

1. Executive Summary for Te Upoko Taiao Natural Resource Management Committee: Environment Management

1.1 Environmental Policy

1.1.1 Overview

- Continuation of the development of the second generation regional plan, including stakeholder workshops
- The Environment Court signed off all outstanding consent orders on the proposed Regional Policy Statement
- Work underway to make the RPS ready for sign off by Council and operative in early 2013

1.1.2 Key results

- All signed consent orders outlining resolutions on all appeal points on the Regional Policy Statement have now been received from the Environment Court
- These signed consent orders cover tangata whenua, landscape, indigenous ecosystems, natural hazards, energy and infrastructure RPS provisions
- The Greater Wellington Regional Council's programme for implementation of the National Policy Statement for Freshwater Management was adopted by the Council at its 12 December 2012 meeting and publicly notified on 23 December
- Te Upoko Taiao – Natural Resource Management Committee met on 30 October and 4 December
- Discussed at the October Te Upoko Taiao workshop were the activities in the beds of rivers and lakes, natural hazard management, coastal management, and a draft Terms of Reference for whitua committees
- At the December meeting the Quarterly Report from the Environmental Management Group for the period ending 30 September was presented. A workshop was also held where the committee tangata whenua resource management, discharges to land, soil provisions, and the National Policy Statement for Freshwater Management
- Draft Terms of Reference (ToR) for whitua committees were taken to the 7 November 2012 Council workshop

1.1.3 Looking ahead

- Te Upoko Taiao will move into the draft provision review phase in 2013. The committee will workshop and approve the draft provisions for the second generation regional plan for release to the public

- Editing and review work is underway to make the RPS operative – copy for signoff by Council to be ready for the 14 February Council meeting. The aim is to publish an operative RPS in March 2013
- Coordinating a full council submission on the Kāpiti Coast District Council (KCDC) proposed district plan, notified late December. Submissions due 1 March
- Further development of the whitua framework

1.1.4 Departmental activity

Implementation programme for the NPS for Freshwater Management

The Council's programme for implementation of the National Policy Statement for Freshwater Management was adopted at the 12 December 2012 meeting and publicly notified on 23 December. The programme includes establishing five whitua committees across the region that will assist with the development of regulatory provisions and non-regulatory methods to give effect to the NPS-FW. The Five whitua are based around the geographic areas of the Wairarapa Valley and Hills, Wairarapa Coast, Wellington Harbour, Porirua Harbour and the Kapiti Coast. Council could potentially establish the first two whitua by mid to late 2013. With the remaining three whitua being established in the subsequent years.

Proposed Regional Policy Statement

All consent orders in the resolution of appeals against the proposed Regional Policy Statement have now been signed by the Environment Court. Officers are working to make the proposed Regional Policy Statement operative. Editing and cross checking are in progress and it is expected that a copy for signoff by Council will be ready for the 14 February Council meeting. The aim is to publish an operative RPS in March 2013.

Regional Plan review

General

Te Upoko Taiao – Natural Resource Management Committee met on 30 October and 4 December. The meetings/workshops were held in the Council Chamber, Regional Council Centre, Wellington.

30 October Te Upoko Taiao workshop

At a workshop held on 30 October the committee discussed ideas for possible provisions for the management of activities in the beds of rivers and lakes. The workshop indicated that clear guidance on management of adverse effects and on what are considered appropriate or inappropriate activities in beds of rivers and lakes is required. Possible rule frameworks to control general beds of rivers and lakes activities were also examined. The overall approach presented by staff was supported.

Also presented at the 30 October workshop were ideas for natural hazards management and the use of an integrated regional coastal hazards management

area approach for managing coastal hazards. A political, economic, social, technological and environmental strengths and weaknesses analysis was presented around these ideas. And a discussion as to barriers and opportunities to implementing such a management approach was presented. The committee supported the continuation of developing a regional natural hazards strategy and that the regional plan deal holistically with natural hazards.

An update on coastal management provisions was the third agenda item at the 30 October workshop. The background report and presentation focussed on the key coastal management stakeholder engagement workshops held in June, and what the main points of discussion with stakeholders were. The workshop discussion focussed on the prospect that some activities be non-complying activities when they occur in sites of significant indigenous biodiversity values, sties/areas significant to tangata whenua or sites of historic heritage in the coastal marine area.

Draft Terms of Reference for whitua committees were circulated prior to the 30 October workshop. A short presentation was also given at the workshop. The feedback from the committee was that whitua model should continue to be discussed with key stakeholders, iwi, and the general public and that the Terms of References should be re-visited after these discussions in early 2013.

4 December Te Upoko Taiao workshop

At a workshop held on 4 December, Te Upoko Taiao discussed tangata whenua resource management and the ways that the new regional plan could provide for protection of tangata whenua values at regional, catchment and site scales. The committee generally supported the overall approach staff presented.

A paper outlining possible approaches for managing point source discharges to land highlighted the utility of current plan provisions and suggested no major changes to these.

The committee was provided a background report on the current regional plan soil provisions – covering soil erosion, soil quality, vegetation disturbance, contaminated land and hazardous substances. The overall suggested policy approach for soils in the new regional plan was similar to the existing regional plan soils provisions. There was discussion at the workshop around setbacks and the committee was satisfied to wait for national direction on this.

The National Policy Statement for Freshwater Management (NPS-FW) was gazetted on 12 May 2011. Staff discussed with the committee how the Greater Wellington Regional Council plans to implement the NPS-FW requirements.

Consultation and Engagement Plan

The engagement strategy for 2012 involved two different sets of activities – stakeholder conferencing and public seminars. The stakeholder conferencing enabled topic leaders in environmental policy to meet with individuals from key organisations, to discuss and develop the approaches to regional plan policies and methods, which were then incorporated into workshop discussions.

Meetings were held with Territorial Authorities and Iwi Authority leaders across the region, providing an update on the progress of the plan review.

Public seminars were held in November to provide an update to the public on the regional plan process and inform people of possible approaches across key issues under the plan review. Six meetings were held from 26 November until 6 December. The public were invited to participate in a web-based survey covering the ideas presented at the meetings. The website was available between December 2012 and January 2013. Attendance was generally good ranging between 4 and 40 people. The public meetings were well supported by elected and non-elected members of Te Upoko Taiao.

Also in November meetings were held with boatshed owners in Evans Bay and Porirua Harbour. At these meetings the potential implications of scheduling boatsheds as holding historic values were discussed. There was general support for scheduling the boatsheds, provided the rules allowed for reasonable changes without requiring resource consent.

Sites of significance to tangata whenua

We have contracts with five of the region's iwi to identify sites of significance to tangata whenua for inclusion in the new regional plan and are working with the iwi kaitiaki to provide this information. We also met with most of the region's iwi authorities to discuss the new regional plan.

Regional Council input into Statutory Planning

District Plan Changes

Kapiti Coast District Council

Kapiti Coast District Council has released its proposed District Plan for public submissions. There are 12 proposed chapters which are being assessed by various officers within the Greater Wellington Regional Council against regional strategies and policy documents including the proposed Regional Policy Statement 2010. The submission is due on March 1 2013.

Upper Hutt City Council

- Proposed plan change 15- Natural hazards

The plan change provides new provisions for managing development in high hazard areas and reduces risk to other development. In response to the summary of submissions, GWRC provided some further submissions on specific properties in support of the information we have provided for hazard mapping.

Porirua City Council

- Proposed plan change 15 – Historic Heritage

Greater Wellington Regional Council went to the hearing for this plan change to congratulate the Porirua City Council on how well it had engaged with us and the wider community in drafting the proposed plan change.

Wellington City Council

- Proposed plan change 77 – Curtis Street Business Area

This plan change proposes the creation of a specific Business Zone from two areas on Curtis Street, currently zoned outer residential and open space area. The area was subject to a plan change in 2008 (DPC 73) which was subsequently subject to a successful judicial review by the Creswick Valley Residents Association (CVRA). This proposal seeks to address the concerns of CVRA through a new plan change and the need for a submission is being assessed (due in March 2013).

Notified Resource Consents*Wellington City Council*

- Bing Lucas Drive subdivision application

The applicants of the Bing Lucas Drive subdivision application, lodged with WCC in May 2012, supplied a revised application November 2012. At hearing in June, GWRC sought additional protection of regenerating bush within the subdivision. The revised application included proposals to protect and covenant this bush. Consequently, GWRC withdrew further right to be heard on the application. WCC commissioners accepted the additional proposals and consent was granted with conditions in December 2012.

Other documents*New Zealand Historic Places Trust*

- Proposed registration of Wellington Harbour Board Historic Area

The Greater Wellington Regional Council continues to meet with a range of stakeholders about the proposed historic area registration, including Port Nicholson Settlement Trust, Centreport, Wellington City Council, Wellington Waterfront and New Zealand Historic Places Trust. A meeting is scheduled for the end of January with all of the parties to discuss the draft regional plan coastal provisions for the Lambton Harbour area.

It is hoped that the New Zealand Historic Places Trust will amend the recommendations of the registration proposal to align with the consensus views about what is appropriate for the Lambton Harbour area.

Natural hazards**Research Projects***Regional surge and coastal vulnerability to hazards project*

Work on this was completed in December, following further input from GWRC staff and NIWA scientists. The report is now in its final draft and currently being reviewed by GWRC staff before its final signoff.

Lower Hutt coastal flooding project

This work followed on from the findings of the regional study into coastal hazards and vulnerability. The modelling took into account the latest upgrades to the Lower Hutt stopbank system to model sea level rise and storm surge

flooding impacts. The work was completed in December and incorporated into the regional storm surge and coastal flooding project.

Civil Defence and Emergency Management

Wellington region civil defence and emergency management group plan

The department continues to work with civil defence emergency management. The Wellington regional CDEM group is currently in the process of preparing a regional CDEM group plan. Environmental policy has been involved in the process, attending workshops and reviewing documents and providing regional hazards and planning advice.

Presentations/Publications/Media

Environment Policy Senior Policy Advisor (hazards) continues to be approached to speak to community and council groups on natural hazards; most recently speaking at Tukorehe Marae at two Wananga about coastal hazards and the role of sand dunes and coastal restoration in protecting our coasts.

The Kapiti Coast District Council has been in the process of releasing coastal hazard setback lines for inclusion in the regional plan. This has involved a number of public meetings to discuss natural hazards to which environmental policy staff have attended and assisted the Kapiti Coast District Council.

Environment Policy Senior Policy Advisor (hazards) spoke to a full Kapiti Coast District Council about the regional storm tide modelling project and sea level rise and the implications of this work to the coastal setback lines. This has involved ongoing work with the local Kapiti Coast community.

1.1.5 Financial reports

Policy Income Statement 6 months ending 31 December 2012	YTD			Full Year			Last Year	
	Actual \$000	Budget \$000	Variance \$000	Forecast \$000	Budget \$000	Variance \$000	YTD Actual \$000	FY Actual \$000
Rates & Levies	1,085	1,085	-	2,170	2,170	-	1,073	2,146
Government Grants & Subsidies	-	-	-	-	-	-	-	-
External Revenue	-	-	-	-	-	-	8	8
Investment Revenue	3	-	3	-	-	-	3	6
Internal Revenue	13	13	-	25	25	-	13	33
TOTAL INCOME	1,101	1,098	3	2,195	2,195	-	1,097	2,193
less:								
Personnel Costs	705	642	(63)	1,364	1,284	(80)	594	1,222
Materials,Supplies & Services	18	23	5	46	46	-	37	52
Travel & Transport Costs	16	3	(13)	7	7	-	13	24
Contractor & Consultants	184	105	(79)	487	287	(200)	213	397
Grants and Subsidies Expenditure	-	-	-	-	-	-	-	-
Internal Charges	97	91	(6)	182	182	-	93	199
Total Direct Expenditure	1,020	864	(156)	2,086	1,806	(280)	950	1,894
Financial Costs	-	-	-	-	-	-	-	-
Bad Debts	(3)	-	3	-	-	-	3	3
Corporate & Department Overheads	195	195	-	390	390	-	199	399
Depreciation	3	3	-	6	6	-	3	6
Loss(Gain) on Sale of Assets / Investments	-	-	-	-	-	-	-	-
TOTAL EXPENDITURE	1,215	1,062	(153)	2,482	2,202	(280)	1,155	2,302
OPERATING SURPLUS/(DEFICIT)	(114)	36	(150)	(287)	(7)	(280)	(58)	(109)
Add Back Depreciation	3	3	-	6	6	-	3	6
Other Non Cash	-	-	-	-	-	-	-	-
Net Asset Acquisitions	(11)	-	11	(11)	-	11	-	-
Net External Investment Movements	-	-	-	-	-	-	-	-
NET FUNDING BEFORE DEBT AND RESERV	(122)	39	(16)	(292)	(1)	(269)	(55)	(103)
Debt Additions / (decrease)	-	-	-	-	-	-	-	-
Debt Repaid	-	-	-	-	-	-	-	-
Net Reserves (Increase) / decrease	123	-	123	-	-	-	(3)	(6)
NET FUNDING SURPLUS (DEFICIT)	1	39	(16)	(292)	(1)	(269)	(58)	(109)

Policy Capital Expenditure Statement 6 months ending 31 December 2012	YTD			Full Year			Last Year	
	Actual \$000	Budget \$000	Variance \$000	Forecast \$000	Budget \$000	Variance \$000	YTD Actual \$000	FY Actual \$000
Total Asset Acquisitions	11	-	(11)	11	-	(11)	-	-
Capital Project Expenditure	-	-	-	-	-	-	-	-
Asset Disposal Cash Proceeds	-	-	-	-	-	-	-	-
Net Capital Expenditure	11	-	(11)	11	-	(11)	-	-
Investments Additions	-	-	-	-	-	-	-	-
Net Capital and Investment Expenditure	11	-	(11)	11	-	(11)	-	-

1.1.6 Financial variance analysis

- Policy has a net deficit of \$114k which is \$150k worse than surplus budget of \$36k
- Personnel costs are \$63k over budget of which \$14k is the cost of other environment staff working on Policy projects. These costs will be held in monitoring and regulation and not costed to policy in future
- Contractors are \$79k over a budget of \$105k – contractors budget has been phased more to the end of the financial year
- Materials and Travel are close to budget

Performance Measure	Performance Target		Comment
	Baseline	2012/13	
That the Regional Policy Statement is reviewed and adopted	The Regional Policy Statement was approved by the Council in May 2010 and is subject to a number of appeals	Resolve appeals on the Regional Policy Statement	The final appeal points were resolved by mediation during the September quarter.
That regional plans are reviewed and adopted	Review of regional plans has been underway since 2009	Review of regional plans continues	Work continues on the Regional Plan.

1.1.7 Risk analysis

None identified in this department.

1.2 Environmental Regulation

1.2.1 Overview

- High core statutory workload in notified and national consents. This quarter's major consenting work was dominated by RoNS projects and municipal waste water treatment renewals
- Non notified consent workload stable, and down on the 2011/12 December quarter
- Compliance inspection load comparable to the 2011/12 September quarter, and steady load of prosecutions and other enforcement investigations

1.2.2 Key results for the year

- Roads of National Significance – Significant ongoing workload in MacKays to Peka Peka, Basins and Peka Peka to Otaki national consenting processes
- Significant appeals work in Castle Hill Wind Farm and Carterton municipal waste water
- Municipal waste water – ongoing replacement consenting across the region, for main plant and infrastructure overflows South Wairarapa and Hutt Councils
- Development and roll out of a pilot programme to contract out earthworks resource consent compliance
- Ongoing enforcement actions being heard in the High Court in the Burrells and Jefferies cases
- Commencing roll-out of dairy effluent pond storage calculator

1.2.3 Looking ahead

- Ongoing management of core statutory work with particularly heavy loads in major enforcement investigations, water permit compliance, earthworks consenting and compliance, and RoNS project and Board of Inquiry work
- Review of existing compliance strategies, linked together by an overarching strategic compliance framework
- Charging policy review incorporating possible changes to charging for science work, water permit compliance charging and contracting out of compliance services
- Investigation of ICT capability including the incidents database, and mobility devices (as part of an organisation-wide project)
- Stakeholder engagement including the Earthworks industry (contractors and consultants), and further work with rural sector agencies
- Review of the Environmental Regulation Quality Management System
- Regional Plan review input, incorporating significant input into plan provisions

1.2.4 Departmental activity

Resource consents

Non-notified consents

Non-notified consent processing work has remained stable in the December quarter, and as with the September quarter is dominated by the ongoing processing of replacement consent applications for water takes, dairy sheds, and swing moorings and the remaining boatsheds from 2011; as well as a number of bore permits and other land use consents (culverts, bridges, stream works).

Overall, we remain well down on actual numbers of consents received processed compared to the 2011-12 year to date, although the load of moderate and larger consents (including Board of Inquiry national consenting processes) is greater.

Consents summary

Item	Dec Quarter 2012	Sept Quarter 2012	Dec Quarter 2011
Consents received	128	102	113
Consents issued	86	99	121

Item	2012-13 year to date	2011-12 year to date	2011-12 year
Consents received	130	259	506
Consents issued	185	310	575

Item	Dec Quarter 2012	Sept Quarter 2012
Median processing time frame	15	15

Item	2012-13 year to date	2011-12 year
Median processing time frame	16	14

Notified and limited notified consents

Moderate and increasing work in assessments, and pre-hearings has been completed and/or decisions released on:

- Hutt City Council – waste water treatment plant pipeline maintenance:** This is an application for infrequent temporary discharges of treated wastewater to Wellington Harbour and the Waiwhetu Stream, from maintenance and repair works to the treatment plant's main outfall pipeline (MOP), which was granted on 21 December 2012. There was no formal hearing as all submitters withdrew their wish to be heard, following engagement over draft consent conditions. The final consent conditions include public 'notification' and communication requirements, and monitoring of water quality and shellfish. The whole process reflects a highly collaborative exercise between the applicant and key stakeholders, fostered and managed by the GWRC team.
- Unilever – process air discharges re-consenting:** This is an application to continue to discharge contaminants (mainly particulates) associated with the production of laundry powders and liquid detergent products. In a similar fashion to HCC's application above, this application was granted in November 2012 following engagement with submitters and the applicant. Earlier we commissioned an independent peer review to determine if ongoing effects could continue to be adequately managed, particularly around the impacts of particulate discharges on the surrounding community. Key conditions include limits on the discharge of particulates and odour.
- Kapiti Coast District Council – public water supply project:** This application was lodged in November 2012. KCDC is seeking consents to increase their current take of water from the Waikanae River for public supply. They propose to mitigate the effects on the river by 'recharging' the river with groundwater taken from the Waikanae Bore Field. Following public notification, submissions closed before Christmas with

22 submissions received, the majority opposing the application. We have completed an initial review of the assessment of effects and presented a draft further information request to the applicant to consider over the Christmas break. We will also review the content of the submissions at present and will likely formalise our request further information from the applicant in late January 2013. A hearing date is unknown at this point.

- **Carterton District Council – Carterton water races re-consenting:** These are replacement consent applications to continue to take water to operate the Carterton district water race system. A pre-hearing meeting was held in August with the applicant and a number of submitters. Overall, the meeting was constructive and we have circulated a set of proposed consent conditions for the applicant and submitters to consider. However, not all parties attended and we have now arranged for a further pre-hearing meeting for those absent. It is hoped that all parties will agree to consent conditions, and therefore avoid the need for holding a formal hearing.
- **South Wairarapa District Council – Martinborough Wastewater Treatment Plant re-consenting:** A replacement consent to discharge treated wastewater to the Ruamahanga River from the Martinborough Waste Water Treatment Plant was lodged on 10 April 2012 (and subsequently returned as incomplete under s88 of the RMA). The applicant subsequently re-submitted a complete application in early December 2012. The proposal seeks a long term (35 years) with a discharge to water regime in the short term (5 years), moving toward a partial land based discharge of treated wastewater during periods of low flow (summer discharge) in the medium to long term. Furthermore, in the short to medium term a series of staged improvements would be undertaken to improve the efficiency and effectiveness of the current system. We are currently assessing the information provided to ascertain whether it is sufficient for notification purposes.
- **South Wairarapa District Council – Featherston Wastewater Treatment Plant re-consenting:** A replacement consent to discharge treated sewage to Donalds Creek from Featherston WWTP was lodged in May 2012. The application is currently on hold seeking further information in particular around the effects of the proposal on Donalds Creek and Lake Wairarapa and how the proposed effects may be better mitigated. An initial response to the s92 request was received prior to Christmas. At this stage notification of the application is anticipated within the next month.
- **Juken NZ Ltd – process air discharges re-consenting.** Consent is sought to discharge various contaminants to air associated with the operation of a wood processing plant, in Norfolk Road, Carterton. A constructive second pre-hearing meeting was held on 15 November 2012. A revised set of draft conditions have been circulated to the parties for their consideration.
- **GWRC (Flood Protection) – Whakawiriwiri Stream:** The Flood Protection department have applied for resource consent to undertake various works in the bed of the Whakawiriwiri stream in an attempt to

mitigate adverse effects from the diversion of the Tawaha catchment and to formalise the historic diversion of water from the Tawaha catchment into the Whakawiriwiri stream. Five submissions have been received by close of submissions in late November 2012 – four in opposition and one in support. The application has been put on hold pending an independent review of the effects of diverting water from the Tawaha Catchment (and associated mitigation), in response to technical issues raised in submissions.

- **Matahiwi Farms Ltd – construction of a dam:** An application to construct an 8m high earth dam in order to dam two unnamed tributaries of the Wakamoekua Creek, which is a tributary of the Waipoua river to the north west of Masterton. The application has been notified with 11 submissions have been received (nine in opposition and two neutral) by the close of submissions in late November 2012. We are aiming to hold a pre-hearing meeting shortly in an attempt to resolve or at the very least narrow down the issues of contention.
- **NCI Packaging – Discharge to air from a can making and painting operation:** This is an application for discharge to air following an investigation of odours generated from NCI in Upper Hutt, affecting the neighbouring residential area. Since the application has been lodged, NCI has been issued with several infringement notices for significant odours from the plant. NCI has completed further monitoring and changes to the discharge stacks, and we are awaiting the final report. We continue to keep the submitters up to date with the process and expect to have a second pre hearing meeting early in 2013.
- **Burrell Demolition Limited – re-consenting and demolition fill extension at C n D Landfill:** Lodged in 2008, this is an application to extend an existing demolition fill at Carey’s Gulley (adjacent WCC Southern Landfill). The application process has been delayed by limited information around site management and stream mitigation matters, as well as by ongoing enforcement action (see ‘Enforcement’ section below). This application seeks consents to pipe streams and fill and reclaim gulley systems with demolition fill, soil and rock. The applicant also seeks consent to ‘sweep’ back over the top of the existing fill material, enabling an estimated new filling capacity of 3 million cubic metres. We are currently assessing the ecological information and will seek public submissions in first half of 2013 in a combined process with the Wellington City Council.
- **Winstone (Winstones) Aggregates Dry Creek Replacement Cleanfill:** Winstones has applied to WRC, PCC and HCC to operate and maintain a cleanfill on rural land near Judgeford, Porirua. The cleanfill will require a new access to be constructed west of SH58 and will have a lifespan of 55-60 years. The clean fill operation will be staged and as the cleanfilling occurs, the existing main tributary that crosses below the main area of the cleanfill is proposed to be progressively piped – in total approximately 835 metres. The application will be jointly notified with PCC and HCC on 26 January 2013.

Board of Inquiry – national consenting projects

- **New Zealand Transport Agency – MacKays to Peka Peka RoNS (M2PP):** The eight-week M2PP Board of Inquiry hearing will conclude on 22 January, with final planning evidence delivered on 18 January and GWRC closing submissions on the final day. Ten statements of evidence supported GWRC's formal submission, and we presented evidence to the Board on transport strategy and planning, biodiversity impacts, sediment discharges, effects on stream and wetland ecology and hydrology, regional planning and conditions setting. Our extended team also took part in numerous rounds of pre-hearing conferencing set up to enable relevant parties to work through the full range of key matters. Many of our matters have been resolved through conferencing, and outstanding matters in our closing submissions deal with consent conditions relating to sediment discharges, stream-loss mitigation, and floodway maintenance and peer review. GWRC's work in the submission and hearing process has been substantially greater for us than our submission/hearing work for the Transmission Gully Board of Inquiry.
- **NZTA – Basin Reserve RoNS:** As part of our statutory responsibilities, we have been engaged by the EPA to undertake completeness checks on the draft and final application documents. To date we have completed draft statutory assessment report, to confirm consenting requirements. The EPA expects that the remainder of the draft application documents will be ready for review in late January 2013, and lodged in April 2013.
- **NZTA – Peka Peka to Otaki RoNS:** In addition to the Basin Reserve RoNS project, we will be undertaking completeness checks on the draft and final application documents (for the EPA). To date the pre-lodgement completeness check report was submitted to the EPA on 21 December. The EPA anticipate lodgement for the final completeness check assessment in February 2013.

Major pre-application discussions continue for:

- **Aotea Block** – In early 2013 Carrus intends to lodge a global consent for the remainder of the development in relation to land use consents and discharge permits for bulk earthworks. This application is likely to be notified.

Resource consent appeals and objections, and declarations

Appeals work has increased in the last quarter, with another new appeal, a declaration application and an objection.

- **Genesis Energy – Castle Hill Wind Farm:** This is an appeal of the consent decision by both the applicant and some of the submitters opposed to the application, primarily focussing on district council related matters (visual amenity, noise and traffic), along with some minor regional issues (around wording of conditions). The first court assisted mediation session was held on 8 and 9 November 2012 and concentrated mainly on district council matters. We have subsequently met with Genesis in an attempt to

resolve the outstanding regional consenting matters. The meeting was constructive and we are currently awaiting revised draft conditions from Genesis for further comment/discussion.

- **CDC – Carterton Wastewater Treatment Plant re-consenting:** The appeal from CDC concentrates on the consent term; the prohibiting of discharges to the Mangatarere during low flow conditions; and the monitoring regime. A timetable for the appeal is yet to be set by the Court.
- **Brian Warburton:** A Porirua resident has sought a declaration from the Environment Court in regard to the status of the land and water that flows from a stormwater outlet across Titahi Beach which he submits is River as defined in the Resource Management Act 1991. The Judge directed mediation which we supported, but was rejected by the Porirua City Council and Mr Warburton. We have lead informal mediation between the parties, which was also unsuccessful. A joint Summary of Facts was submitted to the Court on 23 November 2012. Now awaiting instructions from the Court and a date for the hearing.

Consented compliance monitoring

- **Mill Creek Windfarm – Makara, Wellington:** The Ohariu Valley Road widening works are well underway, in what has been an easy (dry) earthworks season so far. This work will be completed around February 2013, when the works will move into the site proper to start the approximate 800,000m³ of earthworks. We have also been approving ecological and sediment monitoring plans for the affected stream.
- **Exide Battery Recycling Plant Decommissioning:** The decommissioning of the plant continues, with removal of internal pipe-work and smaller plant. All lead in air levels monitored at the plant boundary remain well within the consented limits.

Environmental incidents

206 incidents were notified and responded to in the quarter, down from 242 in the previous quarter. A summary breakdown of incidents is reported 6-weekly through the Councillor's Bulletin.

Enforcement

Abatement and infringement notices

Item	December Quarter 2012	Sept Quarter 2012	Dec Quarter 2011
Abatement notices	13	24	2
Infringement notices	8	8	8

Prosecutions, enforcement orders and abatement notice appeals

Significant prosecutions work in the last quarter includes:

- **Alan Jefferies:** The prosecution of Mr Jefferies and related abatement notice appeals regarding the diversion of Mangaroa River, associated river works and deposition of fill material continues. As noted in the March quarter report, the Environment Court decision confirming the abatement notices was appealed to the High Court by Mr Jefferies. The matter was heard in the High Court on 3 October 2012 by Justice Williams who reserved his decision. The concurrent prosecution of Mr Jefferies on five related charges will be progressed (via trial by jury) once the appeal is resolved.
- **Alex Burrell and Burrell Demolition Ltd:** Following the dismissal of the appeal by the High Court in June 2012. Mr Burrell then successfully gained leave of the High Court to appeal to the Court of Appeal (and seek a stay of the enforcement order). Justice Williams gave leave for four points to be appealed to the Court of Appeal. The Judge also granted a stay of the Enforcement Order with conditions that the appellant must meet including providing a management plan for the filling operation. The application to the Court of Appeal was made on 24 October 2012. We are now awaiting instructions from the Court and date for the hearing. Earlier, the prosecution related to a breach of resource consent in 2008 at C&D Landfill in Happy Valley Road.

Take Charge programme

Set-up work for the Naenae Industrial area assessment project continues. We have been working with both the Environmental Science and Flood Protection teams to identify risks and likely stormwater and stream contamination issues.

Dry weather and wet weather samples have been taken from the stormwater outlets and the Waiwhetu Stream to identify the type of contaminants present. The Take Charge Coordinator has also liaised with the HCC Trade Waste Officers to improve our understanding of the area and stormwater related matters.

Work has also centred around identifying particular contaminants in the stormwater that can be attributed to certain industry types from the Naenae Industrial area. Businesses, identified as having the potential to discharge contaminants to the Waiwhetu, will be approached to participate in the Take Charge Programme.

We have also developed new resources in preparation for the audits commencing, to inform businesses what the aims of the programme are and encourage their participation as well as streamlined reporting templates.

Projects

Roll out of dairy effluent storage calculator for Wellington Region

In November we advised all dairy farmers in the region that the dairy effluent storage calculator was now available for use. A farm dairy effluent storage assessment (which includes using the calculator) is now required to be completed with any dairy effluent resource consent application. For existing resource consents, we are focussing our compliance efforts on farmers who collect effluent year round and farms within the Lake Wairarapa and Mangatarere catchments.

Contracting out compliance services

The pilot programme for contracting out part of our earthworks and forestry compliance programme to Southern Skies Environmental Ltd (Auckland based) got off to a good start in November 2012.

The programme was preceded by Southern Skies leading an industry training workshop in mid October on erosion and sediment control measures. The workshop was well received by industry attendees as it presented a level playing field for how Southern Skies assess earthwork sites and also reinforced GWRC's site compliance scoring system. Southern Skies have, throughout November and December, successfully managed to visit most of the sites selected for the pilot. Their presence has been well received and we are confident that this should continue for the remainder of 2012/13 earthworks season.

1.2.5 Financial reports

Regulation Income Statement 6 months ending 31 December 2012	YTD			Full Year			Last Year	
	Actual \$000	Budget \$000	Variance \$000	Forecast \$000	Budget \$000	Variance \$000	YTD Actual \$000	FY Actual \$000
Rates & Levies	1,231	1,231	-	2,462	2,462	-	1,200	2,400
Government Grants & Subsidies	23	-	23	-	-	-	23	-
External Revenue	807	725	82	1,550	1,450	100	1,172	2,232
Investment Revenue	-	-	-	-	-	-	-	-
Internal Revenue	47	61	(14)	125	125	-	110	203
TOTAL INCOME	2,108	2,017	91	4,137	4,037	100	2,505	4,835
less:								
Personnel Costs	1,251	1,198	(53)	2,396	2,396	-	1,180	2,318
Materials,Supplies & Services	47	54	7	108	108	-	62	84
Travel & Transport Costs	26	22	(4)	45	45	-	17	34
Contractor & Consultants	291	108	(183)	491	291	(200)	513	1,153
Grants and Subsidies Expenditure	-	-	-	-	-	-	-	-
Internal Charges	262	267	5	553	553	-	265	533
Total Direct Expenditure	1,877	1,649	(228)	3,593	3,393	(200)	2,037	4,122
Financial Costs	-	-	-	-	-	-	-	-
Bad Debts	(2)	-	2	-	-	-	16	(54)
Corporate & Department Overheads	307	307	-	614	614	-	386	771
Depreciation	17	15	(2)	31	31	-	17	35
Loss(Gain) on Sale of Assets / Investments	-	-	-	-	-	-	-	-
TOTAL EXPENDITURE	2,199	1,971	(228)	4,238	4,038	(200)	2,456	4,874
OPERATING SURPLUS/(DEFICIT)	(91)	46	(137)	(101)	(1)	(100)	49	(39)
Add Back Depreciation	17	15	2	31	31	-	17	35
Other Non Cash	-	(2)	2	(2)	(2)	-	-	-
Net Asset Acquisitions	-	(30)	(30)	(30)	(30)	-	-	-
Net External Investment Movements	-	-	-	-	-	-	-	-
NET FUNDING BEFORE DEBT & RESERVE MOVEMENT	(74)	29	(163)	(102)	(2)	(100)	66	(4)
Debt Additions / (decrease)	-	-	-	-	-	-	-	-
Debt Repaid	-	-	-	-	-	-	-	-
Net Reserves (Increase) / decrease	-	-	-	-	-	-	-	-
NET FUNDING SURPLUS (DEFICIT)	(74)	29	(163)	(102)	(2)	(100)	66	(4)

Regulation Capital Expenditure Statement 6 months ending 31 December 2012	YTD			Full Year			Last Year	
	Actual \$000	Budget \$000	Variance \$000	Forecast \$000	Budget \$000	Variance \$000	YTD Actual \$000	FY Actual \$000
Total Asset Acquisitions	-	40	40	40	40	-	-	-
Capital Project Expenditure	-	-	-	-	-	-	-	-
Asset Disposal Cash Proceeds	-	(10)	(10)	(10)	(10)	-	-	-
Net Capital Expenditure	-	30	30	30	30	-	-	-
Investments Additions	-	-	-	-	-	-	-	-
Net Capital and Investment Expenditure	-	30	30	30	30	-	-	-

1.2.6 Financial variance analysis

- Regulation has a net deficit of \$91k which is \$137k worse than a surplus budget of \$46k
- External income of \$807k is \$82k more than budget this is mainly due to Restitution Fund being brought forward from the 11/12 year – \$122k
- Travel costs and materials are all close to budget

Performance Measure	Performance Target		Comment
	Baseline	2012/13	
Percentage of resource consents ¹ processed within 20 working days ²	98% (2010/11)	100%	100% for the December quarter.
Percentage of monitoring inspections completed for resource consents with individual monitoring programmes.	98% (2010/11)	100%	This information is only available at year end.
Percentage of environmental incidents reported to the 24-hour incident response service investigated in accordance with legal timeframes ³ for enforcement	68% (2010/11)	100%	100% for the December quarter.

1.2.7 Risk analysis

None identified in this department.

1.3 Environmental Science

1.3.1 Overview

- Establishment of the Limit Setting Group in which Environmental Science (ESci) is a key partner and collaborator with Environmental Policy for identifying objectives and where appropriate limits for freshwater
- Development of the annual State of the Environment (SoE) report cards
- Continuing to provide scientific advise for Wairarapa Moana, Mangatarere, Wairarapa Water use Project and Porirua Harbour
- Final recruitment for teams of the new ESci department
- Development of strategic direction for ESci and engagement processes
- Start of the recreational WQ monitoring and the Cyanobacteria monitoring (in at risk rivers)
- Ongoing collection and data management for SoE programmes

1.3.2 Key results for the year

- Year long water quality programme completed in the Pahaoa River catchment
- Selected Land Use Register (SLUR) now available on GIS viewer on the GWRC website

- Sediment quality survey undertaken in Wellington harbour – joint process as finalised by a Memorandum of Understanding (MoU) with the Wellington City Council
- Ongoing monitoring and investigations in the Porirua Harbour catchment, in part to support the actions identified in the Porirua Harbour and Catchment Strategy and Action Plan launched in April
- Completion of a series of SoE technical reports on air, land and fresh and coastal water resources
- Provision and collaboration of science to the Wairarapa Moana “cleanup” project
- Completion of the Kapiti groundwater model

1.3.3 Looking ahead

- Consideration of the National Objectives Framework, LAWF third report and National Monitoring and Reporting information into the strategic direction of the science programmes
- Continued development, and release of reports around minimum flow investigations in a variety of rivers across the region, and including lake Wairarapa
- Wairarapa Moana ‘cleanup’ programme on science information needs and ongoing performance monitoring
- Redefining the Wairarapa Airsheds and consideration to the long term monitoring of the Kapiti Airshed
- Development of a monitoring programme for SoE Biodiversity and specifically terrestrial
- Development of Regional Science, Whaitua, ESci and associated teams strategies

1.3.4 Departmental activity

General

The more significant areas of work for the department during the quarter were:

- Completion of a final report documenting revised Suitability for Recreation Grades for the region’s fresh and coastal recreational waters
- Peer review and adjustments to the Kapiti Coast groundwater model – to re-define groundwater zone boundaries on the Kapiti Coast, taking into account areas of surface and groundwater interaction

- Provision of a range of technical support to Environmental Regulation, Environmental Policy, Biodiversity, Biosecurity, Land Management, Water Supply and Flood Protection departments
- Development of a MoU framework to assist engagement across the departments the science teams work with

A summary of work carried out in all subject areas follows.

Air quality and climate

(i) Wainuiomata air quality

Preliminary results from the first year of a two-year arsenic in air monitoring investigation indicate that air quality in Wainuiomata is failing to meet the national ambient air quality guideline for arsenic. This investigation is a collaborative project between GNS Science, Greater Wellington and Victoria University which is looking at methodologies for measuring arsenic concentrations in the air which are otherwise not typically being used. While this work has shown elevated levels in the Wainuiomata catchment, these results are likely to be typical of other parts of the country where home fires are used for domestic heating in the winter. Essentially, this is a New Zealand wide problem, but this research work is the first to accurately compare arsenic levels with national air quality guidelines. The likely source of arsenic in air is the intermittent and opportunistic burning of waste timber that has been treated with copper-chrome-arsenate (CCA) in home heating fires. A technical report on the Wainuiomata air quality findings is being prepared.

In the meantime, Greater Wellington has been in close contact with the Ministry for the Environment around the study and the preliminary results. We will continue to work with the Ministry and others into the future around how this information is best circulated and how to involve local stakeholders, such as Regina Public Health and Local Councils, to develop a long term strategy to discourage the use of treated timber as a source of fuel for domestic fires.

(ii) Kapiti Coast airshed

The Kapiti Coast airshed is not currently monitored as there are no major sources of emissions. Screening monitoring carried out in winter 2010 indicated the potential for highly localised air pollution from domestic fires in Raumati South. NIWA has been engaged by GWRC to provide advice on the likelihood of other air pollution 'hot-spots' arising based on mobile monitoring results (winter 2012) and analysis of meteorological patterns. This information will be used to determine any future monitoring or investigation requirements needed to meet our NES-AQ obligations to monitor in areas where the PM₁₀ standard is likely to be breached.

Aquatic ecosystems and quality

(i) Rivers and streams

Work began on writing up the results of a year-long programme of monitoring water quality and ecology in the Pahaoa River catchment in the eastern

Wairarapa. Water samples were collected from six sites at two-monthly intervals over 2011/12 and tested for a range of variables, including nutrients, sediment and faecal indicator bacteria. One-off samples of macroinvertebrates and periphyton were also collected at all six sites last summer.

Nutrient loads were estimated for eight sites in the Hutt River catchment using long term Rivers SoE monitoring data. This work is being undertaken to improve our understanding of the main sources of nutrients to the Hutt River, particularly nitrogen. The emphasis on nitrogen follows preliminary findings from PhD research into the factors behind cyanobacteria ‘blooms’, which suggests that in the presence of low concentrations of phosphorus (such as those that occur along the length of the Hutt River), even moderate concentrations of nitrogen can contribute to toxic algae blooms. GWRC, along with several other regional councils, are funding the PhD research.

In December, freshwater science staff attended the New Zealand Freshwater Sciences Society Conference in Dunedin. A central theme of the conference was around limit setting for fresh waters. Greater Wellington and Hawke’s Bay Regional Council staff co-presented a paper on the use of biological indicators to measure ‘life supporting capacity’ in rivers.

(ii) Lakes

There is nothing of significance to report this quarter.

(iii) Estuarine and marine waters

Work continued looking at the results of laboratory analyses of sediment chemistry from the Wellington Harbour subtidal sediment quality survey, completed in November 2011. Preliminary analyses of the benthic invertebrate data collected during the survey were also carried out. A comprehensive report on the 2011 survey is expected to be completed in June this year.

ESci staff together with GWRC Biodiversity staff, continue to work with the Porirua City Council (PCC) and the other agencies involved in implementing the Porirua Harbour and Catchment Strategy and Action Plan. The primary focus for the quarter was installation of continuous turbidity sensors and automatic sampling equipment on the three tributaries contributing the majority of sediment to the harbour. Dr Andrew Hughes from NIWA Hamilton visited in December to review the installation of turbidity sensors and provide advice on data checks and calibration. As at the end of quarter, we have continuous turbidity sensors installed and transmitting real-time data in the Porirua and Horokiri streams. The third turbidity sensor will be installed in the Pauatahanui Stream in the first quarter of 2013.

(iv) Recreational waters

The summer recreational water quality monitoring programme began in the week of 12 November 2012. Under this programme – jointly carried out with four of the region’s territorial authorities – microbiological water quality at 61 marine and 20 freshwater sites is assessed weekly through until the end of

March. Assessments of cyanobacteria cover (toxic algae) are also made at each freshwater site.

In late November, a 'moderate risk' warning was issued for cyanobacteria cover in the Hutt River from Birchville downstream. Health warning signs were erected and a media release issued.

A working group comprising ESci, GWRC communications, territorial authority and Regional Public Health staff has been working to implement the draft toxic algae communication strategy for rivers in the Wellington region. Monthly meetings were held during the quarter which resulted in a number of positive outcomes, including the use of revised health warning signs, more co-ordinated communication of toxic algae risk and good pick-up of media releases by local and national media.

In early November, the Aquatic Ecosystems and Quality Team Leader convened a one-day workshop of a small group of scientists from regional councils to discuss monitoring and reporting issues associated with the existing national recreational water quality guidelines. These issues have been documented in a discussion paper that was circulated to all councils for comment at the end of December. Once the document has been finalised, it will be provided to the Resource Manager's Group and, from there, to the Ministry for the Environment science and reporting staff. It is intended that the document provide a basis for a review of the guidelines (the Ministry is one of the co-authors of the guidelines which are now 10 years old).

Terrestrial ecosystems and quality

(i) Contaminated land

Ongoing upgrades to the Selected Land Use Register (SLUR) are in train. Staff have worked with the ICT department to complete a review of the correct placement of SLUR shapefiles. Procedures are being developed for the SLUR processes. Staff responded to 46 enquiries for information on properties and completed 63 data modifications to the database this quarter. One of our scientists attended an Emerging Contaminants workshop in Auckland. The talks covered topics that included the detection, prioritisation, impact and treatment of emerging pollutants, such as pharmaceuticals.

(ii) Soil quality

Staff have followed up on examining the potential differences in soil Olsen P monitoring techniques between regional council SoE and industry on-farm soil fertility monitoring. Several differences in techniques used are now known to occur, including subtle variations in lab methodology. Further investigation of the issue is being completed in conjunction with staff from other organisations, as these monitoring differences are of interest to soil quality staff at other regional councils. A brief summary of the differences in Olsen P monitoring was prepared for Environmental Policy staff to distribute to Rural Land Use stakeholders that attended a GWRC ESci presentation on soil and water quality in Carterton in late September.

(iii) Groundwater quality

Extra samples were taken for the National Groundwater Monitoring Programme in December as part of the regional quarterly groundwater quality monitoring programme. These samples form part of a national tritium testing project to age groundwater across New Zealand.

(iv) Terrestrial biodiversity

An estimate of the sampling effort required for Biodiversity SoE reporting has been completed by Landcare Research NZ. Some field trials in rural farmland have been recommended as biodiversity data from these areas is limited. Field trials are planned to take place in the coming months. GWRC has hosted the Biodiversity Working Group, (a national meeting of officers involved in biodiversity research and delivery). Staff are currently involved in the development of national SoE monitoring indicators. A major lizard study has been underway at Baring Head (a high biodiversity site for lizards). Contractors have installed over 200 pitfall traps and have been working with officers and volunteers from Friends of Baring Head to survey lizard abundance on the block. Lizards are being monitored in five different habitat types (coastal habitat, coastal escarpment, pasture terrace, river escarpment and the river flats).

An investigation to monitor the nesting success of banded dotterel at Baring and Pencarrow Heads is nearing completion. Evidence of hedgehogs causing around 80% of nest failures (by preying on the eggs) was gained through the filming of over a dozen nesting attempts. Bird counts have been completed in a number of parks again this spring, with surveys being undertaken in Belmont and East Harbour Regional Parks, Battle Hill Farm Forest Park, Queen Elizabeth Park and Tunnel Gully in Pakuratahi Forest. This data has not been analysed as yet, but increased tui and bellbird numbers were noted in Korokoro Valley in Belmont Regional Park.

GWRC plays an important role in the monitoring associated with the Department of Conservation's Project Kaka investigation. The bird species that have shown the greatest response to 1080 pest control have been rifleman, whitehead and kakariki. These species are all able to breed quickly, but are also very vulnerable to predators. The 2010 monitoring results showed significant increases in the abundance of these birds in the Hutt catchment (two years after 1080 was applied). In 2011, the same response was seen in the Project Kaka area, again two years following that area's pest control operation. This effect is thought to result from the opportunity the birds have to breed successfully when rat and other predator numbers are low. Rifleman and kakariki counts fell in the Hutt catchment in 2011, but whitehead abundance continued to trend upwards. The field teams have just completed this year's bird counts, but it will take some time to analyse the data. Rodent tracking completed in November in the Hutt catchment showed high rat tracking rates overall (45%), with the Eastern Hutt tracking at a record high level (74%).

The Team Leader (Terrestrial Ecosystems and Quality) is the regional representative for Oiled Wildlife Response and recently organised a regional oiled wildlife spill exercise as part of this role. Our Harbours team, Porirua

City Council and Massey University worked together on the exercise which was held in mid-December at Pauatahanui Inlet. Over 40 volunteers took part in learning how to assist with wildlife should an oilspill occur, while logistical information was also gathered for use in such a disaster.

Hydrology

Spring was very dry across the whole Wellington region. Rainfall was between 60–70% of the long term spring average in most places and as low as 40–50% in some places, particularly coastal areas. Wellington city, as represented by the long term Karori Reservoir gauge, had its driest spring since 1958. Only the very northern-most part of the Tararua Range had spring rainfall in excess of the norm. The uncharacteristically settled conditions also meant an absence of significant flood events in this quarter. By the end of spring many of the small spring fed streams in the Wairarapa were approaching low flow conditions and the onset of abstraction restrictions.

(i) Water allocation investigations

As mentioned in the previous quarterly report, a technical report documenting the development of a revised numerical groundwater model for the Kapiti Coast was completed by ESci staff in September. Peer review comments on the model were received in October from two independent experts (one of them international). The comments were very favourable and provide GWRC with confidence that the model is fit for the purpose of revising the groundwater allocation volumes for the Kapiti Coast (required for the Regional Plan review). This is the next stage of work.

A technical report that summarises river and stream minimum flow recommendations for the next Regional Plan was completed in November and issued for external independent review.

(ii) Hydrology investigations

Work continued through spring to gather data for investigating the water balance of Lake Wairarapa. This is needed to inform the review of water allocation policies, among other management actions. Approval from Wairarapa iwi representatives to install a central lake met station has not yet been forthcoming; this station was intended to provide GWRC with accurate open water evaporation measurements. However, data from lake shore met stations combined with water temperature measurements can be used for interim water balance calculations while discussions with iwi continue. A temporary flow gauging site was installed by Science staff in Burlings Stream, a tributary of Lake Wairarapa, at the end of November. This site will provide an indication of the magnitude of flow input to the lake from catchments draining the flanks of the Rimutaka Range – an aspect of the lake hydrology that GWRC currently knows little about.

A continuous flow measurement site has also been installed on Booths Creek (near Carterton). This site will help GWRC manage abstraction consents in this stressed catchment and also improve our understanding over coming years of

the low flow hydrology; this in turn will assist in developing longer term catchment management strategies.

Science strategy and information

A Memorandum of Understanding (MoU) between the ESci and Biodiversity departments has been drafted. This document outlines the roles and responsibilities of each department and processes for requesting work and working together on cross department projects. The document will provide a framework for future MoUs between ESci and the other departments that the science teams work with.

Other significant projects

(i) Wairarapa Moana

ESci plays a key role in the Wairarapa Moana project and is heavily involved in the FreshStart for Freshwater Programme. Members of the Terrestrial and Aquatic Ecology and Quality Teams are part of the Technical Advisory Group and involved in all three arms of the project; the Lake-edge wetland restoration, Land Environment Plans and Monitoring.

ESci staff presented a summary of water quality results from recent lagoon samplings and the wider Lake Wairarapa region to the Wairarapa Moana Coordinating Committee. A similar presentation, including future monitoring suggestions, was provided to the Wairarapa Moana Technical Advisory Group. Our soil scientist also presented an overview of the Overseer Nutrient Budgets programme and led a discussion of its potential use in the Wairarapa Moana projects. Surface water samples were collected from the inflows and outflows from Matthew's and Barton's lagoon systems in December to provide further information about the wetlands identified for possible water quality improvements.

The wetland bird expert engaged to assess wetland bird diversity and abundance at each of the six selected edge wetlands has made some interesting observations. Bittern (Nationally Endangered), spotless crane and marsh crane have been detected at the wetlands, while large concentrations of wetland bird species have been recorded at various sites, eg, 50 scaup at Barton's Lagoon and large numbers of grey teal and pied stilt in JK Donald. One of the biggest surprises was the discovery of over 100 shag nests (a colony comprised of three different species) in some willows at one of the wetlands. A shag colony was noted in the area over 30 years ago, but indications are that it was much smaller at that time. All of this information is being fed back into decisions about pest plant control at the wetland sites, as the habitat for these species needs to be considered when determining willow control plans. A first for Lake Wairarapa was also recorded at Hayward's Lagoon (private property) where the landowner has confirmed the first known nesting of royal spoonbills in the area.

The finalised Ramsar application for Wairarapa Moana was submitted to the Department of Conservation Conservator at the end of December. A paper (co-authored by Tony Silbery of the Department of Conservation) on Wairarapa

Moana was presented at the New Zealand Ecological Society conference held in November. GWRC staff from ESci and Catchment Management hosted visitors from the School of Agriculture and Biology, Shanghai Jiatong University. A presentation on the regional council activities in the Wairarapa region was provided for the visitors, who were on a trip organised by Massey University.

(ii) Limit setting group

The Limit Setting Group was set up in November 2012. It is a working group to identify and prioritise science and policy information needs related to management of water quantity and quality in the draft and proposed second generation Regional Plan and for the upcoming Whaitua committee process and any associated plan changes. The group is interdepartmental and provides links between the ESci, Environmental Policy, Environmental Regulation and Land Management departments on the development of Regional Plan provisions. The group has several representatives from across the ESci department who are responsible for providing scientific expertise and to help identify information needs to inform the setting of values, objectives and limits for freshwater.

Technical support for other departments

Considerable technical support was provided to other GWRC departments/groups during the quarter:

- Environmental Regulation – technical advice was provided on various resource consent applications, including the Kapiti Coast District Council's water supply takes from the Waikanae River and Waikanae borefield, and discharges from the Carterton Water Treatment Plant. Input was also provided on several consent monitoring plans and annual reports, including monitoring plans for the Mill Creek wind farm and planting plans for the Duck Creek residential development. Several science staff provided technical evidence on freshwater ecology and groundwater modelling matters associated with the NZTA's consent application with the EPA for the MacKays to Peka Peka expressway.
- Environmental Policy – assistance continued in relation to work for the next Regional Plan, with the emphasis around limit setting for fresh waters (quantity and quality). A series of regular internal meetings between ESci, Environmental Policy and Environmental Regulation staff have been used to develop draft policies and rules for water takes. A key part of this process has been drawing on the recommendations from various science investigations conducted during recent years under the instream flows programme. A number of science staff attended an inaugural internal 'limit setting' meeting in November; members assigned to this group will be meeting regularly over the coming months to develop provisions for the next Regional Plan (see 'Limit setting group' above). Our coastal scientist compiled a draft table of the estuaries in the region as they qualify against the Policy 22 criteria of the Regional Policy Statement (RPS). Policy 22 requires the identification of indigenous ecosystems and habitats that

possess significant biodiversity values. Related to this, our terrestrial ecology scientist is finalising a desktop survey of the distribution of threatened bird species in rivers, lakes, wetlands and the coastal marine environment. A report is being drafted that lists the region's sites that have been identified as habitats of significance and how this assessment was determined in relation to the criteria specified in Policy 22 of the RPS.

- Flood Protection – ESci continued to provide input and advice in relation to the potential environmental effects from a variety of routine flood protection and land management activities. This work, which will contribute to Flood Protection's applications for resource consents for works in rivers in the western half of the region, included several days surveying of fish and invertebrate communities in the Hutt River. The surveys were carried out to assess the effects of existing flood protection practices on the aquatic ecosystem, in particular, gravel extraction from within the wetted river channel. Our terrestrial ecology scientist also organised and completed shorebird surveys along 91km of rivers affected by flood protection activities. This included selected reaches of four Wairarapa rivers that had been surveyed in 2010 and 2011 by Forest & Bird. Shorebird surveys were also conducted for the first time along the entire lengths of the Hutt, Waikanae and Otaki rivers that are affected by flood protection activities. In the process of carrying out these surveys, a standardised survey technique was developed for use on all rivers in the region. Use of this technique will allow data on shorebird communities to be collected in a standard repeatable way, allowing the detection of any future changes in the abundance, diversity and distribution of shorebirds along rivers in the Wellington region.
- Biodiversity – Output monitoring of rodents, small mammals and possums is completed under contract to the Biodiversity department. Six "Biodiversity Management Areas" were monitored for rodent abundance in November. Mustelid monitoring was also completed at five sites. Rat abundance was at low levels in the two mainland island sites (Wainuiomata and East Harbour), while rodent tracking has risen above 10% tracking rate in Korokoro Valley in Belmont Regional Park. High hedgehog tracking (83% of tunnels) was recorded at Baring Head, while on a more positive note, high invertebrate tracking (89%) was found in Wainuiomata Mainland Island. Pre-operational possum monitoring in Akatarawa Forest completed in November indicated that possum levels were at 10% Residual Trap Catch (RTC). ESci staff also provided input on the Porirua Harbour restoration programme, specifically feedback on the whole-of-catchment and estuary re-vegetation plans.
- Parks – ESci officers have provided input into the Roopu Tiaki Management Plan being prepared for the Parangarahu Lakes. A multi-disciplinary team worked with iwi to assess the fish passage issue at Lake Kohangapiripiri. It was considered that further investigation into fish species present in the lake was required.
- Water Supply – An aerial survey for forest canopy damage due to introduced insects or fungi was completed in December. The forests were

in good health and prolific flowering was noted for rata trees. ESci monitoring staff continued to measure groundwater levels in a number of additional bores throughout the Hutt Valley to provide information for the redevelopment of the Hutt Aquifer groundwater model. This included recent re-surveying of the bores to ensure that the levels are correct and that the relative differences of water levels between sites are accurate.

Staff changes

A number of changes as the result of the Department restructure took effect from 1 October. Five teams now define the ESci Department:

- Terrestrial Ecosystems and Quality – Philippa Crisp as Team Leader
- Hydrology – Nick Boyens as Team Leader
- Aquatic Ecosystems and Quality – Juliet Milne as Team Leader
- Air Quality and Climate – Tamsin Mitchell as Team Leader
- Science Strategy and Information – Lian Potter as Team Leader

The new structure provides better alignment to the science activities that the council undertakes and will enable better engagement, collaboration and partnership with iwi, research providers, Central and Local Government and other major stakeholders.

1.3.5 Financial reports

Monitoring Income Statement 6 months ending 31 December 2012	YTD			Full Year			Last Year	
	Actual \$000	Budget \$000	Variance \$000	Forecast \$000	Budget \$000	Variance \$000	YTD Actual \$000	FY Actual \$000
Rates & Levies	2,396	2,396	-	4,793	4,793	-	2,131	4,261
Government Grants & Subsidies	-	-	-	-	-	-	-	-
External Revenue	31	5	26	10	10	-	28	128
Investment Revenue	2	-	2	-	-	-	2	4
Internal Revenue	118	118	-	245	245	-	55	110
TOTAL INCOME	2,547	2,519	28	5,048	5,048	-	2,216	4,503
less:								
Personnel Costs	1,091	1,142	51	2,283	2,283	-	931	1,915
Materials,Supplies & Services	217	149	(68)	297	297	-	214	419
Travel & Transport Costs	33	46	13	91	91	-	40	132
Contractor & Consultants	416	410	(6)	1,013	1,013	-	206	686
Grants and Subsidies Expenditure	-	-	-	-	-	-	-	-
Internal Charges	220	184	(36)	368	368	-	195	421
Total Direct Expenditure	1,977	1,931	(46)	4,052	4,052	-	1,586	3,573
Financial Costs	12	11	(1)	23	23	-	18	34
Bad Debts	-	-	-	-	-	-	4	4
Corporate & Department Overheads	338	338	-	677	677	-	307	615
Depreciation	141	86	(55)	172	172	-	129	259
Loss(Gain) on Sale of Assets / Investments	(10)	(15)	(5)	(15)	(15)	-	-	(28)
TOTAL EXPENDITURE	2,458	2,351	(107)	4,909	4,909	-	2,044	4,457
OPERATING SURPLUS/(DEFICIT)	89	168	(79)	139	139	-	172	46
Add Back Depreciation	141	86	55	172	172	-	129	259
Other Non Cash	(10)	(15)	5	(15)	(15)	-	-	(28)
Net Asset Acquisitions	(3)	(244)	241	(244)	(244)	-	-	(270)
Net External Investment Movements	-	-	-	-	-	-	-	-
NET FUNDING BEFORE DEBT & RESERVE MOV	217	(5)	222	52	52	-	301	7
Debt Additions / (decrease)	-	-	-	-	-	-	-	-
Debt Repaid	(47)	(48)	1	(97)	(97)	-	(81)	(169)
Net Reserves (Increase) / decrease	(2)	45	(47)	45	45	-	77	75
NET FUNDING SURPLUS (DEFICIT)	168	(8)	176	-	-	-	297	(87)

Monitoring Capital Expenditure Statement 6 months ending 31 December 2012	YTD			Full Year			Last Year	
	Actual \$000	Budget \$000	Variance \$000	Forecast \$000	Budget \$000	Variance \$000	YTD Actual \$000	FY Actual \$000
Total Asset Acquisitions	13	289	276	289	289	-	-	301
Capital Project Expenditure	-	-	-	-	-	-	-	-
Asset Disposal Cash Proceeds	(10)	(45)	(35)	(45)	(45)	-	-	(31)
Net Capital Expenditure	3	244	241	244	244	-	-	270
Investments Additions	-	-	-	-	-	-	-	-
Net Capital and Investment Expenditure	3	244	241	244	244	-	-	270

1.3.6 Financial variance analysis

- E Science has a net surplus of \$89k which is \$79k worse than a surplus budget of \$168k
- Materials and Supplies are \$68k over a budget of \$149k this is mainly due to:
 - Surface Water Hydrology – \$76k
 - Air Quality Monitoring – \$21k
 - Environment SOE Documents – \$11k
- Internal Charges are \$36k over a budget of \$184k this is mainly due to Monitoring Project Kaka – \$14k
- Consultants and Travel costs are close to budget

Performance Measure	Performance Target		Comment
	Baseline	2012/13	
Number of state of the environment report cards downloaded on the Greater Wellington Regional Council website	1929 (2010/11)	Increase on previous year	This information is not currently available.

1.3.7 Risk analysis

We have reviewed our risks and no changes are required to the risk register.