

**Geoff Skene**  
Manager, Environment Education

## **Environment Education Department Report – July 2005**

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### **1. *Take Action***

Term two is drawing to a close with three guided schools and three self-guided schools completing their action projects.

#### **1.1 Guided schools taking action**

This term the schools doing the guided programme are Gracefield (Lower Hutt), Island Bay (Wellington), and Fergusson Intermediate (Upper Hutt). Five classes from Island Bay School undertook their field trips at the Karori Wildlife Sanctuary. As before, the trail site presented wonderful learning opportunities. The students will present the outcomes of their action projects to parents on Friday 24 June. The school's action projects include worm farms, planting projects and working to reduce the litter that comes from school lunch boxes (and which can end up in the stormwater system). The entire middle school will be involved in a planting with the Wellington City Council at Berhampore Golf Course.

At Gracefield School two classes are developing a composting / wormfarming project, another is implementing a school wide recycling system and a fourth class is creating school wide awareness of the issues around stormwater drains.

At Fergusson Intermediate this term's classes are starting a number of projects centred around the stream at the back of the school. The school is looking at how they can look after the stream over the long term and how the students can be involved in a meaningful way with the area into the future (e.g., through an ongoing dialog with the local council, regular plantings, rubbish removal). Other classes from the school are doing *Take Action* in the next two terms so there is time to work through this question.

#### **1.2 Self-guided schools**

This term's three self-guided schools (St Josephs, Birchville, and St Brendans) have completed their investigations into stream health and are now working on their action projects.

#### **1.3 Student numbers for *Take Action***

At the mid point of the calendar year 2005, 1445 students have completed *Take Action*, 585 doing the guided programme, and 860 taking the self-guided option. This is a considerable step up on last year when, by the same date, 515 students had participated in the programme (both guided and self-guided).

## **2. Take Care**

### **2.1 Care group progress**

Care group activity is increasing as most groups commence their winter planting programmes. Groups are working on most weekends over the next three months right across the Region. Staff from the Environmental Education and Resource Policy Departments will be working with their care groups at:

- Owhiro Stream (three planting events between June and August)
- Hulls Creek (three events at Silverstream railway and two events at Millwood)
- Kaiwharawhara Stream (inter-planting of up to 3000 plants within the existing restoration area)
- Porirua Stream at Glenside
- Waikanae Estuary Scientific Reserve (two events)
- Eastbourne, with the Dunes Protection group
- Greendale Reserve
- Paraparaumu Beach, on the dune restoration area on Manley Street; and
- Oku Coast Care Group's Island Bay dune project.

A full list of weekend care group activities over the next three months (with relevant contact details) will be put in the Councillors' Information Bulletin so that Councillors can attend these (and other care group) events if they wish. I will cover the achievements of the groups over the winter season in my next two reports to the Committee.

## **3. Nigel Clarke**

As Councillors will be aware, Nigel has resigned from Greater Wellington to take up a new position with another organisation. Nigel worked for the Council for 15 years, contributing enormously to many of Greater Wellington's programmes in that time. He made particular contributions to our care group and business sustainability programmes, environmental monitoring and reporting, planning, and Trees for Survival. I would like to record my thanks to him for all of his efforts, commitment and enthusiasm, and wish him well in his new role.

**Tim Porteous**  
**Acting Manager, Resource Policy**

## **Resource Policy Department Report – July 2005**

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### **1. Maintaining Regional Policies and Plans**

#### **1.1 Regional Plan Changes**

There is a single outstanding matter to be resolved before Plan Change 1 to the Regional Freshwater Plan can be made operative. A new rule requires resource consents to drive heavy vehicles on stopbanks. The Environment Court has decided that a length of stopbank within the Lower Wairarapa Development Scheme should be excluded from this rule. The Council has appealed the Environment Court's decision to the High Court. The High Court has allowed the Council's appeal to the extent that conditions should be included in the rule that prevent future changed use that could have unpredictable consequences.

We are currently working through possible conditions on the new rule with the respondent to the appeal before returning to the High Court for a final judgement.

On 7 June, the Council held a pre-hearing meeting with submitters on Plan Change 2 to the Regional Freshwater Plan. This plan change establishes minimum flows and water allocation in the Mangaterere Catchment. The meeting followed the collection of some additional information on low flows in the catchment. An update of mean annual low flows that includes the new information collected was requested at the meeting. Once this has been done, the need for a hearing will need to be considered by all the submitters.

### **2. Regional Policy Statement and Plan Implementation**

#### **2.1 Freshwater Ecosystem Programme**

Information sheets on native freshwater fish in our region have been prepared for interested people and groups. Two hundred copies of these are now being printed. The sheets will also be available on the web site.

## **2.2 Wetlands**

The wetland hydrology guidelines have been printed and are now available. The guidelines are a simple introduction to wetland hydrology for people wanting to restore wetlands, and they provide information about how to establish a more natural wetland regime in wetlands that have been affected by human activity. The publication complements the information that we have provided on wetland ecology. Its development is being part funded by the Department of Conservation National Biodiversity Advice Fund.

## **2.3 District Plans**

Statutory resource management work is the subject of a separate report to the Committee.

## **2.4 Kaiwharawhara Project**

This project is the subject of a separate report to the Committee.

## **2.5 Waiwhetu Stream Project**

Four studies of the Waiwhetu Stream commenced in late May. The studies are:

- The extraction and analysis of sediment cores from the contaminated reach of the stream to determine the extent and nature of the contaminants.
- The digging of a number of test pits adjacent to the stream to determine the chemical and geotechnical characteristics of this land.
- Water quality sampling and flow monitoring to establish the relative significance of contaminant inputs from historic in-stream sediments and those currently entering the stream via stormwater from the Gracefield area.
- An investigation to establish the significance of contaminated groundwater infiltration as a source of contaminant export to the Waiwhetu Stream.

The physical works associated with the first two projects are now complete and laboratory analysis is well advanced. The results will be reported to a subsequent meeting of the Committee. Projects three and four have longer timeframes and will be completed early in 2006. This work is 60% funded by the Ministry for the Environment's Contaminated Sites Remediation Fund, with the balance of costs shared with Hutt City Council.

## **2.6 Pauatahanui Project**

This project is the subject of a separate report to the Committee.

**John Sherriff**  
**Manager, Resource Investigations**

## **Resource Investigations Department Report – July 2005**

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### **1. Resource Information**

#### **1.1 Flood warning**

The Resource Investigations Department provides a flood warning and monitoring service for the western part of the Wellington Region. Rainfall and river level recorders around the region automatically relay information to the Regional Council Centre. When specified rainfall intensities or river levels are reached the system automatically alerts staff who implement response procedures.

Details of alarms received are provided to the Committee to fulfil reporting requirements set out in the Annual Plan.

Since the last meeting of the Committee the following rainfall and water level alarms were received and responded to:

|             |   |
|-------------|---|
| 19 May 2005 | <b>Rainfall:</b> Taungata   |
| 29 May 2005 | <b>Rainfall:</b> Kapakapanui, Kaitoke Headworks, Waikanae, Warwicks |
| 1 June 2005 | <b>Rainfall:</b> McIntosh   |

#### **1.2 Pencarrow Lake levels**

Our Resource Information team are currently working with the Department of Conservation to assess the feasibility of installing water levels monitors in the Pencarrow Lakes. This monitoring will help our understanding of how these important natural resources function.

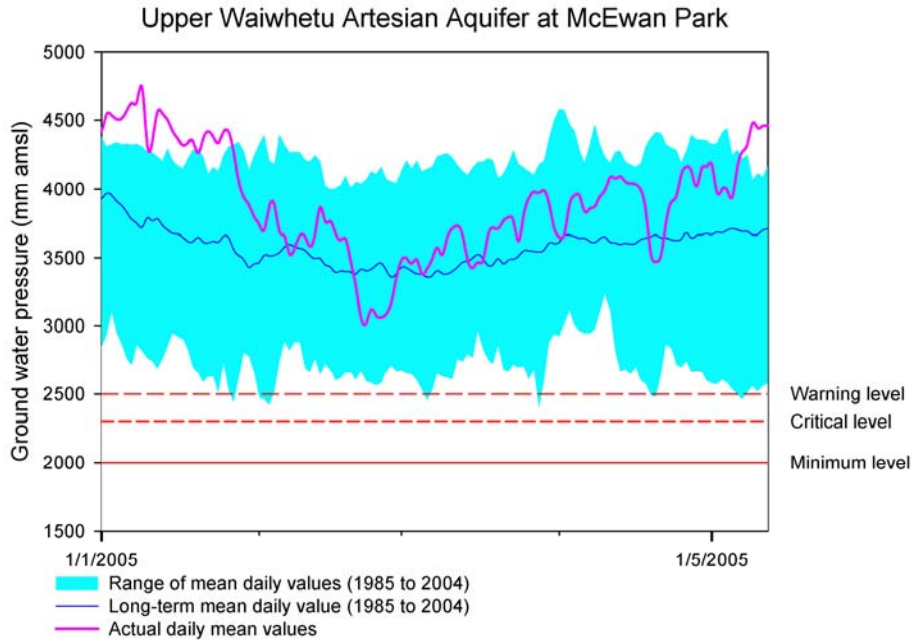
### **2. Resource analysis**

#### **2.1 Groundwater levels**

The Department monitors groundwater levels at 46 sites around the western region. We use two of these bores, McEwan Park at Petone and Hautere Plain on the Kapiti Coast as general indicators of the state of groundwater resources in these areas. Records from these two bores and a synopsis of the situation are provided to the Committee at each meeting.

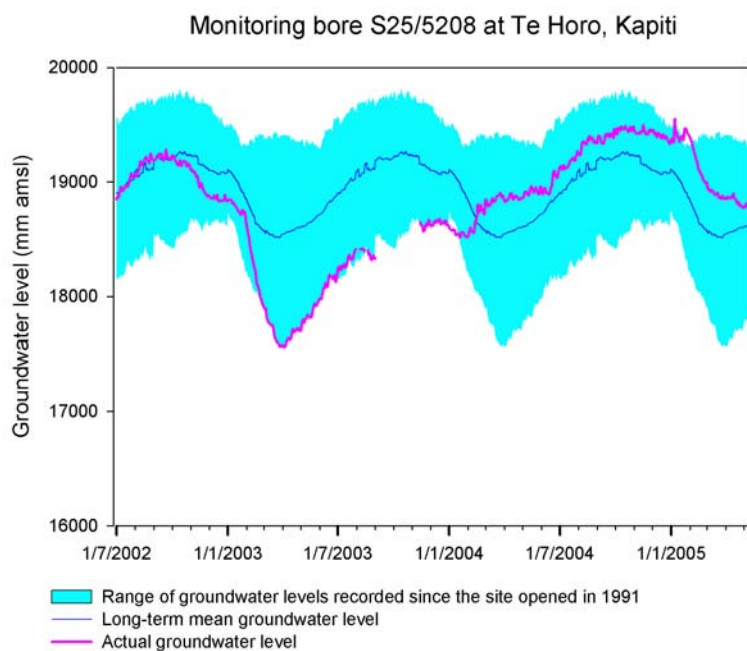
### 2.1.1 Lower Hutt groundwater zone – Upper Waiwhetu artesian aquifer

Aquifer pressure at our McEwan Park monitoring bore is currently at record high levels for this time of year and, therefore, well above the first seawater intrusion alarm level.



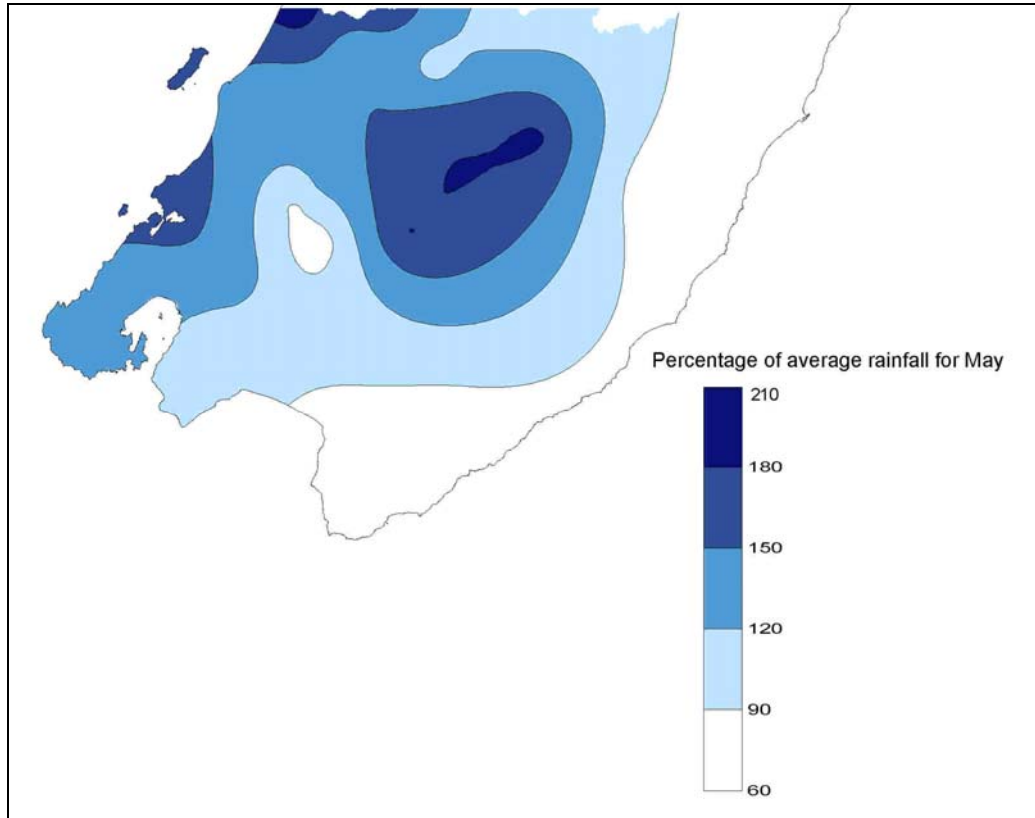
### 2.1.2 Kapiti Coast

The water levels in Kapiti aquifers are also above average for this time of year. The hydrograph below shows the record from monitoring bore S25/5208 on the Hautere Plain, which intercepts a deep rainfall recharged aquifer. It would appear that the groundwater level has reached its seasonal low level and is now recovering in response to the onset of winter recharge.



## 2.2 Rainfall and river flows

The map below shows that rainfall in the Wellington Region during May 2005 tended to be below average in the east of the region, above average in northern Kapiti Coast and on the Wairarapa plains, and about average in the rest of the region. Anticyclones tended to be centred well away from New Zealand during May, meaning that conditions were not settled; however, temperatures were above average in most parts of the region.



### Rainfall during May 2005 as a percentage of average for the month

Similarly, river flows tended to be slightly above normal for the month. A small storm at the beginning of May (2-3) boosted river flows, leading to small floods particularly in the Porirua and Waiwhetu Streams. The rainfall was centred around the urban areas of Wellington, Porirua and the Hutt Valley and in the low foothills. As a consequence, the larger rivers did not have significantly increased flows. A second storm at the end of May caused small flood peaks in the Kapiti Coast rivers, but remained well below the level of the mean annual flood.

To date, June has been relatively wet, with regular fronts passing over Wellington. There have been frequent south to south easterly flows over the region, which bring rain to southern Wairarapa, Wellington City, Hutt Valley and Wainuiomata. However, under this weather pattern the Kapiti Coast remains relatively dry.

## 2.3 Air quality monitoring

### 2.3.1 Ambient air quality monitoring

We currently monitor ambient air quality at three sites in Lower Hutt (Birch Street Reserve), Upper Hutt (Trentham Fire Station) and Masterton (Wairarapa College). The effects of transport emissions are monitored at the corner of Vivian and Victoria Streets. We also monitor carbon monoxide emissions at Te Aro.

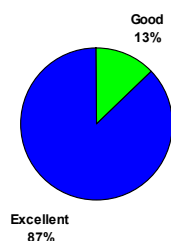
The graphs below represent air quality at the location indicated when the monitoring results are compared to ambient air quality guidelines. The assessment categories are as follows:

| Category   | Maximum Measured Value                | Comment   |
|------------|---------------------------------------|---|
| Action     | Exceeds Guideline                     | Completely unacceptable by national and international standards.  |
| Alert      | Between 66% and 100% of the guideline | A warning level which can lead to guidelines being exceeded if trends are not curbed.   |
| Acceptable | Between 33% and 66% of the guideline  | A broad category, where maximum values might be of concern in some sensitive locations, but are generally at a level that does not warrant dramatic action. |
| Good       | Between 10% and 33% of the guideline  | Peak measurements in this range are unlikely to affect air quality.   |
| Excellent  | Less than 10% of the guideline        | Of little concern.  |

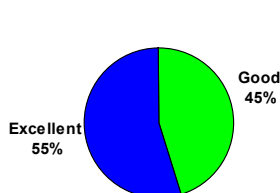
**Councillors will be aware that our *Take 10 - Quality of Life* target for air quality is that there will be no recorded instances when air pollution reaches the "alert" level of the national air quality guidelines.**

### Results for the past two months at Upper Hutt

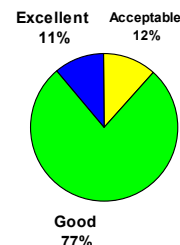
8-Hour Average CO at Upper Hutt



24-Hour Average NO<sub>2</sub> at Upper Hutt



24-Hour Average PM<sub>10</sub> at Upper Hutt



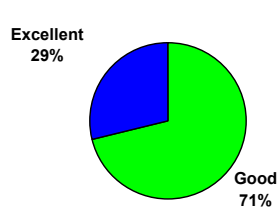


## Results for the past two months at Lower Hutt

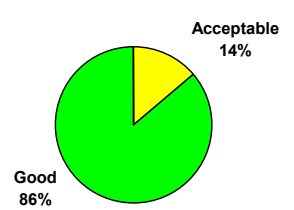
8-Hour Average CO at Lower Hutt



24-Hour Average NO<sub>2</sub> at Lower Hutt

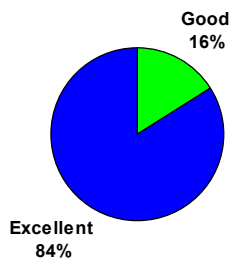


24-Hour Average PM<sub>10</sub> at Lower Hutt

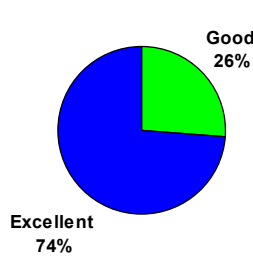


## Results for the past two months at Masterton

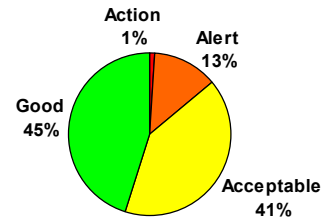
8-Hour Average CO at Masterton



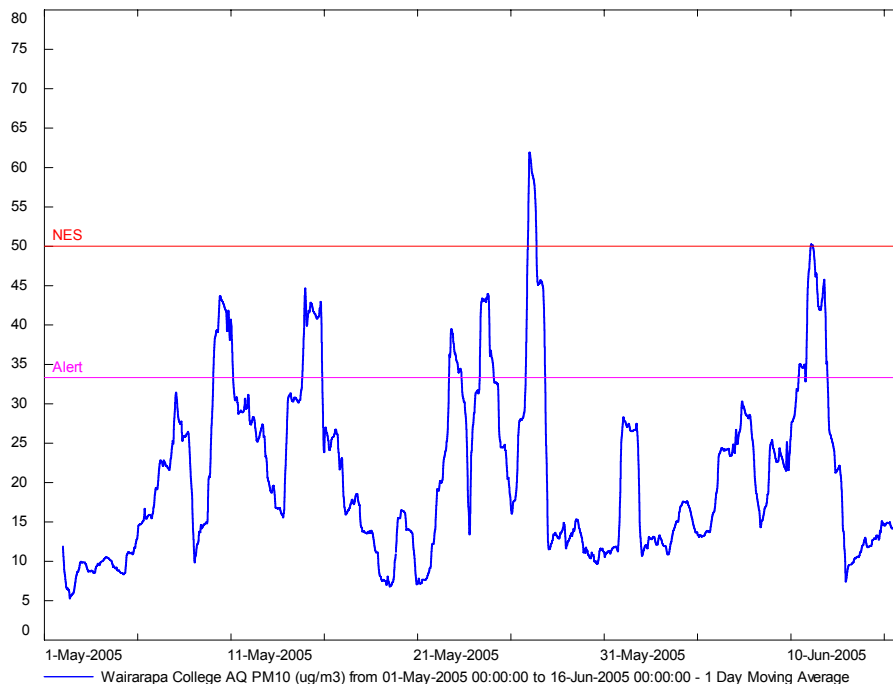
24-Hour Average NO<sub>2</sub> at Masterton



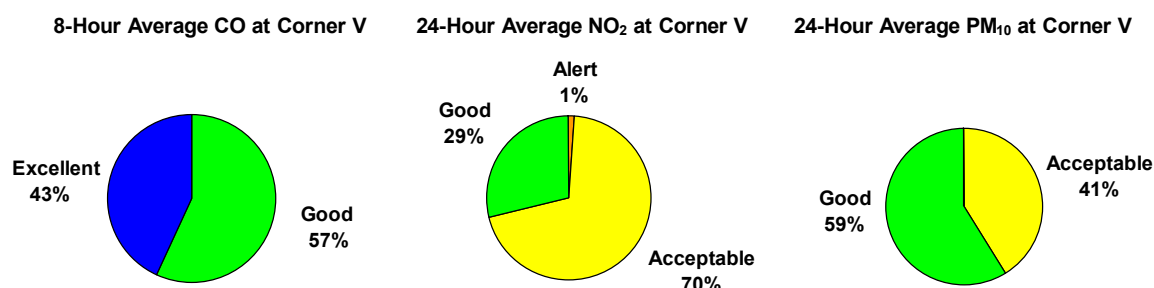
24-Hour Average PM<sub>10</sub> at Masterton



Since the onset of winter and the increased use of domestic fires for home heating, fine particle concentrations in Masterton have increased. To date we have had two exceedences of the National Environmental Standard for fine particles (PM<sub>10</sub>). Monitoring results from the Wairarapa College air quality monitoring station are presented graphically below. From 1 September this year the National Environmental Standard will require us to publicly notify exceedences of this type.



## Results for the past two months at Corner Victoria & Vivian Streets



## Results for the past two months at Te Aro

### 8-Hour Average CO at Te Aro



## 2.4 Stormwater

We have received from our consultants a draft of report which analyses the stormwater investigation undertaken by Resource Investigations staff over the past three years. When this report is finalised it will be reported to the Committee and then shared with territorial authorities as part of our work towards developing a Regional Stormwater Action Plan.

Students from Wellington Medical School, under guidance from Regional Public Health, are about to commence a group project focussing on how best to manage any health risks from contaminated shellfish. For the purposes of this project their focus will be on Porirua Harbour.

## 2.5 Contaminated sites management

On-site investigative work at the Masterton Gasworks site has been completed and we are now awaiting the consultant's final report. Preliminary reports identified the need to do further work to assess the impacts of the gasworks on groundwater. Further boreholes will be drilled by the end of June to allow this assessment to be done.

### **3. Pollution Control**

#### **3.1 Pollution and non-compliance complaints**

A summary of pollution complaints, our performance in responding to them and enforcement action taken is reported separately.

### **4. Staff**

Our most experienced air quality technician Aotasi Iose has resigned and will be leaving Greater Wellington during July. Tasi has been an essential member of the team which has developed our air quality monitoring programme over the past few years, and a very popular member of staff. His experience and presence will be missed. An appropriate replacement is currently being sought.

Rod Hart, one of our Pollution Control Officers, has also resigned for personal reasons and leaves Greater Wellington mid July.

**Nigel Corry**  
**Manager, Consents Management**

## **Consents Management Department Report – July 2005**

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### **1. Consent statistics**

In the period to 20 June 2005 we have received 494 consent applications. This compares with 571 received for the same period last year.

Over the same period, we have processed 408 consents. This compares with 523 last year.

All consents processed since the last Committee meeting have been done so within statutory timeframes, and our median processing time for non-notified consents remains at 10 working days.

A summary of the notified consents we are currently processing is attached for information.

### **2. Appeals and objections**

There are no appeals or objections outstanding at present.

### **3. Compliance**

#### **3.1 General**

##### **Exide Technologies Review**

As you know, we notified the review of the Exide Technology's discharge to air consent on 21 May 2005. Since this time the issue has received a fair degree of media attention, has been the subject of a public meeting, and we have fielded dozens of phone calls from members of the public in relation to the matter. Submissions have now closed and we received 72 individual submissions, one of which was presented as a 'petition' countersigned signed by 77 people. We are now assessing the content of these submissions and preparing our officer's report. We have yet to schedule a hearing date, but this will be sometime in late July or early August. The content of the officer's report and hearing will no doubt be the subject of much interest and I don't anticipate that this issue will become any less contentious once a decision is eventually made on the matter.

## **Taylor Preston**

On 19 May, an offensive or objectionable odour was confirmed as coming from the Taylor Preston site. We sent a 'please explain' letter to Taylor Preston on 25 May who have responded indicating that as far as they are aware, there was no plan failure or other incident that clearly lead to the cause of the odour. We are now considering how to best respond to this incident. Immediately following our investigation, we collected several witness statements which we will be in a position to use in any enforcement action should we need to do so.

We have also been invited to a meeting later in the year with the Gorge Action Group. We are in regular contact with GAG, and I have already indicated that we will be happy to meet with them.

## **Carey's Gully**

The Carey's Gully Community Liaison Group meeting was held on 2 June which we participated in as usual. This was a fairly positive meeting, although concerns clearly still exist in relation to odour in the area surrounding Carey's Gully. We now await the release of the report commissioned by Wellington City Council in relation to odour sampling in the area.

### **3.2 Abatement notices**

We have served one abatement notice since the last Committee meeting. The notice was served on Metal Immersions Limited, based in Tawa, requiring the installation of suitable emission control equipment so that any fugitive emissions from their operation are contained. This notice has been complied with.

### **3.3 Infringement notices**

We have also served one infringement notice since the last meeting. This notice was served on Garry Holland Earthmoving in relation to unauthorised works in the Waikanae River. We have had extensive discussion about this issue with both the Flood Protection Department (for whom Garry Holland Earthmoving was working) and Fish and Game New Zealand who take an active interest in the management of the Waikanae River.

### **3.4 Prosecution and enforcement orders**

There are no prosecution proceedings currently occurring.

However, the Mangaroa Metals enforcement order has resurfaced again. While his application for an interim enforcement order was rejected by the Courts in late January, the continued concerns of Mr Mears in relation to compliance with conditions of the consent (resolved by way of mediation in September of last year) has meant that he has again gone to the Environment Court seeking an enforcement order. We went to Court on 13 June in relation to this, the result being that the Judge adjourned the hearing and told all parties to get together and sort the issue out. We will attempt to do this in the next two weeks, otherwise we will be back in Court. We remain satisfied that we are in

a strong position in relation to this matter and, should we be required to go back to Court, that the application for an enforcement order will again be denied.

## **4. Other**

### **4.1 Ivey Bay**

Since the last Committee meeting we have met on-site with staff from the Department of Conservation in relation to vehicle access across Ivey Bay. Issues discussed at this meeting centred around the cumulative effects of access across the foreshore, the current lack of information about these cumulative impacts, and how many trips across the foreshore is 'acceptable' when assessing applications for consent. While there was no clear resolution from this meeting, DOC and GW have agreed to continue to liaise over this issue on a case-by-case basis and to look into opportunities to pursue research into the effects of vehicle movements. We will also be meeting with staff from the Porirua City Council in the coming weeks to discuss similar issues.

### **4.2 Staff issues**

We are still fully staffed, and continue to help the Wairarapa with some of their consent processing work.

The Consents Management and Pollution Control teams organised and hosted a Muddy Waters workshop for consultants and contractors in the region looking at the environmental effects of sediment discharges, how GW's Sediment Control guidelines should be implemented, best practice, and GW's expectations in terms of current application information and compliance requirements. This was an excellent forum where Council staff presented in an extremely professional manner. We have received some excellent feedback following this workshop and I consider that GW is providing an excellent degree of leadership in the field of erosion and sediment control for those with whom we work.

Complementing this Muddy Waters workshop was an excellent two day Erosion and Sediment Control training workshop for Council staff on 14 and 15 July. Those in attendance included GW staff from both sides of the hill, and staff from all the Territorial Authorities on the Western side of the region. The workshop was conducted by Brian Handyside and Claire Feeney who have held a number of similar training sessions for the Auckland Regional Council.

| Applicant                              | Proposal   | Date Consent Lodged | Date Submissions Closed | Number of Submissions Received                                 | Pre-hearing Held | Hearing Held  | Hearing Committee Members                 | Date Decision Released | Granted or Declined            |
|--|--|---------------------|-------------------------|--|------------------|---|---|------------------------|--------------------------------|
| Wellington City Council                | Change of consent monitoring conditions for the Moa Point Pump Station.  | 02/11/00            | 08/12/00                | 2  |                  | On hold for further information in relation to monitoring requirements. | -   | -                      | -                              |
| Wharfe Quarry <sup>1</sup>             | To undertake a quarrying operation, including discharge of stormwater, dam and diversion of water, taking of water and piping a watercourse. | 06/11/03            | 04/02/04                | 57 plus 2 late   | -                | Hearing not yet scheduled - on hold under s92 and s91 of the RMA 1991.  | -   | -                      | -                              |
| Silverwood Subdivision <sup>2</sup>    | To undertake a 162 lot residential subdivision and associated earthworks, discharges and reclamation.  | 07/05/04            | 03/11/04                | 17   | -                | 28 February - 1 March and 13 April.                                     | Chris Turver<br>Sally Baber<br>Aka Arthur |                        | Granted – no appeals received. |
| Ridvan Garden Development <sup>3</sup> | To lay culverts and discharge contaminated stormwater as part of a residential subdivision development in Crofton Downs.                     | 23/12/04            | 25/02/05                | 51   | -                | Scheduled for 27/28 June  | Sally Baber<br>Ian Hutchings              | -                      | -                              |
| Wellington Waterfront Ltd              | To develop open space areas, divert groundwater and daylight the Kumutoto Stream, North Queens Wharf   | 16/03/05            | 28/04/05                | 31 plus one late – 5 of these relate specifically to GW issues | -                | 7/8 June  | Chris Turver<br>Miria Pomare              | -                      | -                              |

<sup>1</sup> This application will be jointly heard with Porirua City Council

<sup>2</sup>This application will be jointly heard with Porirua City Council

<sup>3</sup>This application will be jointly heard with Wellington City Council

| Applicant   | Proposal  | Date Consent Lodged | Date Submissions Closed | Number of Submissions Received | Pre-hearing Held     | Hearing Held  | Hearing Committee Members          | Date Decision Released | Granted or Declined |
|---|---|---------------------|-------------------------|--------------------------------|----------------------|---|------------------------------------|------------------------|---------------------|
| Wellington Waterfront Ltd <sup>4</sup>                                  | Extend the existing lagoon and undertake associated development of the existing Frank Kitts lagoon area.  | 16/03/05            | 28/04/05                | 31 plus one late               | -                    | 7/8 June  | Chris Turver<br>Miria Pomare       | -                      | -                   |
| eNZoil Limited  | To discharge contaminants to air associated with the operation of a transformer oil regeneration plant.   | 18/01/05            | 03/05/05                | 7                              | Scheduled for 18 May | 10 June   | Terry McDavitt<br>Margaret Shields | -                      | -                   |
| Shell Oil New Zealand   | To discharge contaminants to air from the operation of a plant producing detergent intermediates (such as pastes used in shampoos and dish wash powders). | 16/11/04            | 12/05/05                | 4                              | Scheduled for 24 May | All parties have agreed in principle to draft conditions – will be seeking their formal sign-off in which case no hearing will be required. | -                                  | -                      | -                   |
| FC Allen  | To undertake a variety of river works including installing a culvert, diverting and reclaiming.   | 20/08/04            | 17/05/05                | 2                              | -                    | Draft conditions are currently with the only submitter in opposition – hopeful of obtaining formal sign off.                                | -                                  | -                      | -                   |
| Wellington Waterfront Ltd and the Wellington Tenth's Trust <sup>5</sup> | To construct and maintain a new Wharewaka on the western side of the extended Lambton Harbour Lagoon  | 02/06/05            | 08/07/05                | -                              | -                    | -   | -                                  | -                      | -                   |

<sup>4</sup> This application will be jointly heard with Wellington City Council

<sup>5</sup> This application will be jointly heard with Wellington City Council



| Applicant                                  | Proposal  | Date Consent Lodged | Date Submissions Closed | Number of Submissions Received | Pre-hearing Held | Hearing Held | Hearing Committee Members | Date Decision Released | Granted or Declined |
|--|---|---------------------|-------------------------|--------------------------------|------------------|--------------|---------------------------|------------------------|---------------------|
| The Wellington Tenth Trust <sup>6</sup>    | To construct and maintain a new building (wharanui) at Taranaki Street Wharf.                                   | 02/06/05            | 08/07/05                | -                              | -                | -            | -                         | -                      | -                   |
| Wellington Waterfront Limited <sup>7</sup> | To develop, use and maintain public spaces, landscaped areas and associated structures at Taranaki Street Wharf | 02/06/05            | 08/07/05                | -                              | -                | -            | -                         | -                      | -                   |
| Hutt City Council                          | To discharge treated and disinfected wastewater from the Seaview wastewater treatment plant.                    |                     | 20/07/05                | -                              | -                | -            | -                         | -                      | -                   |

<sup>6</sup> This application will be jointly heard with Wellington City Council

<sup>7</sup> This application will be jointly heard with Wellington City Council

**Mike Pryce**  
Manager, Harbours

## **Harbours Department Report – July 2005**

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### **1. Harbour navigation aids**

During the second week of June, the Maritime Safety Authority (MSA) carried out an audit on our principal navigation aids in Wellington Harbour. This is the first such audit that they have carried out in New Zealand under the guidelines for “Providing Aids to Navigation in New Zealand”, one of a series of documents supporting the New Zealand Port & Harbour Marine Safety Code.

All navigation aids operated satisfactorily.

### **2. Oil pollution response**

- Eight reports of oil spills were received and investigated.
- On 8 June the quarterly oil spill response equipment check was carried out, and equipment was also audited by MSA staff.

### **3. Events**

#### **Port and Harbour Risk Assessment**

On 2 and 9 June meetings were held with Marico Marine to “score” the risks identified in our Port and Harbour risk assessment. The risk assessment process is progressing well and is already substantially complete. A meeting is scheduled with major “stakeholders” on 1 July to discuss the ranked hazard list.

#### **Submissions**

Harbours Department made submissions on the proposed amendments to Maritime Rule Part 22 (Collision Regulations) and the Marine Protection Rule 130B (Tier 1 Operations). A submission regarding approaches to Wellington Harbour was made for the proposed Vessel Routing Code – Recommended Approaches.

## Incidents

On 16 June 2005 the Maritime Safety Authority released official reports into the near-grounding of the ferry *Aratere* at Tory Channel and the close quarter's incident between the ferries *Aratere* and *Kent* in Wellington Harbour.

The following is a condensed version of events:

### **“Aratere near-grounding - what happened:**

*Late in the afternoon of 29 September 2004, Aratere entered Tory Channel from Wellington bound for Picton with 292 people on board. Aratere was operating on automatic track keeping mode, which allows it to automatically maintain a programmed track.*

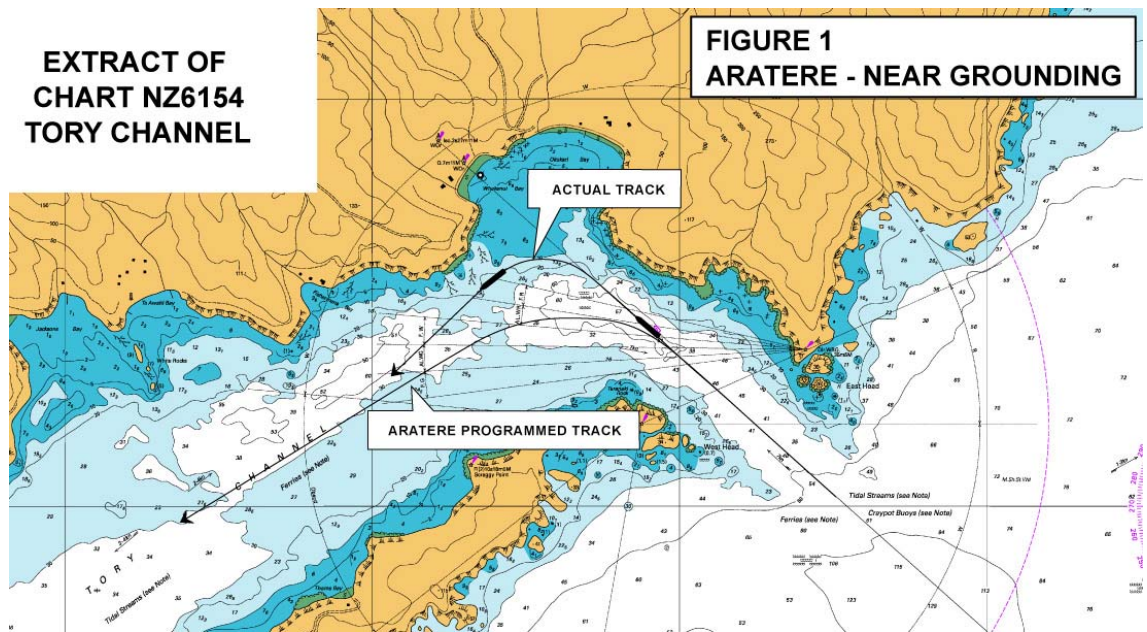
*At 5.17pm, instead of keeping to the programmed track, the automatic tracking system on Aratere failed to make a programmed track change. The Chief Officer did not appear to notice this and informed the Master that the distance between the programmed track and the actual track was 61 metres. The Master told the Chief Officer he had seen the ferry off track before – up to 85 metres – and that it had corrected itself. Aratere at this stage was travelling at 20 knots (38km/hour).*

*The Chief Officer continued to report the increasing distance off track. When that distance reached about 100 metres, the Master and Chief Officer realised that Aratere, at her current path and speed, would shortly run aground in Whekenui Bay, Arapawa Island if they took no action.*

*To prevent Aratere grounding, the Master overrode the automatic steering system, manually putting the rudders full to port (left). At this point, Aratere had travelled a distance of about 480 metres from the position where it should have automatically altered course. Aratere was still at full speed.*

*The MSA investigation found Aratere narrowly missed grounding on rock situated to the south of Whekenui Bay by 80 to 90 metres.*

The following chart shows the extent of the ferry's deviation (named Actual Track) from the programmed track.



## Findings of the MSA investigation

*The investigation pointed to serious failings by the Master and Chief Officer to manage the situation, and poor bridge management and navigation.*

*“The bridge team failed to pay attention to other navigational aids available and they over relied on automation for the ferry’s navigation. They believed, erroneously in this case, that the Integrated Bridge System would intervene in time to avoid having to override it manually,” he said.*

*Note: The Integrated Bridge System is a combination of systems such as radar, automatic steering, navigational, course and speed inputs.*

## Key findings

*The Master and Chief Officer over relied on, and lacked appropriate knowledge of the technical capabilities and limitations of the Integrated Bridge System on Aratere. There was no formal training on the Integrated Bridge System, curriculum or procedures.*

*Proper bridge resource management techniques were not used. There was a significant lack of situational awareness, shown by the insufficient attention by the bridge team at a crucial stage of the vessel’s navigation.*

*Interislander’s procedures manual was lacking detail on navigation principles, roles and responsibilities.*

*There were no formal contingency plans. Internal audit procedures were inadequate and overlooked a number of fundamental basic procedures for safe navigation.*

*There was no helmsman standing by the ship's wheel as required.*

*A MSA external audit in June 2004 failed to detect a number of shortfalls in the practices for the safe navigation and accident/incident reporting onboard **Aratere**.*

*There were six other incidents where **Aratere** had to a significant degree, departed from its programmed course between January and May 2004, one of which was reported to be the third time in a week it had happened (the other two not recorded). None of these incidents were reported to MSA.*

*In addition to the above, between the late 1990s and 2004 there had been an unspecified number of incidents where **Aratere** deviated from its passage plan while under control of the automatic track system.*

*No formalised contingency plans had been implemented by Interislander to resolve previous incidents.*

*In late May 2005, after MSA had completed the investigation reports into the near grounding and close quarters incidents, information came to hand that microphones on the bridge of **Aratere**, which are usually switched off, were in fact switched on at the time of both incidents. These microphones are part of a continuous automatic voyage data recorder, similar to a black box found on the cockpit of aircrafts.*

*These recordings reveal a number of other people, including children, were on the bridge at the time of the near grounding in Tory Channel. Interislander had not told MSA investigators that other people were on the bridge.*

*Additional information from the voice recordings confirmed the bridge team may have been distracted at the time of the first incident, which affected their situational awareness.*

### **Outcome of the investigation**

*On 30 September 2004, the day following this incident, MSA imposed a condition requiring **Aratere** to be manually steered through the Marlborough Sounds including Tory Channel, and within Wellington Harbour, rather than use the automatic system. This was to avoid a repeat of the automatic system failing in these areas where there is little sea room. This condition still stands.*

*Following initial findings into this incident, MSA required an audit of navigational practices on board the **Aratere** and other Interislander vessels be carried out. This led to a series of findings and improvements being carried out.*

*A culmination of findings from this incident, and other incidents involving technical failures on the **Aratere**, led to a technical risk assessment being carried out early this year, and a review of emergency procedures and contingency plans. The great majority of these improvements have been carried out, while others are programmed for when **Aratere** goes into drydock in August 2005. An additional engineer is also now required on board **Aratere** during every sailing.*

*On 25 February 2005, following the drafting of findings from this incident, MSA gave a series of actions to the management of the Interislander to carry out. The Interislander has begun work on these, and has two months to respond that it has carried them out. The actions for the Interislander include that it must:*

- Ensure all masters and watch-keeping officers receive training on the vessel's Integrated Bridge System I1.*
- Ensure the Master and Chief Officer involved in this incident are re-trained in the techniques of bridge resource management (Interislander has extended this voluntarily for all deck officers).*
- Introduce a system for reviewing performance of masters and navigational officers.*
- Review its safety manual – particularly regarding principles in watch keeping and passage planning*
- Review internal audit procedures*
- Fully reinstall the ferry's Integrated Bridge System, back to the manufacturer's specifications*
- Undertake a full risk assessment of the Integrated Bridge System*
- Revise current bridge resource manning*
- Introduce a procedure to ensure that visitors to the bridge do not interfere with navigational practices.*

*The cause of the automatic tracking system failure is still under review by the Interislander, the Norwegian manufacturers and MSA. Until resolved, and procedures introduced and implemented, **Aratere** will continue to be manually operated in pilotage waters.*

## Findings and outcome regarding MSA auditing

*Both the investigations into the near grounding and close quarter incident highlighted shortfalls in the management of the MSA International Safety Management audit of **Aratere** carried out in June 2004.*

*In April 2004, MSA took over International Safety Management auditing of 13 large commercial vessels from classification societies. This was because the MSA was not satisfied audits were being undertaken properly, and in particular, because the classification societies were employed by the ship owner and there was a possibility of conflicts of interest.*

*In June 2004, an MSA-approved auditor checked **Aratere** documentation and interviewed a selection of crewmembers, carrying out the same procedures as the classification societies used. Navigational procedures were checked, but were not verified while the vessel was sailing. Poor navigational practices on board **Aratere** were therefore not detected.*

*Had the auditor sailed with the ship, it is likely that he would have identified these failings. As a result, MSA is establishing a new, highly proficient audit team to carry out this and other audit work in future.*

## Measures carried out by Interislander since the incident

*The Interislander has carried out many measures already, including:*

*A complete review of their safety management system.*

*An external electrical engineer has been contracted to audit the integrated bridge system on **Aratere** and compare this with the vessel's operating with the same system in Australian waters.*

*Interislander is currently implementing bridge management procedures/techniques onboard their vessels, with external assistance.*

*A management review and additional staff have been employed to strengthen management since October 2004.*

*A full review has been undertaken and implemented for reporting of accidents, incidents and mishaps to MSA.*

## **Aratere/Kent** close-quarters incident - what happened

*Shortly after 6am on the morning of 1 October 2004, **Kent** and **Aratere** were both entering Wellington Harbour.*

***Kent** had passed Barrett Reef Buoy at the entrance to the Harbour and **Aratere** was following **Kent** into the Harbour at a speed that was five knots faster than **Kent**. On mutual agreement, **Aratere** overtook **Kent** on her right side at a distance of 260 metres.*

*When the stern (back) of **Aratere** was just forward of **Kent**'s bow (front), **Aratere** began turning to port (left) before she was finally past and clear. This was in breach of maritime rules. Furthermore, the Master of **Aratere** did not forewarn **Kent** of this manoeuvre, either by VHF and/or by whistle.*

*As a result, the Master of **Kent** was unable to challenge the decision by **Aratere**. He sounded six blasts of the whistle, and continued travelling straight ahead.*

*The MSA investigation found that the **Aratere** crossed in front of **Kent** at a distance of about 130 metres.*

*In May, MSA was informed the microphone on the bridge of **Aratere** was switched on at the time of this incident. The voice recordings confirmed the relative positions of the two vessels at the time the **Aratere** altered course.*

### **Key findings from the close-quarters incident**

*Maritime regulations require an overtaking vessel to keep clear of the vessel it is overtaking until it is finally past and clear, to avoid a collision.*

*MSA found that, mathematically, given that **Aratere** was travelling at a faster speed, a collision would not have happened. However, it was found the vessels did come too close to one another.*

*The MSA found the decision by the Master of the **Aratere** to alter course across the bow of **Kent** was inappropriate. The Master of **Aratere** did not visually check the situation properly and instead assumed he was past and clear of **Kent**, and that **Kent** would alter course at the same time he did. He did not discuss his manoeuvre with the bridge team, and he did not advise **Kent** he was about to alter course. There was also a lack of a helmsman on the bridge of **Kent** at the time of this incident, as required under navigation bylaws.*

### **Outcome of the close quarters investigation**

*MSA censured the Master of the **Aratere** for failing to keep clear of **Kent** until **Aratere** was finally past and clear.*

*In addition to other actions contained in the **Aratere** near grounding, the Interislander engaged an international expert on bridge resource management techniques to audit techniques and develop a training program and provide ongoing advice to management in effective bridge management techniques. The Interislander has since done so.*

*Integrated bridge management requirements are also to be reviewed on the **Aratere**, and a system put in place to ensure manuals are adequate and peer-reviewed.*

*The MSA investigation report also recommended that the Wellington Harbourmaster instructed the Beacon Hill signal station to monitor vessel*



*compliance with travelling the recommended tracks, and that it reported any significant non-compliance to the Wellington Harbourmaster.”*

The full detailed reports can be viewed on the MSA website:

<http://www.msa.govt.nz/Accidents/gettingreports.htm>

“Reports Available on Line” section, report numbers O4 3559 (32 pages) and O4 3567 (67 pages).

**Although the *Aratere* near-grounding incident took place in Tory Channel, both reports are of relevance to Wellington, as the causes could easily have created a similar incident in Wellington Harbour or approaches.**

On 9 June 2005 the Strait Shipping ferry **Santa Regina** had a near-grounding whilst sailing outwards through Tory Channel entrance bound from Picton to Wellington. It was reported to MSA on 14 June, when the master was suspended pending an investigation by MSA. The news became public on 17 June, and added to high media interest in ferries created by the release of the two previous *Aratere* incidents.

Rian van Schalkwyk  
Manager, Emergency Management

## Emergency Management Department Report – July 2005

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### 1. Civil Defence Emergency Management Group

#### 1.1 CDEM Group Plan

The Wellington Region CDEM Group Plan is causing some ripples around the world! Emergency Services in Holland have seen our CDEM Group Plan on the web causing them to approach us to be included in a proposed research programme, called Metropole.

The subject of the research is the self-reliance of civilians in crisis and disaster situations. Sixteen advisors from the four big cities in Holland (Amsterdam, Rotterdam, The Hague and Utrecht) have been selected for this programme. Members of the Group will be in Wellington from 18 July to 16 August, talking to local, regional and central government agencies with roles and responsibilities in emergency management.

#### 1.2 CDEM Group Work programme

Preparation work has begun on some of the work programmes set out in the CDEM Group Plan for 2005/06. These include preliminary work on the CDEM Group Welfare Management Plan, the CDEM Group Public Information and Media Management Plan and the Review of Standard Operating Procedures. Progress on the work will be reported to future Committee meetings.

#### 1.3 CDEM Group EOC Communications – satellite system

We are meeting on a weekly basis with Telecom (and their equipment provider) regarding the implementation of the new *iP-Star 400* satellite system. Information obtained from these discussions prompted us to be a bit more cautious before we take the final step to purchase the system. After negotiating with two other providers of satellite systems we believe that there are more cost-effective solutions available than the *iP-STAR* system. A final decision will be made in the next two to three months.

## **2. Marketing and Communications**

### **2.1 Emergency Preparedness**

Following advice from the Council's IT Department, it was decided to re-locate the CDEM Group website to another platform outside Wellington. Clone New Zealand (Auckland) is in charge of the change-over process and the new web site will go live on 26 or 27 July 2005.

The new website will have many new features such as a slower, but more comprehensive, 'peace time' part which will be very user-friendly, with lots of interactive features, especially for kids. This part of the website will provide all the preparedness information that may be required as well as emergency planning information for households, businesses, etc.

The other part of the website will be faster and will be used during emergencies ('war time'). Relevant real time information will be posted on this part of the site. This will include information such as:

- a description of the emergency event
- situation reports
- what people need to do
- where to go for help and information about search and rescue, treatment and movement of the injured, health, welfare and sanitation and;
- lifeline utility restoration

Local councils, emergency services, the media and the public will be able to obtain information from this site during an emergency.

## **3. Environment**

### **3.1 Earthquake Reports:**

Since preparing the last report for the Environment Committee meeting, 30 earthquakes bigger than 3 on the Richter Scale were reported by GNS. Three earthquakes were felt in the Wellington Region. Their details are:

June 20 2005 **Magnitude:** 5.6 **Depth:** 270 km *100 km north of White Island*  
May 24 2005 **Magnitude:** 3.5 **Depth:** 25 km *20 km east of Eketahuna*  
May 23 2005 **Magnitude:** 4.2 **Depth:** 30 km *40 km south-west of Wellington*

### **3.2 Special Weather Bulletins**

Two Special Weather Bulletins (both for strong wind) were received since the last Committee meeting. The relevant agencies were notified and no problems were experienced.

### **3.3 Communications**

Weekly tests of the radio communications network are being carried out.

On 29<sup>th</sup> May, two of our repeaters at Mount Climie were struck by lightning. As a result, the power was cut and the battery back-up failed. One antenna was also destroyed. These problems were rectified on 2 June and the system is again functioning.

**Richard Waddy**  
**Designation Divisional Accountant**  
**Financial Position: 31 May 2005**

**1. Operating Results**

We are pleased to report the operating results for the 11 month period ended 31 May 2005.

| <b><u>Environment Division</u></b>             |  |  |  |   |
|--|--|--|--|---|
| <b><u>Summary Income Statement</u></b>         |  |  |  |   |
| <b><u>For the Period Ended 31 May 2005</u></b> |  |  |  |   |
|  | <b><u>Actual</u></b><br><b><u>\$000s</u></b> | <b><u>Year to Date</u></b><br><b><u>Budget</u></b><br><b><u>\$000s</u></b> | <b><u>Variance</u></b><br><b><u>\$000s</u></b> | <b><u>Full Year</u></b><br><b><u>Budget</u></b><br><b><u>\$000s</u></b> |
| Rates  | 7,516  | 7,516  | --   | 8,199   |
| Other Revenue                                  | 1,864  | 1,920  | 56 U   | 2,113   |
| <b>Total Revenue</b>                           | <b>9,380</b>                                 | <b>9,436</b>   | <b>56 U</b>                                    | <b>10,312</b>   |
| <b>Less:</b>                                   |  |  |  |   |
| Direct Expenditure                             | 7,766  | 8,185  | 419 F  | 9,017   |
| Indirect Expenditure                           | 1,163  | 1,236  | 73 F   | 1,354   |
| <b>Total Operating Expenditure</b>             | <b>8,929</b>                                 | <b>9,421</b>   | <b>492 F</b>                                   | <b>10,371</b>   |
| <b>Operating Surplus (Deficit)</b>             | <b>451</b>                                   | <b>15</b>  | <b>436 F</b>                                   | <b>(59)</b>   |

**2. Surplus**

We report that the Division's finances are in a satisfactory position. For the period an operating surplus of \$451,000 was recorded, which is significantly above our budget of \$15,000.

The result translates to a net favourable variance of \$436,000, comprising reduced revenue of \$56,000 and offset, to an extent, by lower than expected expenditure of \$492,000.

### 3. Revenue

Total Revenue at \$9,380,000 is some \$56,000 short of our budget target of \$9,436,000.

The shortfall has been caused by a lower number of notified consents processed in the first half of the year than budgeted and a one-off feature – the remit of costs for a notified consent. In addition, changes to the internal arrangements for the after-hours answering service have resulted in a loss of revenue. Previously Beacon Hill staff provided the service.

However, we received \$87,000 from the Department of Conservation towards our biodiversity initiatives for landowner assistance, and this has helped offset some of that shortfall. This contribution was not specifically included in our budget.

### 4. Total Expenditure

The Division's total expenditure at \$8,929,000 is some \$492,000 less than our budget.

The main reasons for this variance are:

- **Materials, Supplies and Services costs** were less than budget by \$175,000. There are significant costs in the pipeline. The Kaiwharawhara Stream project spend has been funded by other agencies with costs yet to be passed onto us.

In addition, the reduced number of notified consents and introduction of "limited" notified consents has meant that our call for commissioners to hear applications is less than we expected.

- **Consultant costs** were less than budget by \$198,000.

The take-up of the funding for the iwi projects is lower (\$113,000) than anticipated in our budgets. Our forecasts show an underspent by about this amount for the full year.

In addition, some of the QE11 National Trust work is behind (\$89,000). Although funds have been allocated, farmer reimbursement claims (via the QE11 National Trust) will be less than we anticipated and underspent this year. As a consequence we have made provision to carry some of these funds (\$122,000) over into the next year.

Some projects, although slightly delayed, will be completed by year end. These include a risk assessment of Wellington Harbour, sediment coring programme in Pauatahanui Inlet, and the contaminated site investigation at the former Masterton gas works. The budget will be taken up by year end.

- **Internal charges** were under budget by \$76,000. Most of the underspend arises because of the changes to the after-hours answering service previously provided by Beacon Hill staff.

## **5. Capital Expenditure**

At the close of the period our capital expenditure programme has been underspent by some \$36,000.

The construction of the new air quality stations, a mobile station for traffic emission monitoring and a permanent station based at Upper Hutt, has been completed. With the replacement of the Voice logger (\$15,000) and upgrade to the Pencarrow light navigation aid (\$10,000) deferred, the expected spend on capital projects has been reduced.