable for the review of the plans were approved at the 11 November Council meeting. The review of all of the parks and forests' management plans and the consolidation of these plans is now in process. An advertisement has been placed in all of the Wellington papers advising the public of the review, while letters have also been sent out to clubs, concessionaires, Friend's groups and past submitters to the individual management plans. Information about the current documents has also been made available on the website. The consultation period for this part of the process will be one month, with submissions closing on 18 December.

A paper about the plan review was prepared for the Ara Tahi meeting on 2 December. Other work under way includes the consolidation of the policies in all of the plans and the development of the concept plans for each park and forest. These concept plans are an important component of a consolidated plan, as there will only be a small section for each park or forest in the document.

The *Battle Hill Farm Forest Park Management Plan* was adopted on 11 November at the Council meeting, as was the approval for the Kapiti Pony Club licence at Queen Elizabeth Park. Letters will be sent to submitters to both of these proposals informing them of the outcome of their recommendations. One of the policies adopted in the *Battle Hill Farm Forest Park Management Plan* was to reserve the bush remnant in the park as a Scenic Reserve. The first step in the process is to call for public objections to reserving the area. To this end, an advertisement has been placed in *The Dominion Post* and *Kapi-Mana News*. Any submissions received (at the end of the month long submission period) will be reported to this Committee in February. Information about the bush remnant is available on the Greater Wellington Regional Council (GWRC) website.

The summer months are rapidly sneaking up on us and a lot of time has been spent getting on top of spring growth and ensuring parks are ready for the pressures of summer. The incidences of vandalism are increasing, along with the number of users and the hours of the day, and consequently the hours of work are getting longer. We have already had a number of occasions where rangers have had to deal with alcohol fuelled incidents in the early hours of the morning.

#### 2. **Environmental Management**

##### 2.1 **Pest control**

The Wainuiomata/Orongorongo Water Collection Area 1080 operation planned for 2009/10 will be postponed for at least a year, as a recent possum monitor has shown that possum numbers are low (2 percent residual trap catch (RTC)).

Possum numbers have not increased to high enough levels since the last 1080 operation in 2005, to trigger another operation (>5 percent RTC). This is good news, as it indicates that our pest control techniques are effective. The ongoing intensive pest control work in the Mainland Island will be also helping to keep possum numbers low.

No feral goats were encountered in Korokoro Valley during a goat control operation in Belmont Regional Park. Again, this is great news, considering the large numbers of goats that used to be present in the area (298 were culled in 2001). The photographs on page 7 show how much regeneration has improved over time in the area since the start of goat hunting. These pest animals can cause a great deal of damage to the native vegetation. Twelve goats were culled in other areas of the park.

Mustelid numbers have fallen in the Parangarahu Block of East Harbour Regional Park. Mustelids have been trapped around the Pencarrow Lakes for just over a year now. Recent trap checks netted only one weasel, one stoat and three rats. This means that the nesting conditions will have improved for wetland birds. It will be interesting to see if an increase in bird numbers results from this work.

## **2.2 Monitoring**

Bird monitoring is in full swing in all of the parks and forests. Data is still coming in but monitoring in Belmont Regional Park has been completed. There has been a big increase in total bird numbers recorded (from 314 in 2008 to 791 in 2009). There were increases in a number of species - grey warbler, tui, bellbird, fantail, kereru and especially silvereye. The numbers of the exotic blackbird and finches also increased. This coincides with the information gained by the Korokoro Environmental Group, which monitored rodent numbers in early September. They found that rat numbers had fallen to 2 percent tracking rate, compared with 28 percent in June 2009. These low pest numbers are likely to be a result of the extension of the possum control network that was completed during the last financial year.

Officers have taken part in the first monitoring task of Operation Kaka, the Department of Conservation (DoC) large-scale possum /pest control trial. After a combined training session with DoC held at Holdsworth Lodge, staff completed bird counts at 100 sites in the Hutt Water Collection Area from 6 to 8 November.

## **2.3 Wainuiomata Mainland Island**

Environmental Officer, Nikki McArthur, has revisited the Waimarino Forest in Wanganui to meet with the landowners and reassess the robin numbers, as part of the preparation for the proposed robin release in April 2010. The next step will be to meet with the tangata whenua of the area to obtain permission to relocate the birds from that area. The Waimarino Forest is pine plantation and the proposal is to take birds from mature stands that will be logged soon. Research has shown that robin populations within those stands are unable to recover or to move to other areas following the logging.

Intensive hunting for feral pigs in the Wainuiomata/Orongorongo area was carried out by contractors during early October. Twenty-three pigs and two deer were destroyed. Migration of pigs into the Mainland Island seeking the large amount of berries that can be found on the ground there is an ongoing problem. The stomach of one pig was found to contain mostly berries, both fresh and sprouting. On a positive note, the contractors found no goats or sign of goats and commented that historic slips are regenerating well, including with palatable species such as five finger, broadleaf, fuchsia and wineberry.

## 2. Western sector

Daylight saving has arrived but weather has been inclement, resulting in fluctuations in visitor numbers across our parks. Lambing closures that affect part of Battle Hill Farm Forest Park and Belmont Regional Park have come to an end.

We have been organising mowing contracts at both Belmont Regional and Queen Elizabeth Parks (QEP). The QEP contract has been finalised and we are in the later stages of finalising a new contract for mowing of Belmont Regional Park entrances.

Converting the old Otonga school site into a residential subdivision has begun, with initial roading work resulting in some complaints about the effects on the Oakleigh Street car park at Belmont Regional Park. We responded to these complaints by improving signage informing people about the scope of the development work and how it will impact the park entrance. The access road to this development utilises legal road on the boundary of the park, thus people have been concerned that the development encroaches into the park. We have been working with Hutt City Council officers over the issue and will continue to do so.

The water supply upgrade at QEP is almost complete, with the old chlorine plant being decommissioned by Kapiti Coast District Council and a new bore now serving the parks needs. Filter systems that comply with the *Drinking-Water Standards for New Zealand* have been installed, therefore doing away for the need for the chlorine plant. Significant cost savings will result from this work.

Organised events included a mountain bike cross country event held at Belmont Regional Park, a corporate planting held at QEP and the annual barn dance held at QEP. The corporate planting at QEP was held at the bush remnant and resulted in 2,000 plants being planted by 70 people.

Volunteers have been assisting with mountain bike track maintenance at Belmont Regional Park. The Park Ranger, Battle Hill attended the Paekakariki Hill Road Residents' Association meeting. At QEP the ranger attended both the Tramways and Friends of QEP monthly meeting. The QEP ranger gave a presentation to the Kapiti bird club showing the great variety of bird life at QEP.

The Park Ranger, Battle Hill has been working with the Battle Hill eventing committee to help manage a working bee installing portable horse jumps in the park. The ranger has also assisted Orienteering Hutt Valley with mapping the forested part of Battle Hill.

Incidents of littering and minor vandalism have been recorded and attended to by ranger staff across the sector. One gate at the QEP MacKays Crossing entrance was rammed by a vehicle and extensive repairs were required.

Trail bikes in the coastal part of QEP continue to be a challenge for staff to deal with. Public co-operation and Police assistance has resulted in the successful prosecution of three offenders this period.

## **2. Eastern sector**

Labour Weekend is the traditional start of the camping season and over 30 families were on-site at Kaitoke Regional Park. Unfortunately there were a few groups of youths who, because of either excessive drinking of alcohol or dangerous driving, had to be talked to and/or evicted from the park. Two groups were evicted and five people were trespassed and evicted by the Police for damage to park assets. The barbecues were also broken into and damaged twice over the period.

Vandalism in Wainuiomata continues, with mini bike riders being escorted from the Gums Loop Track, bollards being ripped out and the grass area trashed on more than one occasion, and a group of vandals intervened while they were trying to cut a lock giving access to the grass area. Police were notified of this incident.

Our East Harbour Ranger was involved in a search and rescue operation when four walkers went missing in the Gollans Valley area at around 3 pm on 30 September. As one of the missing walkers was very elderly, a full effort was made to retrieve the group, which was located at 7 pm fit and well in the mid-Gollans area. Our Wainuiomata Ranger also assisted with a Search and Rescue callout when trampers were reported missing in the Orongorongos during October. The missing party was caught by a flooded river and walked out as the river receded.

Kaitoke Regional Park usage is increasing as the weather warms, with picnic groups enjoying the park, several school tours and three days of filming for the Zealandia Wildlife Sanctuary interpretation display.

A new season of walking tours in the Wainuiomata Catchment has commenced, with bookings steady to date. A private mid-week tour was also conducted during September for a group that was unable to attend Sunday walks. This was greatly appreciated by all who took part.

Events in the Akatarawa Forest are steady, with eight 4WD events, two Army training events and four motorcycle events taking place during this period. This is expected to continue to increase as we move into the summer months.

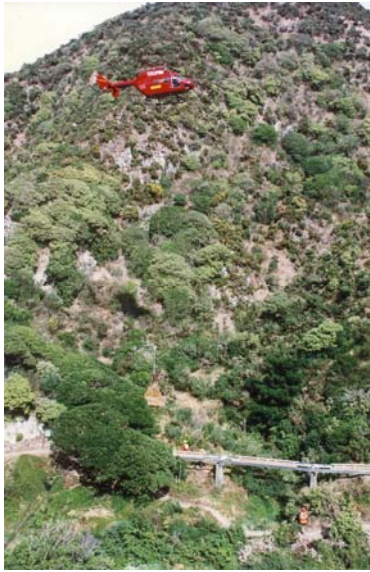
Seventy Maidstone School children planted over 450 native seedlings as part of a late Arbor Day celebration. The site is at Te Marua and continues the project of interplanting and extending the native forest remnants in this area.

Three workers have been provided to Kaitoke Regional Park one day per week by Upper Hutt City Council as part of the Government's Community Max Scheme. They have planted out over 500 native seedlings around the campground area and will be in the park for the next 25 Fridays. In addition, three supervised work crews from the Department of Corrections have been working in the park for three days a week for the last six weeks. They have been painting, clearing weed plants, planting, mulching gardens and clearing rubbish from around the park.

As previously reported, one of the Mackenzie Track bridges in the Butterfly Creek Valley was destroyed after a huge beech tree fell across it, smashing it in half. The replacement bridge has been lifted in and our Eastern Parks' construction team is presently finishing the project. The new, partly built structure, weighing just over a tonne was flown into the site and manoeuvred in place by a ground crew. The helicopter then flew in track metal further down the valley to remedy sections of the track that were too muddy and did not meet New Zealand Track Standards.

Approximately 300 m<sup>3</sup> of rotor millings were made available to us following road works on the motorway in Petone. These millings were used to surface the Rimutaka Incline entrance, from State Highway 2 right up to the walkway gate. The results have been very successful, providing a surface that will result in reduced future maintenance costs a harder wearing smoother surface.

One of the old historic bricked culverts on the Rimutaka Incline installed 100 years ago has been blocked by sediment that has washed down from a large slip up the gully. This has meant that a fairly large pond of water has formed behind the incline. As no safety risk exists, we are waiting to see if the majority of the water will drain away naturally, enabling us better access to the old culvert which is well buried by the slip. Failing this, we will have to install a new culvert pipe immediately above the old pipe.



Korokoro - clockwise - 1998, 2006 and 2009 respectively showing signs of regeneration over time



The completed new bridge in Butterfly Creek



A burned out vehicle in Wainuiomata



An American Car Club enjoys a picnic in Kaitoke Regional Park



Volunteers checking bait stations at Battle Hill Farm Forest Park

# Marketing and Design

## Review of operations for the period ended 31 October 2009

### 1. Water Supply

#### 1.1 Water usage

The risk of a water shortage between November and the end of January 2010 is low. Our water shortfall-forecasting model was run on 9 November using NIWA's November to January climate outlook, which predicted average seasonal conditions. The model run showed a 98 percent probability that the lakes will be above 59 percent full throughout the period to 31 January. Model runs are updated monthly. We are monitoring actual lake levels against our predictions as spring and summer progress.

Wellington City Council's (WCC) Strategy and Policy Committee considered a water conservation and efficiency plan report on 15 October (Report 1 - (1215/52/IM)). In summary, the Committee resolved to adopt a target of holding Wellington City's water use at present levels until 2025; develop a phased approach to water conservation, by undertaking cheaper and more easily achieved water efficiencies first; and instructed officers to seek to work collaboratively with GWRC and other local city councils to that end. WCC expects to consult on the next phase of its water conservation plan in May 2010. We met with Capacity to discuss matters in relation to this and are awaiting further information about their plans prior to May, and how we can best assist them.

#### 1.2 Spring/summer water conservation

Our annual mulch campaign ran through the month of November. Twelve garden centre retailers from the four cities offered specials on mulch. An array of advertising mediums were used, ranging from newspaper and radio advertisements, an insert in the November issue of the *New Zealand Gardener* magazine, email newsletters and point of sale posters. Retailer feedback on the promotion will be reported on at the next Committee meeting.

The first of four water conservation themed leaflets was completed. The *How to mulch your garden* leaflet has since been distributed at the Home and Garden Show held in October, and is available to download from the *Be the Difference* website. Supplies were also sent to some of the participating mulch campaign retailers.

We are working with Capacity and Porirua City Council to ensure readiness to implement our Summer Water Demand Management Plan - an agreed hierarchy of communications activity triggered by increasing demand and/or reducing water availability. Each city council is publicising its standard "odds and evens" watering restrictions, as agreed for the "base" level of communications activity.

We are also investigating with our customers how to further raise awareness of



the need to conserve water within our supply area, with reference to GWRC's research findings on public perceptions around the risk of water shortages. This will lead to a consistent story for publicity via city and Regional Council communications and possibly advertising to promote this message.

A summer watering tips promotion will run during January and February, which includes advice about techniques and appropriate watering equipment. Garden industry association-member retailers will link with the campaign to offer low prices on suitable watering equipment during the period and support the promotion via their own customer communications. Our customer councils will also support the promotion via their communications. Our advertising agency will shortly deliver creative and media proposals.

### **1.3 Education resources**

Development of resources that will complement the New Zealand school curriculum is now officially under way, with the signing of a contract to deliver content by the end of the financial year.

### **1.4 Presentations and treatment plant visits**

There have been four tours of water treatment plants during the period.

We contributed to a lunchtime presentation about wholesale water supply development and demand management for GWRC staff on 23 October. We made a presentation on the wholesale water supply system to an Upper Hutt 60s Up meeting on 27 November. We arranged the presentation of the Ministry for the Environment's On Tap research about aspects of water supply and conservation to be made to this Committee meeting.

## **2. Parks**

### **2.1 Great outdoors summer events programme**

With a new name, booking officer appointed, and bookings opening on Tuesday, 1 December, the *Great Outdoors summer events programme* is all ready to go, with the first event on 29 December. The printed programme is to be circulated as an *Our Region* insert via the Fairfax community newspapers in the week commencing 7 December and we are looking forward to seeing a positive effect on awareness and participation in the summer events. As in previous years, we will deliver multiple copies of the programme to libraries, information/recreation/community centres and other popular sites for people to pick up.

One of the feature events of the summer is *Bike the Trail*, to be held on the Hutt River Trail in February 2010. This event has been run since 2004, growing from 400 to 1,800 participants, and now has its own website [www.bikethetrail.co.nz](http://www.bikethetrail.co.nz). GWRC - together with Hutt City and Upper Hutt City Councils - were delighted to receive a "Highly Commended" Award in the Outstanding Event category at the recent New Zealand Recreation Association's national conference.

## **2.2 Events**

### **2.2.1 Community and corporate planting days**

We co-ordinated a beach cleanup day at Whitireia Park, with 20 people from DLA Phillips Fox, in association with John Poppleton of *Keep Porirua Beautiful*.

### **2.2.2 Buggy walks**

The buggy walk series moved to Queen Elizabeth Park in November, attracting 132 children, parents and grandparents to a walk into the wind from MacKays Crossing, along the Whareroa Stream track to the beach and back via the road. Not a bad effort when pushing a buggy!

The December buggy walk will start at Harcourt Park and go out to the Totara Park Bridge and back via the Hutt River Trail.

### **2.2.3 Hutt Valley Big Backyard**

Following a significant review after the low turnout last year, a new version of this event was held on Sunday, 22 November, at the Hutt City Council I-site pavilion. GWRC Parks promoted recreational opportunities in the adjoining regional parks, while Flood Protection took the opportunity to get more public feedback on the development options for the Boulcott Reach.

### **2.2.4 Other events**

Forest and Bird is conducting an open day with displays and lectures on wild rivers at Rivendell, Kaitoke Regional Park, on 28 November as part of their national awareness campaign on the subject.

## **2.3 Parks' management plan review**

Staff members have been contributing to the planning, meetings and development of background information, e.g., newsletters and maps for the review. It is noticeable that, with the improvements in technology over the years, we will be able to provide very useful information to participants in the process.

## **2.4 Research**

This summer we are working with DoC on a joint project to survey visitors to the Rimutaka Rail Trail. This has resulted in the joint development of a new (shortened) survey form, a review of our processes and some valuable advice from DoC regarding calibration of our counters. We were fortunate to have been offered the services of several Community Max (Work and Income New Zealand subsidised) staff who will help us out, enabling all budgets to go further.

We will also be surveying the Tunnel Gully and Maymorn entrances to the Pakuratahi Forest, the two main road entrances to the Akatarawa Forest and the Wainuiomata Recreation Area.

The on-park survey work will start on Wednesday, 20 January. We expect it to

run until the end of February, allowing for some “bad weather” days.

## **2.5 Landscape/environment**

Work is progressing with the development of updated restoration plans for the Queen Elizabeth Park wetlands and the coastal dunes.

Allocations of available Honda Treefund monies have been made across GWRC lands, so that plant orders may be placed before Christmas. New areas to be funded include Barton’s Lagoon at Lake Wairarapa and the Parangarahu Lakes area in East Harbour Regional Park.

## **2.6 Environmental awards**

Staff co-ordinated the judging of the Rata Awards. While there were fewer entrants this year, the standard was again very high. In the future we plan to encourage groups that were unsuccessful to apply the next year, as the projects are generally improving all the time. The awards event is to be held on 2 December.

# **3. Community liaison**

## **3.1 Introduction**

The community newsletter *Green Shoots* was published slightly earlier than usual and distributed to around 1,500 people and organisations with an interest in our parks. Usually this edition is accompanied by a copy of the summer events programme but this year recipients were advised of when bookings opened and that they would receive their paper copy via the Fairfax community newspapers. They were also invited to view the new Parks Network Strategy and to submit on the review of our parks and forests management plan.

Written submissions are expected from all the Friends/interest groups on the first stage of the review of the Parks Management Plan.

## **3.2 Recent meetings**

### **3.2.1 Friends of Belmont Regional Park**

The group is planning for a *Discover Maara Roa* members’ walk on 21 November and a park open day in February 2010 based at the Hill Road old shearers’ quarters. We have assisted them with planning some environmental restoration near the Hill Road entrance.

### **3.2.2 Friends of Queen Elizabeth Park**

Meetings were recently held with members of both the Friends and the Raumati South Residents’ Association to discuss how we spend around \$70,000 awarded from the DoC Community Conservation Fund for planting in the park. We are working with the Friends on a Memorandum of Understanding to clarify expectations and responsibilities of both GWRC and the Friends in the relationship - and the various points are taking some time to tease out.

### 3.2.3 Friends of Maara Roa

Maintenance work continues on their restoration area and they are planning their planting programme for 2010.

They are keen to update their restoration plan and we are investigating the available options.

### 3.2.4 ARAC

We have agreed a draft Memorandum of Understanding for management of the Orange Hut.

### 3.2.5 Hutt River Trail Operations liaison

Two meetings were held during the period, mainly focusing on the proposed Boulcott Reach upgrade. There is concern about the impact on the Hutt River Trail and the proposed design of the river edge treatment.

### 3.2.6 The Great Harbour Way

The Hon. Peter Dunne hosted a presentation on 10 November to stakeholders of a recent report of issues and opportunities of the Great Harbour Way. The Greater Harbour Way concept involves the development and marketing of a continuous and shared 67 km cycle and pedestrian route around the coastline of Port Nicholson/Wellington Harbour from Red Rocks to Pencarrow Head. The aim is for it to be located immediately beside the harbour edge as far as it is practicable.

### 3.2.7 National cycleway

Representatives of various councils, DoC, iwi and community groups attended a Ministry of Tourism briefing regarding the national cycleway initiative, and lodging an application to be considered for funding. Positively Wellington Tourism is leading the development of an application which needs to be lodged with the Ministry by 18 December. GWRC Parks is supporting the proposal, which would start at Hikoikoi Reserve and run via the Hutt River Trail and the Rimutaka Rail Trail to Featherston and Martinborough. This links with Destination Wairarapa's plan for a route from Pukaha/Mount Bruce to Wharekauhau near Palliser Bay.

## 4. Water usages

Charts detailing water sales for the year are on page 14.

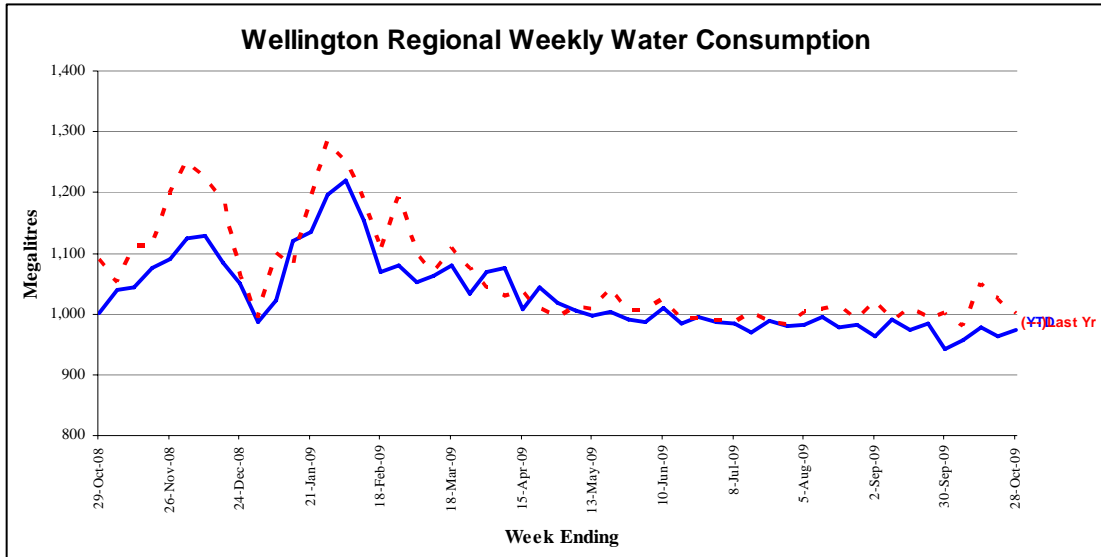


Figure 1 - Water sold over the last 12 months

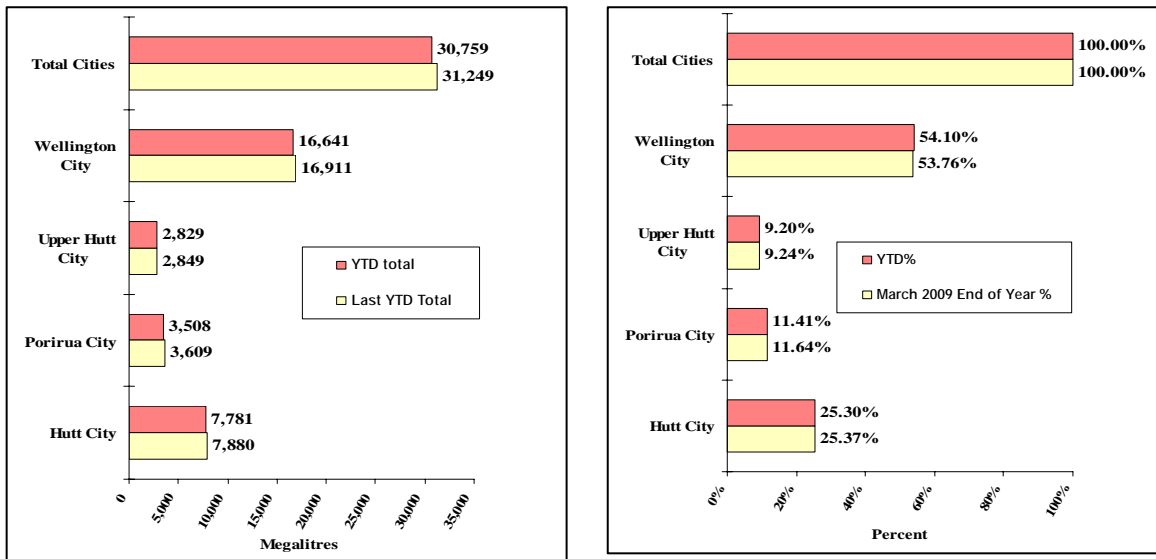


Figure 2 - Water sold during the metering year to date [April 2009 to October 2009]

# Water Supply

## Review of operations for the period ended 31 October 2009

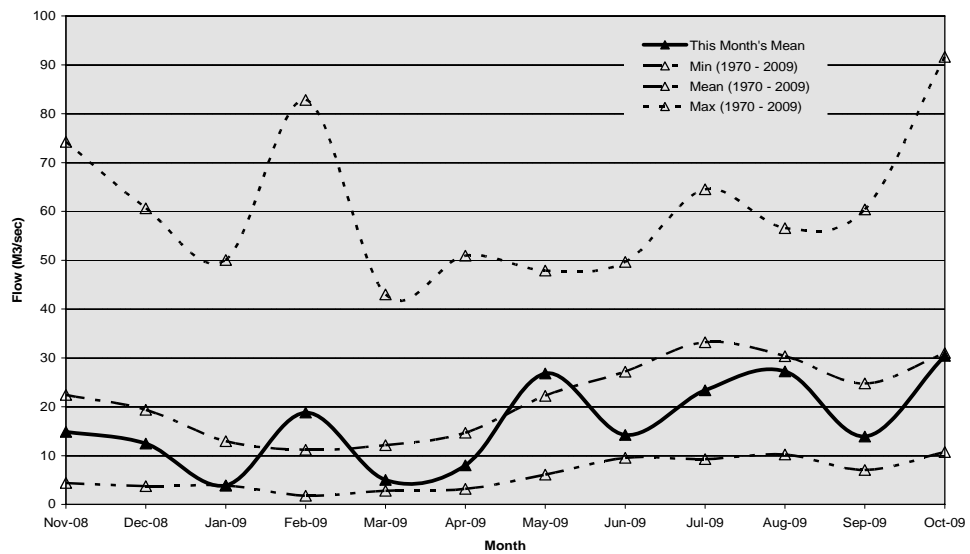
### 1. Supply situation

#### 1.1 General

There were no supply issues for the period and lakes' storage volume at time of writing (17 November) is 100 percent.

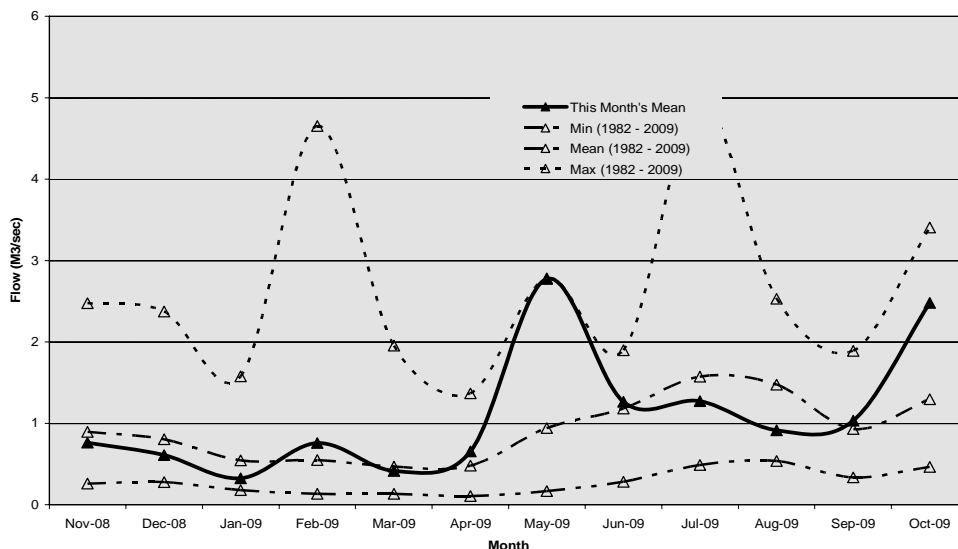
#### 1.2 Hutt River flows measured at Birchville

During September the mean flow for the Hutt River at Birchville was below the mean. During October the mean flow was about the mean.



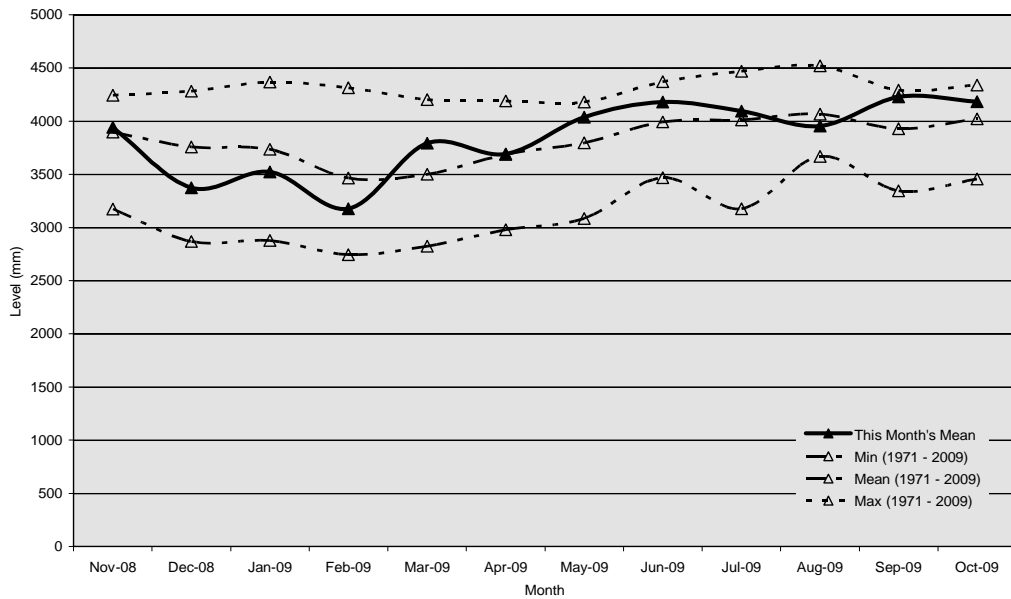
#### 1.3 Wainuiomata River flows measured at Manuka Track

The mean flow in the Wainuiomata River at Manuka Track was about the mean during September. During October the mean flow was above the mean.



## 1.4 Aquifer levels measured at McEwan Park

The water level in the Waiwhetu aquifer during September was about the maximum. During October the water level was above the mean.



## 2. Pipe break at Motuhara Road, Plimmerton

The pipe failure has been repaired. However, there were delays in obtaining various approvals from Porirua City Council. The final approval for a building consent to repair the bank and road was issued on 16 November.

## 3. Te Marua pump as turbine project

Delays to the commissioning of the Te Marua pump as turbine project were experienced because of problems with an electrical protection relay and a pneumatic valve positioner. These issues were resolved by the 13 November and the two pumps as turbines were generating over 200 kW of power when filling Lake 2. See Report No. 09.747 for more information.

## 4. Disinfection by-product investigations

Disinfection by-products are potentially toxic chemical compounds that are health significant. Natural organic matter contains compounds that disinfectants (chlorine) are able to react with to form disinfection by-products. The higher the organic matter concentration, the greater the potential for disinfection by-product formation.

Some organic compounds can be removed by our treatment processes. Others cannot. Analysis of the Hutt River water has shown that this source has a high level of disinfection by-product formation potential (compared to published data from the United States), whereas an analysis of the Te Marua treated water shows very low levels of actual disinfection by-product compounds.

As a consequence of the initial test results, we are conducting a more detailed study to determine the performance of the treatment process under varying conditions. The results of this work will allow us to develop operational practices that will ensure any potential risks to public health are minimised.



## Development and Strategy

### Review of operations for the period ended 31 October 2009

#### 1. **Stuart Macaskill Lakes**

A proposal has been requested from Tonkin and Taylor Ltd for the detailed design of work on the lake embankments and lining for the seismic upgrade and raising the lake levels. The design of associated work for the projects will be carried out in-house. Design and contract documentation for the seismic upgrade and raising the level of both lakes will commence in the New Year.

The design will cover full containment of both lakes but the documents will be structured to allow the option of seismic upgrade without full containment for Lake 1. This will accommodate the deferral of a decision on full containment of Lake 1 until October 2010.

The Contract is programmed to be advertised mid-2010, with Lake 2 being taken out of service for construction over the summer of 2010/11. Construction work for Lake 1 will be carried over the following summer after Lake 2 is back in service.

#### 2. **Reduced low flow at Kaitoke weir**

An updated draft application that provides additional information and takes into account comments from internal review is planned to be completed by 20 November for final internal discussion. A decision will then be made by senior management on whether to approve submission of the application for consent condition changes.

GWRC Councillors and our four city council customers will be advised of the decision reached.

#### 3. **Economic benefits of Whakatikei dam**

A report has been received from Business and Economic Research Ltd (BERL) that identifies the benefits to the Region generated by the Whakatikei dam through a reduction in business losses following a major seismic event.

The report assesses the change in economic impact from a Wellington Fault movement with the Whakatikei dam in place, compared with the current wholesale water supply sources. This assessment uses the economic impact framework developed by BERL in the stage 1 report, together with the estimate of water network repair times developed by Development and Strategy from wholesale water supply damage modelling by GNS Science.

The economic impact assessment shows a benefit to cost ratio with the Whakatikei Dam in place of between 1.7 and 5, depending on the assumptions made about the probability of a Wellington Fault movement as advised by GNS Science.

An assessment of the social benefits of the Whakatikei dam is to be undertaken by GNS Science in 2010.

A presentation on the framework for evaluating the economic impact will be presented by GWRC and BERL to the Wellington Lifelines Group in December. The framework methodology is able to be applied to other lifeline utilities.

#### **4. Proposed Central Business District (CBD) reservoir**

Following advice from the Minister of Health that the Capital and Coast District Health Board is unable to fund a share of the proposed CBD reservoir, GWRC and Wellington City Council officers have met to discuss options for a way forward.

The meeting included a review of Wellington's water storage need for future growth and security of supply in the city's CBD and eastern suburbs, including the Wellington Regional Hospital in Newtown. Further work will be carried out on an alternative solution.

#### **5. Wainuiomata mini-hydro power generation**

Tenders have been called for the supply of a 300 kW hydro-generating set from selected local and international manufacturers recommended by our consultant. Tenders will close on 7 January 2010. Exchange rate fluctuation and price volatility in the hydro generation industry means it is difficult to estimate in advance the likely cost of the generating set. A decision on what steps are needed to provide performance security and price certainty will be made based on the preferred tenderer and currency offered for payment.

Detailed design of the civil works, generator building and electrical work can begin after details of the generator have been received.

The key stakeholders of iwi, DoC and Fish and Game New Zealand have been consulted, and further discussion is under way with Fish and Game New Zealand. When completed, an application will be lodged for resource consents to discharge water from the generator into George Creek and to construct the discharge structure. For certainty, these consents are needed before an order is placed for the generator. Therefore, an application by December is targeted.

Hutt City Council has granted outline plan approval for the project, which is in lieu of a land use consent, as the site is designated for water supply purposes.

#### **6. Puketiro wind farm**

The draft replacement contract has been amended to remove permission for wind turbines situated outside the Battle Hill Farm Forest Park to overfly the park. The contract signatories need to be modified because of internal restructuring of RES New Zealand Ltd's parent company. When advice is received from RES on this change, the contract can be produced for final legal review before signing.