



Our Ref A610586

**Committee meetings Wednesday 25 November 2015**

Following are the agendas for the Committee meetings to be held on Wednesday 25 November commencing at 8.30 am. The venue is the Council Chamber, 70 Stafford Street, Dunedin, and members of the public are welcome to attend.

Any full detailed reports referred to in the agendas are available on the Council website, or by contacting the Committee Secretary – see contact details below.

***Committee agendas***

	<b><i>Page Nos.</i></b>
Regulatory Committee.....	2 - 83
Communications Committee.....	84 - 97
Technical Committee .....	98 - 114
Finance and Corporate Committee .....	115 - 127
Policy Committee.....	128 - 140

A handwritten signature in black ink, appearing to read "Janet Favel".

Janet Favel  
**Committee Secretary**

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## OTAGO REGIONAL COUNCIL

**Agenda for a meeting of the Regulatory Committee to be held in the  
Council Chamber, 70 Stafford Street, Dunedin on Wednesday  
25 November 2015 commencing at 8.30 am**

**Membership:**

- Cr Sam Neill (Chairperson)
- Cr Gerrard Eckhoff (Deputy Chairperson)
- Cr Graeme Bell
- Cr Doug Brown
- Cr Louise Croot MNZM
- Cr Michael Deaker
- Cr Gary Kelliher
- Cr Trevor Kempton
- Cr Gretchen Robertson
- Cr Bryan Scott
- Cr David Shepherd
- Cr Stephen Woodhead

**Apologies:**

**Leave of Absence:** Cr Bryan Scott

**In attendance:**

**Please note that there is an embargo on agenda items until 8.30 am on Monday 23 November.**

**CONFIRMATION OF AGENDA**

**PUBLIC FORUM**

**MINUTES**

The minutes of the meeting held on 14 October 2015, having been circulated, for adoption

**Matters arising from minutes**

## PART A – ITEMS FOR NOTING

### Item 1

2015/1228 **Annual Compliance Summary 2014-15.** DEMO, 19/10/15

Summarising compliance activities and consent conditions for all major consent holders and prohibited activities for the 2014/15 year.

### Item 2

2015/1213 **Low Flow Event review and preparations.** DEHS, 13/11/15

The report describes the 2014/15 low flow event and ORC's actions, preparations for the forecast 2015/16 event, and the changes and improvements that have been made to the way ORC deals with such events.

### Item 3

2015/1241 **Communications Plan and Project Plan: Water Management Groups.** DPPRP, 2/11/15

The report notes that Plan Change 1C to the Regional Plan: Water gave rise to an LTP project to encourage and assist consent holders to form water management groups for the renewal of deemed permits and water permits in suitable catchments. The work programme and communications approach proposed for the project are summarised.

### Item 4

2015/1227 **Biosecurity and RMA Monitoring Report.** DEMO, 10/11/15

Reporting on water, air, pest, and contaminated site environmental monitoring and incidents for the period 4 September to 6 November.

### Item 5

2015/1257 **Consent processing, consent administration and Building Control Authority update.** DPPRM, 10/11/15

Detailing consent processing, consent administration and building control authority activity for the period 28 September to 6 November 2015.

Item 6  
2015/1247

**RMA, Biosecurity Act and Building Act Enforcement Activities.**  
DPPRM, 6/11/15

Detailing Resource Management Act 1991, Biosecurity Act 1993 and Building Act 2004 enforcement activities undertaken by the Otago Regional Council for the period 25 September to 6 November.

Item 7  
2015/1266

**Appointments by Commissioner Appointment Subcommittee.**  
DPPRM, 13/11/15

Listing hearing commissioners appointed for the period to 13 November 2015.

## OTAGO REGIONAL COUNCIL

### Minutes of a meeting of the Regulatory Committee held in the Council Chamber, 70 Stafford Street, Dunedin on Wednesday 14 October 2015 commencing at 3.28pm.

**Present:**

Cr Sam Neill (Chairperson)  
 Cr Gerrard Eckhoff (Deputy Chairperson)  
 Cr Graeme Bell  
 Cr Michael Deaker  
 Cr Gary Kelliher  
 Cr Gretchen Robertson  
 Cr Bryan Scott  
 Cr David Shepherd  
 Cr Stephen Woodhead

**Apologies:** Cr Doug Brown

**Leave of Absence:** Cr Louise Croot MNZM  
 Cr Trevor Kempton

**In attendance:**

Peter Bodeker  
 Gavin Palmer  
 Fraser McRae  
 Scott Maclean  
 Nick Donnelly  
 Caroline Rowe  
 Sarah Ibbotson  
 Charlotte Stickings  
 Lauren McDonald

#### CONFIRMATION OF AGENDA

There were no changes to the agenda.

#### MINUTES

The minutes of the meeting held on 2 September 2015, having been circulated, were adopted on the motion of Crs Eckhoff and Bell.

#### Matters arising from minutes

There were no matters arising from the minutes.

## PART A – RECOMMENDATIONS

Item 1

2015/1177 **Summary of Dairy Farm Inspections for 2014/2015. DEMO, 19/08/15**

The report described the findings of the 2014/2015 annual inspection of dairy farms in the Otago Region.

Of the 450 farms inspected it was noted that 48 had breaches and serious non compliance with 150 properties identified as high risk. This reflected the need for good training and management systems on farm to be in place, which was currently not the normal standard.

Mr MacLean advised that environmental outcomes were not necessarily diversion only and that rate of voluntary change is slow.

A question was raised asking if compliance staff contacted farmers before making site visits. Mr MacLean confirmed that warranted officers are legally entitled to undertake inspections without prior notification and are covered under the Council's Health & Safety policy while on site.

Discussion was held on the risk matrix developed so that high risk properties were visited more often than low risk. A ratio had been suggested of four visits per year for high risk properties/catchments but this ratio had not been supported due to the funding cost to do so.

It was commented that increased education and awareness to support farmers in meeting requirements of Schedule 16 needed to happen with the compliance process. This would also involve some industry support in emphasising environmental management to landowners.

Council was advised that the Ministry for the Environment is to table amendments to the RMA by the end of 2015. The amendment will allow the ability for chargeable monitoring of permitted activities

A review of the multiple visit approach for dairy inspections and effects based monitoring was suggested to be included in the Annual Review process.

Cr Shepherd moved

Cr Bell seconded

*That:*

1. *The report be noted*
2. *That Council discuss the merits of any changes to the Compliance Monitoring of the dairy effluent program.*

**Motion carried**

**PART B - ITEMS FOR NOTING**

Item 2

2015/1169 **Biosecurity and RMA Monitoring Report. DEMO, 02/10/15**

Report on water, air, pest, and contaminated site environmental monitoring and incidents for the period 24 July to 4 September 2015.

With reference to QLDC sewage discharge upgrades on the Shotover, it was noted that they were within consent conditions with this work likely to take 2-3 years. A series of short consents had been issued to carry out the upgrade.

Water metering focus is on those consents greater than 20 litres per second, noting a lack of installers in Otago being an issue. If these consent holders are found to have no equipment in place after 1 October 2015, abatement notices would be issued.

Cr Woodhead moved  
Cr Robertson seconded

*That the report be noted.*

**Motion carried**

Item 3

2015/1180 **Consent processing, consent administration and Building Control Authority update. DPPRM, 30/9/15**

The report detailed consent processing, consent administration and building control authority activity for the period 17 August to 25 September 2015.

Cr Scott moved  
Cr Shepherd seconded

*That the report be noted.*

**Motion carried**

Item 4  
2015/1167 **RMA, Biosecurity Act and Building Act Enforcement Activities.**  
DPPRM, 25/9/15

The report detailed Resource Management Act 1991, Biosecurity Act 1993 and Building Act 2004 enforcement activities undertaken by the Otago Regional Council for the period 13 August to 25 September 2015.

Cr Shepherd moved  
Cr Woodhead seconded

*That the report be noted.*

**Motion carried**

Item 5  
2015/1178 **Rabbit Serum Results 2015.** DEMO, 15/07/15

The report detailed rabbit serum results collected across 10 sites in Otago during February and March 2015.

A question was raised as to whether ORC would consider using the Korean strain of the RHD virus for rabbit control. The Korean strain has had a trial release in Tasmania.

It was noted that ORC is part of the National Rabbit Coordination group together with other regional councils, DoC, MPI, Landcare Research and Lincoln University who are looking at strategic rabbit control New Zealand wide. Janine Duckworth (Lincoln University) is doing significant work in this area.

Increased immunity reflected in increased rabbit numbers was noted in the Albert Town area as well as Molyneux Park in Alexandra. Both sites could be possible trial sites for the Korean strain of the RHD virus if the outcome from the Tasmania release is positive.

Cr Kelliher moved  
Cr Bell seconded

*That the report be received.*

**Motion carried**

The meeting closed at 4.14pm.

**Chairperson**



**REPORT**

Document Id: A852559

Report Number: 2015/1213

Prepared For: Regulatory Committee

Prepared By: Gavin Palmer, Director Engineering, Hazards and Science  
Dean Olsen, Manager Resource Science  
Lu Xiaofeng, Hydrologist  
Sarah Ibbotson, Manager Environmental Data and Planning  
Frederika Mourot, Resource Scientist Groundwater

Date: 20 November 2015

Subject: **Low Flow Event Review and Preparations**

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**1. Precis**

ORC is maintaining a watch on the climate situation for Otago. It is likely that ORC will need to become involved in a low flow event this summer<sup>1,2</sup>. Staff are preparing for that possibility, applying experience of the 2014/15 event. For planning purposes ORC has made the assumption that flows will be exceptionally low everywhere within Central Otago, North Otago and Dunedin district through to April 2016. This report describes the 2014/15 event and ORC's actions, and preparations for another event. It sets out ORC's role and functions and how it will exercise those functions. The report describes the changes and improvements that have been made to the way ORC deals with such events.

**2. Introduction**

Low rainfall and river flows affected large parts of North and Central Otago in 2014/15, impacting on the availability of water to support agriculture, horticulture and river ecosystems. There was no direct impact on the ability to supply water for municipal purposes. Water use for human consumption did not need to be restricted, with the exception of Hampden/Moeraki.

An El Niño event is underway in the tropical Pacific and it is predicted by NIWA that these conditions are certain to persist for the next three months. The current El Niño event is slightly weaker than the 1997/98 event, which was the strongest since 1950, but it is expected to intensify further and peak in the summer months<sup>3</sup>. During El Niño, New Zealand tends to experience stronger or more frequent winds from the west in summer, typically leading to drought in east coast areas and more rain in the west. These predictions, along with the existing conditions indicate that there is an elevated risk of a continuation of the dry conditions experienced in 2014/15.

Given the climate outlook it is likely that ORC will need to become involved in a low flow event this summer. Staff are preparing for that possibility, applying experience of

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<sup>1</sup> *Director's Report on Progress*, Prepared for Technical Committee, Otago Regional Council, 2015/1088, August 2015

<sup>2</sup> *Director's Report on Progress*, Prepared for Technical Committee, Otago Regional Council, 2015/1166, 28 September 2015.

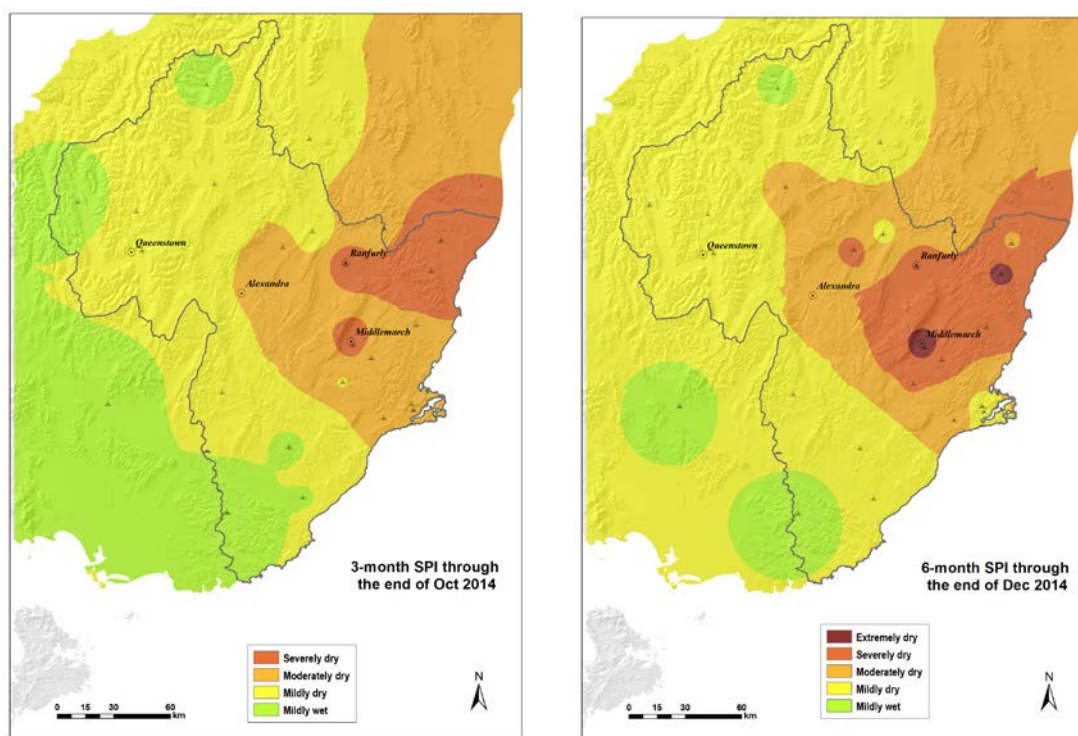
<sup>3</sup> NIWA seasonal outlook, <https://www.niwa.co.nz/climate/sco/seasonal-climate-outlook-october-december-2015>).

the 2014/15 low flow event. This report describes the 2014/15 event and ORC's actions, and preparations for another event. It sets out ORC's role and functions and how it will exercise those functions. The report describes the changes and improvements that have been made to the way ORC deals with such events.

### 3. Environmental conditions in 2014/15 and the present situation

#### Climate and soil moisture

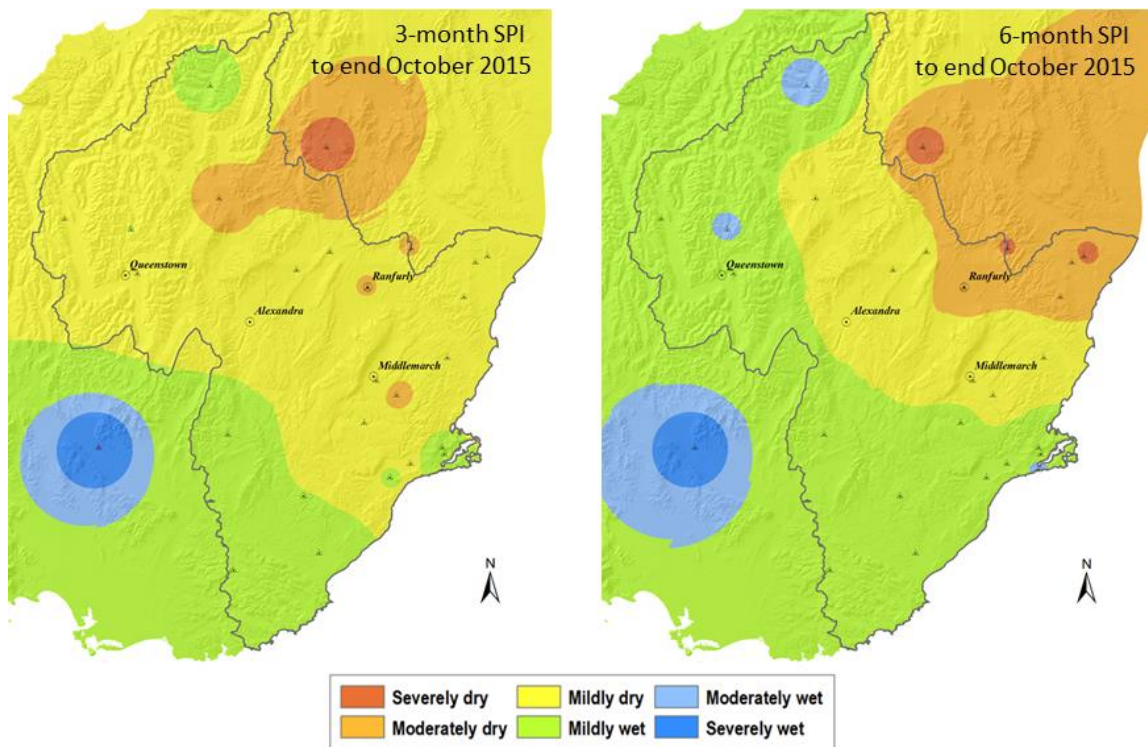
Maps of the standardised precipitation index (SPI)<sup>4</sup> prepared by ORC show that for the 2014/15 event the driest 3-month period was August to October and the driest 6-month period was July to December (Figure 1). SPI values for other periods and for the 1998/99 event are presented in Appendix 1 for comparison.



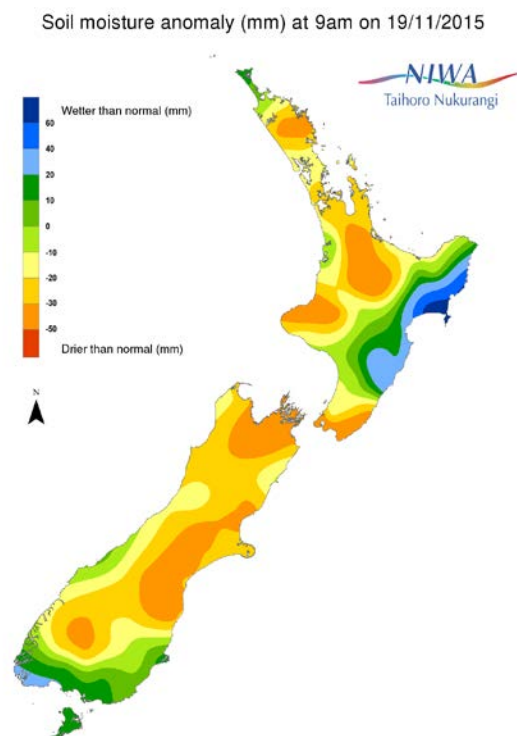
**Figure 1 Standardised Precipitation Index (SPI) for Otago to 31 October 2014 (3-month period) and to 31 December 2014 (6 month-period).**

Present values of SPI show that over the short-term (3 months) and medium-term (6 months), the majority of North and Central Otago has been mildly to moderately dry (Figure 2). Over the medium-term (6 month), rainfall in South and West Otago has been normal or above normal (Figure 2). It is noted that the SPI is based on rainfall only, and that near-normal rainfall may not have been sufficient to restore soil moisture and groundwater levels in areas affected in 2014/15. Soil moisture, as reported by NIWA, is well below normal (Figure 3). This is consistent with anecdotal reports being received by ORC.

<sup>4</sup> SPI quantifies the precipitation deficit, or the difference from the long-term average. Values reported by ORC have been calculated by ORC in accordance with World Meteorological Organization, *Standardized Precipitation Index User Guide*, WMO-No. 1090, 2012.



**Figure 2 Standardised Precipitation Index (SPI) for Otago to 31 October 2015 over 3-month and 6-month time periods.**



**Figure 3 Current soil moisture (at 19 November 2015) compared with the long-term average. Figure from <https://www.niwa.co.nz/climate/daily-climate-maps>**

## River flows

River flows during the 2014/15 event are summarised in Table 1 and are compared with other events and long-term monthly averages in Appendix 2.

**Table 1: Summary of river flows 2014/15**

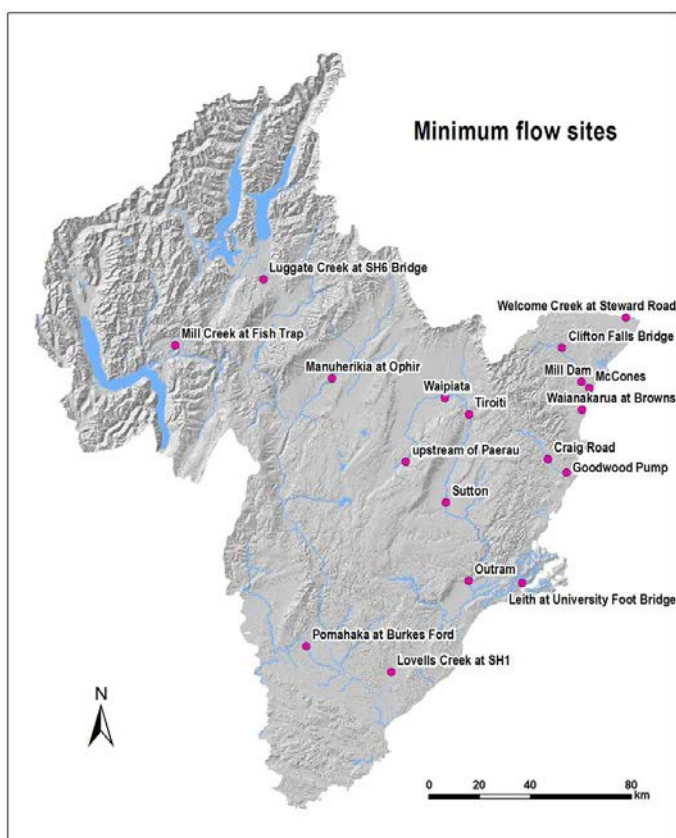
Flow site	Minimum flow value <sup>1</sup> (l/s)	Lowest daily average flow in 2015 (l/s)	Date of first flow below minimum flow <sup>2</sup>	Date of last flow below minimum flow	Number of days on which flow was less than minimum flow
Taieri River at Canadian Flat	-	567	-	-	-
Taieri River at Waipiata	1000	812	05/01/2015	28/02/2015	45
Kye Burn at Water Take d/s 300m	-	78	-	-	-
Taieri River at Tiroiti	1100	915	08/01/2015	21/02/2015	38
Taieri River at Sutton	1250	975	29/12/2014	06/03/2015	58
Taieri River at Outram	2500	1664	07/01/2015	20/02/2015	24
Kakanui at River Clifton Falls Bridge	-	402	-	-	-
Kakanui River at Mill Dam	250	275	29/10/2014	19/01/2015	3
Kakanui River at McCones	250	295	-	-	-
Waianakarua River at Browns Pump	200	111	04/01/2015	31/01/2015	24
Shag River at Craig Road	150	62	18/12/2014	02/03/2015	63
Waikouaiti River at Confluence d/s	-	34	-	-	-
Dunstan Creek at Beattie Road	-	38	-	-	-
Manuherikia River at Ophir	820	1164	15/04/2015	15/04/2015	1
Manuherikia River at Campground	-	442	-	-	-
Luggate Creek at SH6 <sup>3</sup>	180	196	-	-	-
Waitahuna River at Tweeds Bridge	450	743	-	-	-
Pomahaka River at Burkes Ford	3600	2598	15/1/2015	3/2/2015	16
Mill Creek at Fish Trap	180	207	-	-	-

1 Schedule 2A of the Regional Plan Water.

2 Based on the instantaneous flow displayed on WaterInfo: for consistency with the Regional Plan Water rules associated with water takes and minimum flows.

3 A permanent flow recorder will be installed at the minimum flow site in 2015/16. At present, regular gaugings are undertaken during low flows and the frequency of gaugings is increased as flows approach the minimum flow.

The Regional Plan Water specifies minimum flows for key sites on several rivers (Figure 4). During the 2014/15 event river flows were less than minimum flow values at 9 minimum flow sites on one or more days. The number of days varied between 1 (Manuherikia River at Ophir) and 63 (Shag River at Craig Road).



**Figure 4 Minimum flow sites in Otago**

During October 2015, the lowest flows observed in much of the Taieri catchment were well below what would typically be expected at this time of the year and were lower than what was observed in October 2014 (Appendix 2 and Table 2). The lowest flows observed in the Kye Burn in October 2015 were considerably lower than at the same time last year.

Flows at all sites in the Kakanui River in October of this year were below those observed at the same time last year and were below the long-term average (Table 2). Flows in the Shag and Waianakarua Rivers in October of this year were considerably lower than at the same time last year and were significantly below what would typically be expected for October (Table 2). Similarly, flows in the Waikouaiti River were considerably lower than at the same time last year, although the limited dataset for this site means that historical comparisons are not possible (Table 2).

Flows in Dunstan Creek in October 2015 were lower than experienced in October last year, and were the lowest 7-day flows recorded at this site in October since records began (Table 2). Flows in the Manuherikia River were substantially lower than October last year and were low for this time of year (Table 2).

Flows in South Otago (Waitahuna River, Pomahaka River) in October were higher than average for October (Table 2).

Conditions in October may not be a reliable indicator of summer low flows, as is evident for some of the historical drought years presented in Table 2. However, flows at many sites in North and Central Otago were well below normal for October, with flows at some sites in the Manuherikia catchment the lowest on record (e.g. Dunstan Creek, Manuherikia River at Campground) (Table 2).

**Table 2 October flow statistics for flow sites in the Taieri, Kakanui, North Otago, Manuherikia and South Otago catchments. All flows are expressed as seven day October average low flows, i.e. the lowest flows averaged over a seven day period within October.**

Site	Term of record	Lowest 7-d October average low flow					
		Long-term average	Long-term minimum	1998	2003	2014	2015
Taieri at Canadian Flat	33	3.655	1.846	4.874	2.734	5.038	<b>3.935</b>
Taieri at Waipiata	23	7.821	1.808	-	4.599	9.297	<b>5.178</b>
Kye Burn at Scotts Lane	3	1.147	0.921			1.373	<b>0.921</b>
Taieri at Tiroiti	34	10.543	2.603	5.964	8.508	10.861	<b>6.437</b>
Taieri at Sutton	55	14.339	3.391	6.924	11.766	13.140	<b>8.269</b>
Taieri at Outram	48	22.241	6.665	10.384	16.714	18.956	<b>13.486</b>
Deep Stream at SH87	24	2.046	0.879	2.215	0.941	2.336	<b>1.914</b>
Kakanui at Clifton Falls Bridge	35	1.696	0.452	1.400	1.210	1.317	<b>1.261</b>
Kakanui at Mill Dam	26	1.952	0.519	1.496	1.441	1.198	<b>0.918</b>
Kakanui at McCones	13	2.129	0.543		1.642	1.184	<b>1.103</b>
Waianakarua at Browns Pump	11	0.911	0.342			0.455	<b>0.425</b>
Shag River at Craig Road	22	0.744	0.258	0.374	1.232	0.504	<b>0.479</b>
Waikouaiti below confluence	6	0.885	0.135			0.571	<b>0.135</b>
Dunstan Creek at Beattie Road	13	3.081	1.864		3.760	1.864	<b>1.515</b>
Manuherikia at Ophir	45	13.370	3.387	9.184	11.307	8.028	<b>5.514</b>
Manuherikia at Campground	7	10.901	3.571			8.587	<b>3.571</b>
Waitahuna at Tweeds Bridge	23	1.624	0.980	1.564	1.118	2.652	<b>1.702</b>
Pomahaka at Burkes Ford	54	15.382	6.841	23.736	13.951	24.148	<b>25.308</b>

### Groundwater levels

Five aquifers have restriction levels specified in the Regional Plan Water for the purposes of managing water demand and preventing over-extraction of the groundwater resource<sup>5</sup>. Groundwater levels observed in 2014/15 for these aquifers were higher than the respective restriction levels with the exception of the Lower Taieri – West aquifer (Figures 5 to 10). For the Lower Taieri - West aquifer, groundwater levels were lower than the 25% restriction level (Momona bore) for approximately 115 days (Figure 7). There are three water permits that have conditions that required the taking of groundwater from that aquifer to be restricted.

Data for other aquifers are presented in Appendix 3. Current groundwater levels are above the long-term average at most sites. However, current groundwater levels in Dennisons Bore in the Lower Waitaki Plains Aquifer (107.13 m) are well below the long-term average and are 0.3 m higher than those at the same time during the 1998/99 event. Groundwater levels in the Dunstan Flat Aquifer in September 2015 were amongst the lowest observed since records began in 1986.

<sup>5</sup> Schedule 4B.

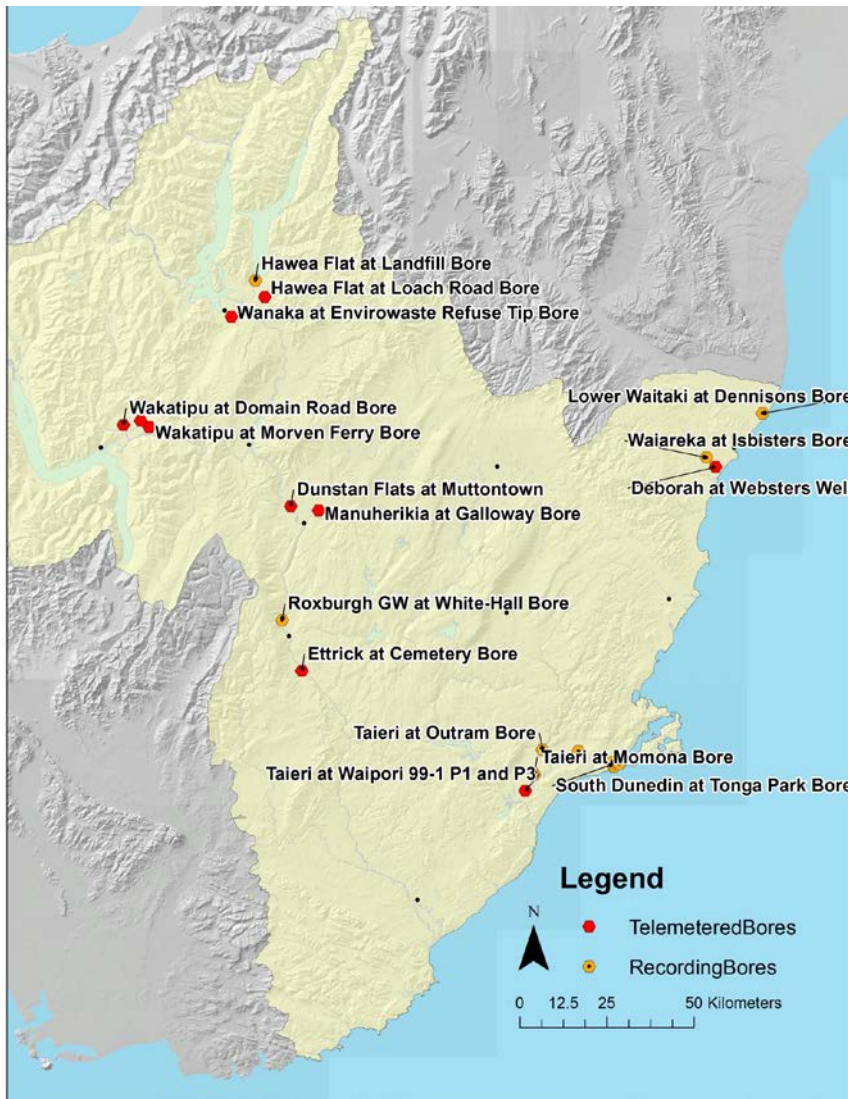


Figure 5 ORC's groundwater monitoring network

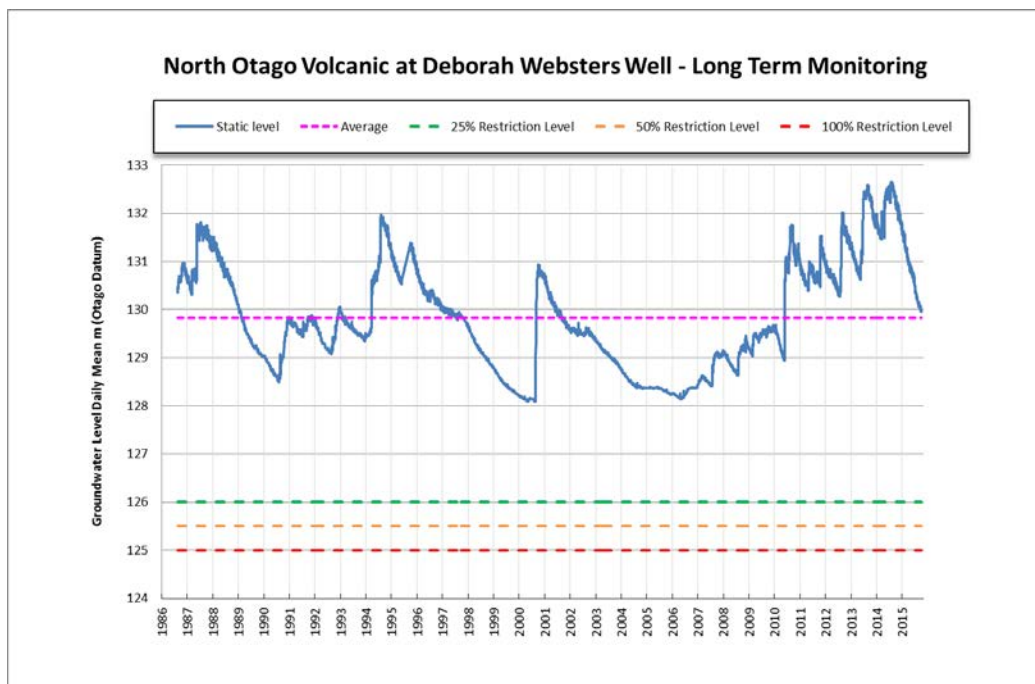
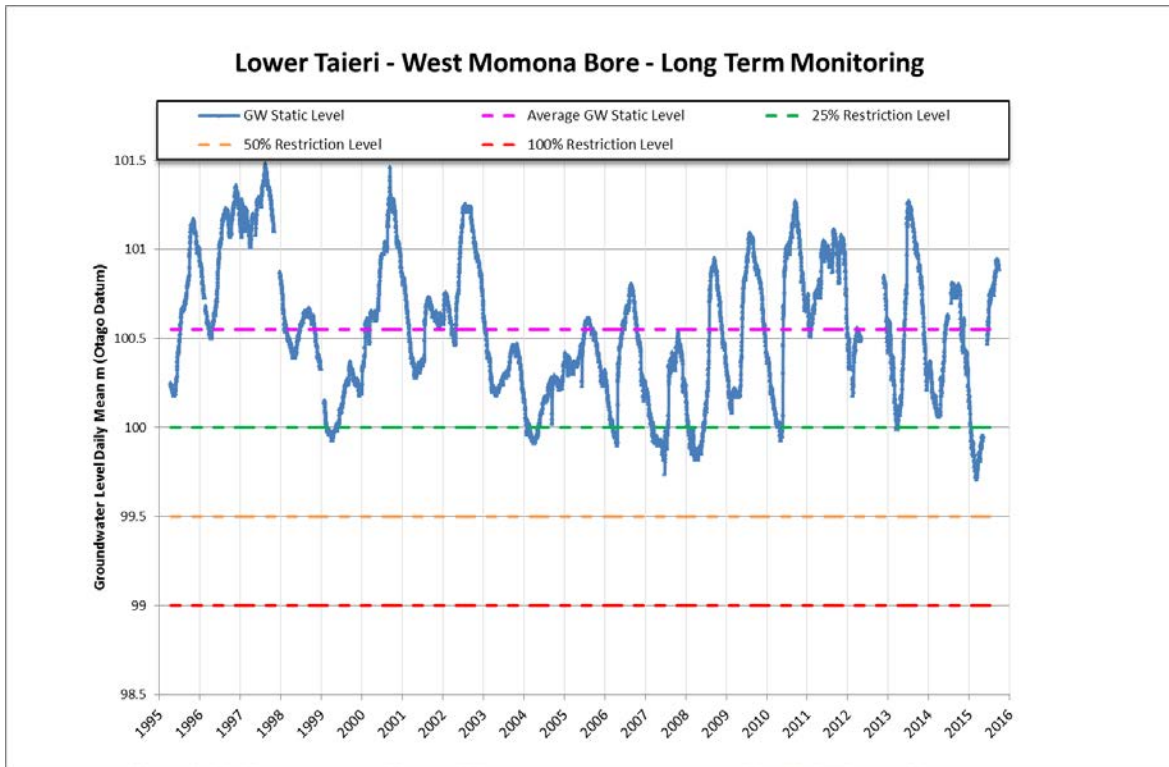
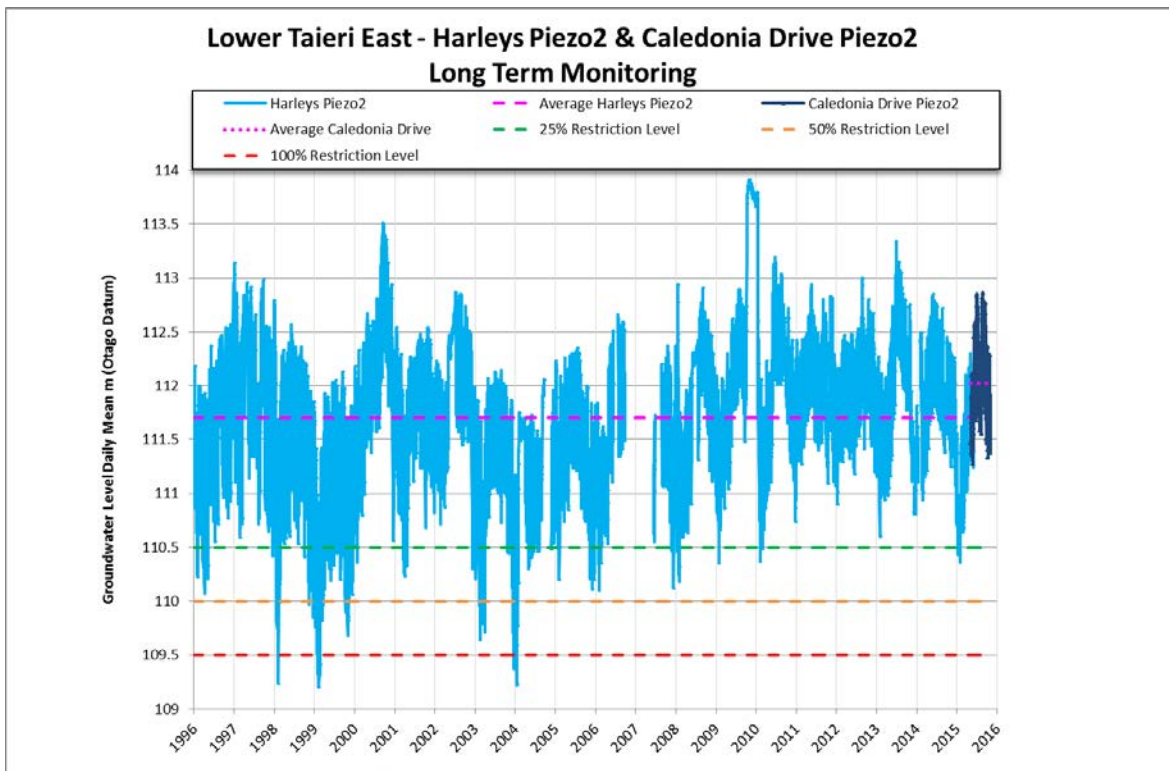


Figure 6 Daily mean groundwater level (m) in the North Otago Volcanic Aquifer

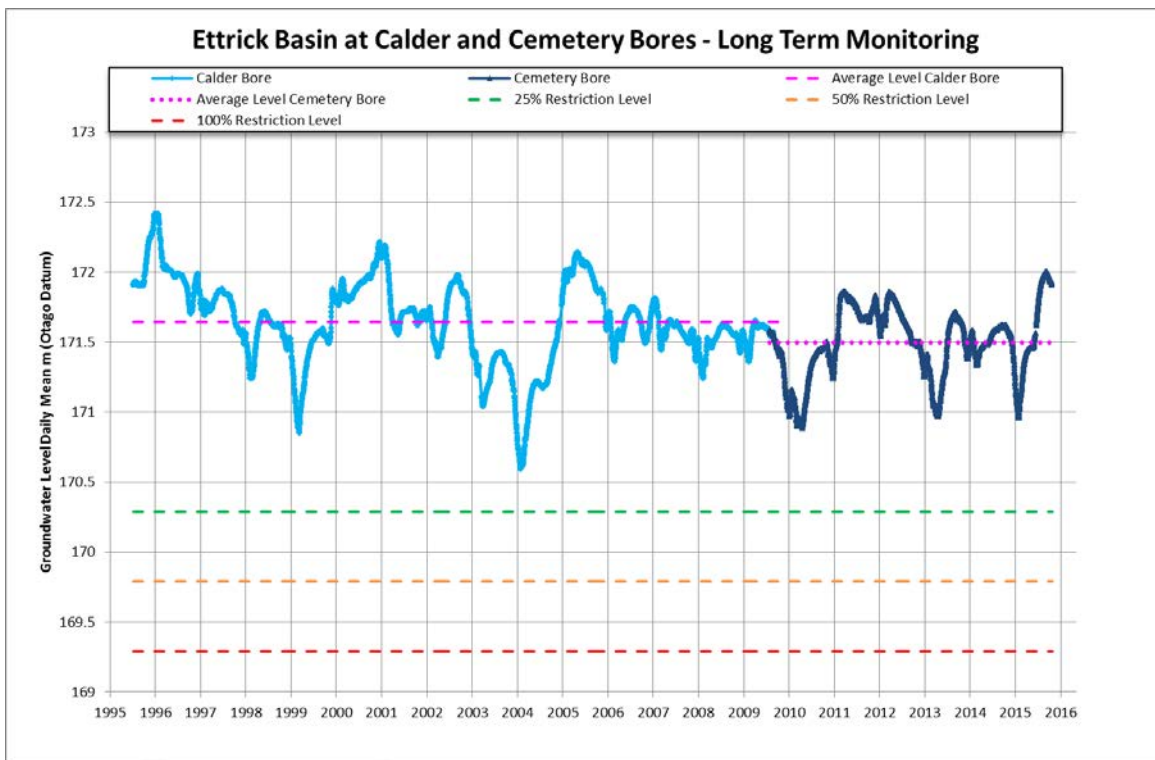


**Figure 7 Daily mean groundwater level (m) in the Lower Taieri Aquifer (West Momona Bore)**

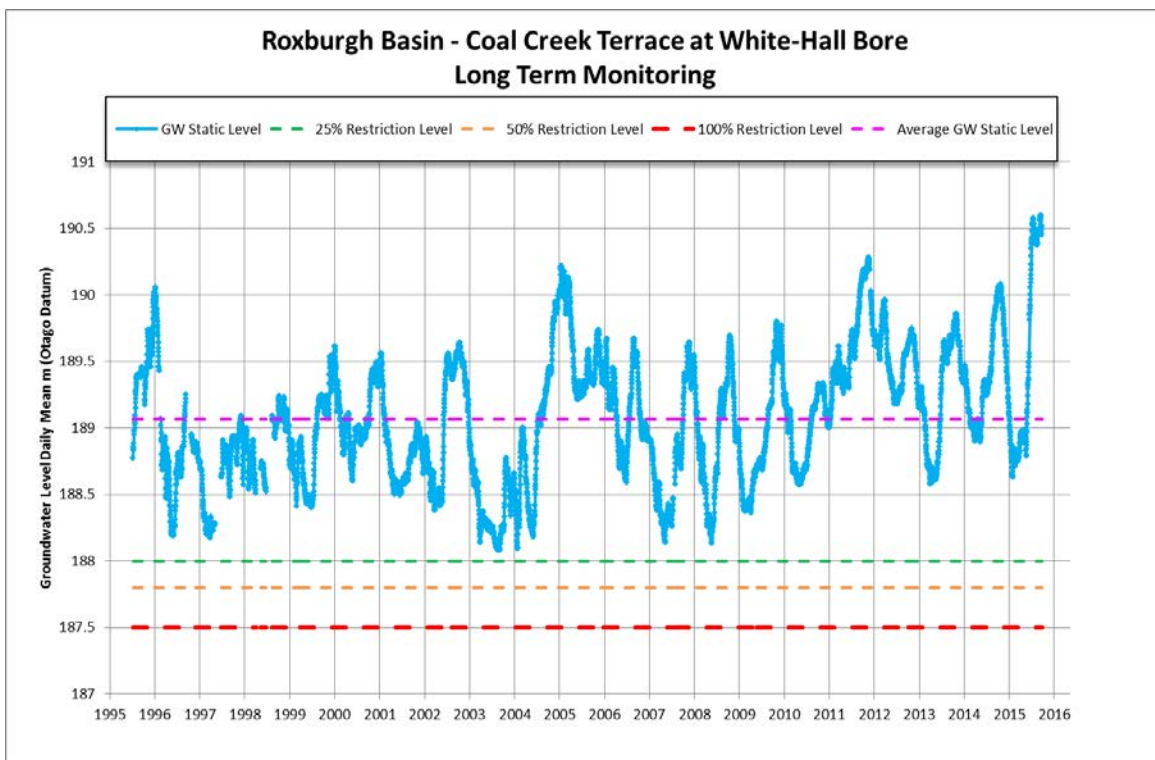


**Figure 8 Daily mean groundwater level (m) in the Lower Taieri East Aquifer**





**Figure 9 Daily mean groundwater level (m) in the Ettrick Basin Aquifer**



**Figure 10 Daily mean groundwater level (m) in the Roxburgh Basin Aquifer**

#### 4. Environmental effects associated with the 2014/15 event

##### Water temperature

Water temperatures observed in all major rivers affected by the 2014/15 event were unlikely to detrimentally affect native fish species (Appendix 4). However, water temperatures in the Kauru River at Ewings, both sites in the Kakanui River, Lindis River at the Clutha confluence and the South Branch of the Waianakarua River at the railway bridge, were likely to have been unsuitable for brown trout (Appendix 4). Water temperatures in the Lindis River at the Clutha confluence and Ardgour Road bridge were likely to exceed the tolerances of rainbow trout (Appendix 4).

##### Periphyton

Extended periods of low, stable flows can result in the proliferation of periphyton, with a wide range of adverse ecological effects. During the 2014/15 low flow event, periphyton was monitored by ORC on a monthly basis at 21 sites across Otago, including the Cardrona (8), Fraser, Hawea, Kakanui, Lindis (7), Manuherikia (3) and Pomahaka Rivers and single surveys in February or March at a further 9 sites in the Kye Burn, Luggate Creek, Shag River (2), Waikouaiti River (2), Sow Burn and Taieri River (2).

The cover of long filamentous green algae exceeded guideline levels for the protection of aesthetics, recreation, trout habitat and angling (30%)<sup>6</sup> at two sites: Kakanui River at McCone's (January, 40%) and Luggate Creek (February, 83%).

Algae biomass (as measured by chlorophyll *a*) exceeded the conservative guideline level for the protection of benthic biodiversity (50 mg/m<sup>2</sup>)<sup>7</sup> at several sites including the Fraser River (January and February), Manuherikia River (Ophir in December, Loop Road in February), Lindis River upstream of Cluden Stream (February), Lindis River at Ardgour Road hydrological site (December, January and March, Figure 11) and Sow Burn (March). The only site that exceeded the biomass guideline for trout habitat and angling was the Lindis River at Ardgour Road hydrological site in March (151 mg/m<sup>2</sup>), which exceeded the 120 mg/m<sup>2</sup> guideline for sites dominated by long filamentous green algae (Figure 12).

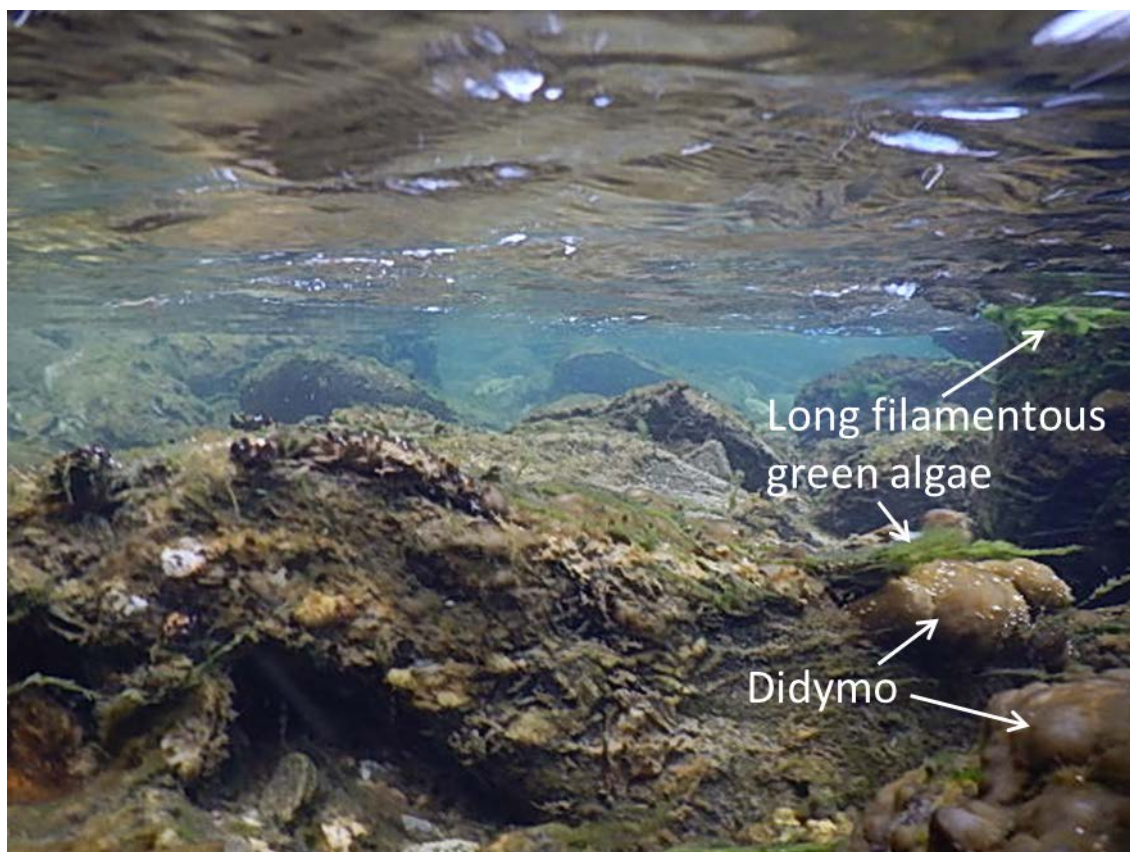
Cyanobacteria cover did not exceed the interim cover guideline (50%)<sup>8</sup>, although cover at the site in the Fraser River did reach 50% in April. Cyanobacteria cover exceeded 30% in the Manuherikia at Galloway (November), Lindis River upstream of Cluden Stream (February) and in the Lindis upstream of the Pass Burn (February and March), although this latter site was dominated by the colonial cyanobacterium *Nostoc*, rather than the more frequently observed benthic cyanobacterium *Phormidium* (Figure 12).

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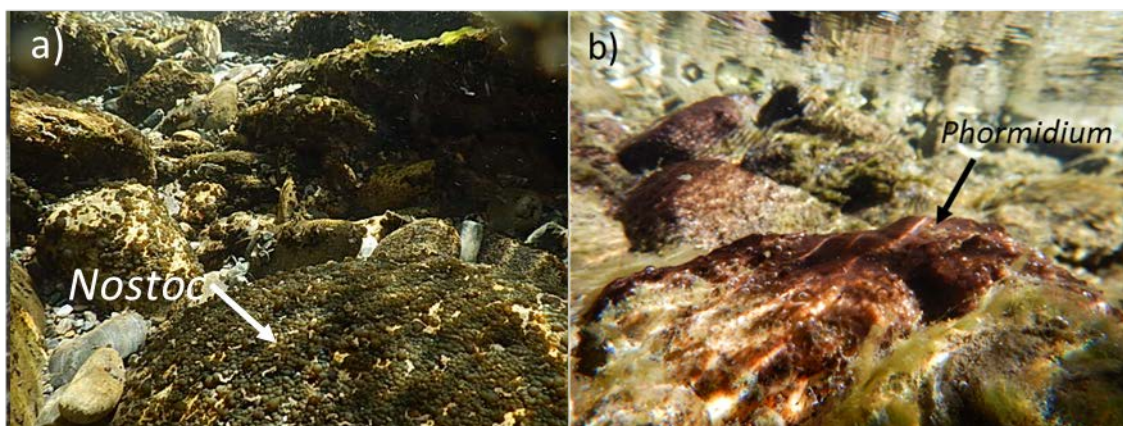
<sup>6</sup> Biggs, B., (2000). *New Zealand Periphyton Guideline: Detecting, Monitoring and Managing Enrichment of Streams*. Prepared for the Ministry for the Environment. Wellington: Ministry for the Environment.

<sup>7</sup> Goodman JM, Dunn NR, Ravenscroft PJ, Allibone RM, Boubée JAT, David BO, Griffiths M, Ling N, Hitchmough RA & Rolfe JR (2014). Conservation status of New Zealand freshwater fish, 2013. *New Zealand Threat Classification Series 7*. Department of Conservation, Wellington, 12 p.

<sup>8</sup> Ministry for the Environment & Ministry of Health (2009). *New Zealand Guidelines for Cyanobacteria in Recreational Freshwaters. Interim Guidelines*. Prepared for the Ministry for the Environment and the Ministry of Health by SA Wood, DP Hamilton, WJ Paul, KA Safi and WM Williamson. Ministry for the Environment, Wellington.



**Figure 11** Lindis River at Ardgour Road hydrological site on 20 January 2015 showing periphyton growths.



**Figure 12** Underwater photographs of a) the colonial cyanobacterium *Nostoc* (Lindis River upstream of Pass Burn, 20 January 2015), b) thick mat of the benthic cyanobacterium, *Phormidium* (Cardrona River at SH6, 17 March 2015).

### Phytoplankton blooms

Low inflows to ponds and water reservoirs along with high water temperatures can result in an increased risk of phytoplankton blooms, especially of potentially toxic cyanobacteria. During the 2014/15 low flow event, algal blooms were observed in Falls Dam as well as in a number of farm ponds in the Manuherikia catchment (Figures 13 and 14). Regular monitoring of Falls Dam indicated that the bloom was dominated by dinoflagellates and diatoms and did not, therefore, pose a health risk to water users or stock. However, the blooms observed in a number of farm ponds in the Manuherikia catchment were likely to be blooms of planktonic cyanobacteria (Figure 14). This is of concern, as water from these ponds may be used for stock water, to irrigate crops, or even for domestic supply. In the case of blooms of toxin-producing cyanobacteria, the

use of water from affected ponds could carry significant health risks for humans and animals.



**Figure 13 Phytoplankton bloom in Falls Dam reservoir, 9 March 2015.**



**Figure 14 Cyanobacteria bloom in a stock pond in the Manuherikia Valley, 9 March 2015.**

## **Macroinvertebrates**

Macroinvertebrates are a good indicator of conditions within a stream, such as water and habitat quality. Because the typical life-span of macroinvertebrates is 6 months to 1 year, the composition of macroinvertebrate communities provides an indication of conditions over a longer timeframe than periphyton communities, which can change rapidly.

Macroinvertebrates were sampled at 16 sites affected by the 2014/15 event as part of long-term monitoring. The macroinvertebrate community index (MCI) scores for most sites were close to, or above the long-term average for these sites. The exceptions to this were the Kye Burn at SH85 and the Manuherikia River at Blackstone Hill, which had lower MCI and SQMCI (semi-quantitative macroinvertebrate community index) scores, with the scores for the Manuherikia site being the lowest scores observed at this site. These results suggest that low flows over the summer months of 2014/15 generally had little detrimental effect on macroinvertebrate communities.

### Drying

A large number of waterbodies across Otago were observed to cease flowing during the 2014/15 event. In some cases this occurred naturally, but in many cases this occurred partly or entirely as a result of water abstraction. This affected many tributaries in the Cardrona, Ida Valley, Lindis, Manuherikia, and Taieri catchments, as well as parts of the mainstem of the Alpha Burn, Bengier Burn, Big Kuri Creek, Cardrona River, Lindis River, Kauru River, Quartz Creek, Shag River and Trotters Creek (Figure 15).



**Figure 15** Drying reaches a) Lindis River upstream of SH8 bridge (17 Mar 2015), b) Trotters Creek off Horse Range Rd (13 Jan 2015), c) Big Kuri Creek upstream of SH1 bridge (13 Jan 2015), d) Shag River upstream of Horse Range Rd (13 Jan 2015)

Of particular note was the middle to lower reaches of the Kauru River drying, with abstraction continuing despite very low flows (Figure 16). This section of the Kauru River is the primary habitat for lowland longjaw galaxias (threatened - nationally critical<sup>9</sup>) and the low flows in 2014/15 resulted in a substantial reduction in the extent of habitat available. It is likely that this event led to significant mortality of adult fish.



**Figure 16 Dry river bed of the Kauru River upstream of the Kakanui Valley Road bridge on 28 January 2015. The flow at Ewings, approximately 7.9km further upstream, was 40-50 l/s at the time.**

Another site of note was Spain Creek in the Ida Valley, where the very low flows and drying of some reaches were likely to have increased the risk to the population of Central Otago roundhead galaxias present (threatened - nationally endangered<sup>10</sup>).

### **5. ORC's actions during the 2014/15 event**

The possibility of river flows reducing to less than minimum flows was identified by ORC in late 2014. The situation was advised to the public in a media release made on 18 December 2014 as flows first receded to minimum flow values (Table 1).

The level of monitoring and planning increased during the first week of January<sup>11</sup>. Senior council staff met daily to assess the situation, and to decide on actions. As there was some discretion in how ORC exercised its responsibilities and functions a set of principles were developed and used to guide decision-making. The principles were refined over time. The finalised set read as follows:

1. ORC will take all practicable steps to mitigate impacts of low flows on river ecology.
2. ORC will manage water use to achieve minimum and residual flows.
3. River flows will be managed to allow timely rebound as river conditions improve.

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<sup>9</sup> Goodman *et al.* 2014.

<sup>10</sup> *op cit.*

4. ORC will permit the distribution of surplus water for irrigation purposes.
5. ORC will work with the local irrigators to determine how available water will be distributed.
6. Water shortage directions do not apply to water held in storage.

In the second week of January meetings were held with water permit holders in the Taieri, Manuherikia and Kakanui catchments to gain information on how water was being managed and the impacts of the event on communities. ORC's role was explained, including how water shortage directions<sup>12</sup> might best be used in this situation. Further community and group meetings were convened by ORC in February. Irrigation community leaders were in phone contact regularly.

An initial meeting was held with Department of Conservation, KTKO Ltd, Otago Fish and Game, Ministry for Primary Industries and Federated Farmers on 15 January to discuss the situation. A further briefing for these stakeholders was held on 26 February. From 28 January, staff participated in weekly stakeholder meetings convened by Federated Farmers.

Staff met with Dunedin City Council water supply staff on 29 January to discuss the situation and DCC's plans for managing their system and water demand.

Ten advisories were emailed to group representatives, water permit holders and other stakeholders over the period January to March. A total of six media releases were made during the event, in December and January. There was a significant amount of communication with the public through radio, television and newspapers.

ORC liaised with representatives of the Kakanui Water Allocation Committee. The committee managed water takes from the Kakanui River without the need for any involvement by ORC.

Most of ORC's effort was focussed on the Taieri River because of the large number of water permits without minimum flow conditions (Figure 17), the very low flows and the inter dependency of flows at the four minimum flow sites (discussed later in this report). ORC requested a 24-hour voluntary shut down of water takes so as to improve knowledge of the amount of water within the river and to determine travel times between minimum flow sites<sup>13</sup>. The results were used to inform assessment and decision-making during the event and will be used again during the next event.

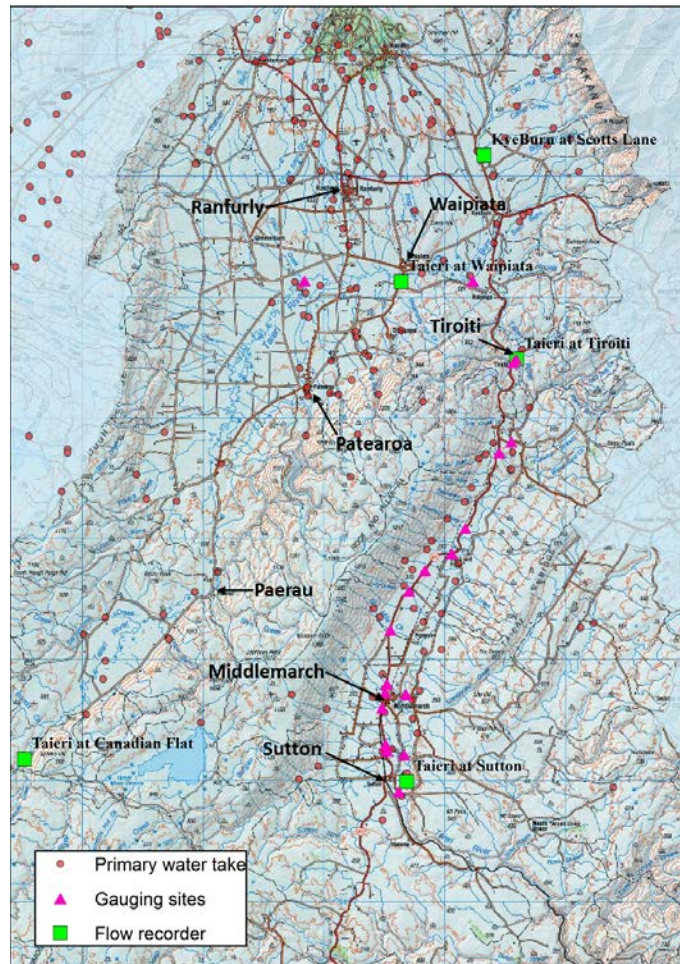
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<sup>11</sup> *Low Flows in Otago Rivers*, Prepared for Council, Otago Regional Council, Report 2015/0705, 2 February 2015.

<sup>12</sup> Under s329 of the RMA, where a regional council considers that at any time there is a serious temporary shortage of water in its region or any part of its region, the regional council may issue a direction for either or both of:

1. The taking, use, damming or diversion of water;
2. The discharge of any contaminant into water.

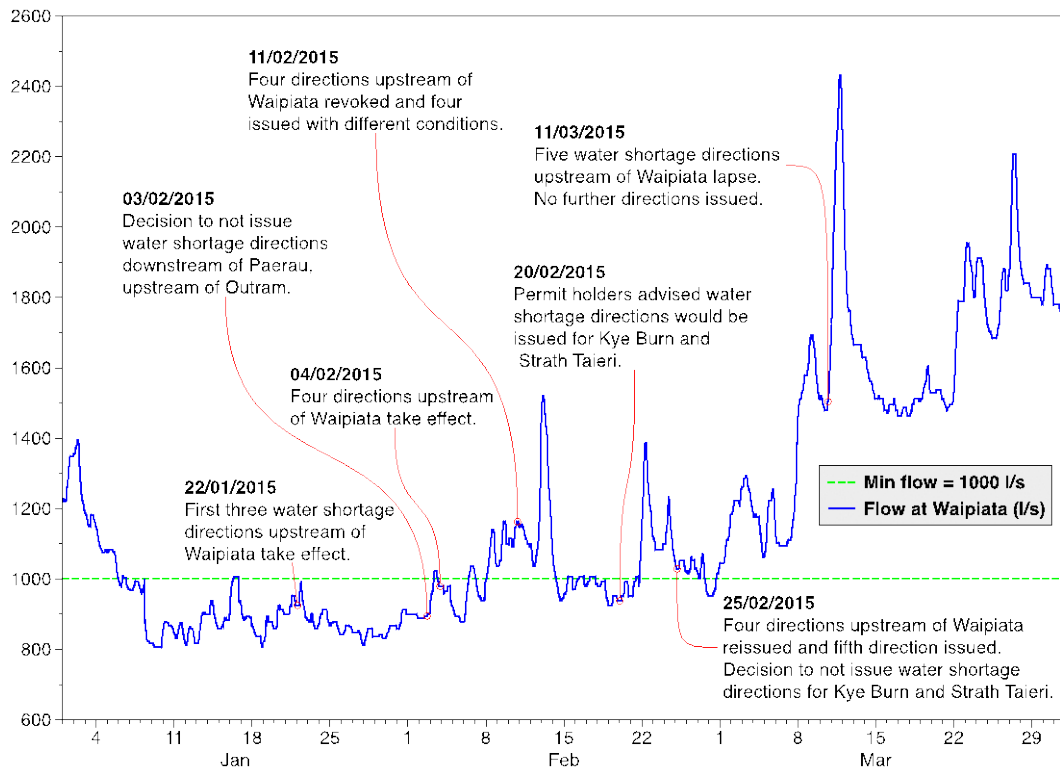
<sup>13</sup> *The effects of the 24 hour voluntary irrigation shutdown on flows in the Taieri River*, Prepared for Technical Committee, Otago Regional Council, Report 2015/1026, 7 July 2015.



**Figure 17 Taieri catchment water permits and minimum flow monitoring sites**

The water permit for Loganburn Dam requires the release of water to assist with maintaining the minimum flow of 1000 l/s at Waipiata. During the 2014/15 event ORC identified the importance of keeping flows no less than 1000 l/s at Waipiata for the purposes of maintaining adequate flows further downstream. To ensure water released from Loganburn Dam reached Waipiata, three water shortage directions were issued that took effect on 22 January (Figure 18). The RMA states that a direction may not last more than 14 days but may be amended, revoked, or renewed by a subsequent direction. The directions therefore applied for the period to 4 February. The directions required the three water permit holders to roster the restricted take of water and suspend the taking of water should the minimum flow at Waipiata not be achieved. At the same time the Kye Burn and main stem users between Waipiata and Tiroiti (who had formed a group), were self-rostering and restricting takes of water voluntarily in an attempt to maintain the minimum flow at Tiroiti. Permit holders downstream of Tiroiti and upstream of Sutton were voluntarily restricting takes.





**Figure 18 Timeline of ORC's actions relating to water shortage directions for the Taieri catchment**

Despite the good support from water permit holders to ration the taking of water and to roster water use it became necessary during the following week for ORC to consider issuing water shortage directions for a wider part of the Taieri catchment. The directions would provide assurance that values would be protected, especially when river flows started to increase. On 30 January the decision was made to issue a water shortage direction for the Taieri catchment downstream of Paerau and upstream of Outram, with exceptions for domestic and stockwater, firefighting, dairy shed cleaning, use of stored water and takes by territorial authorities for reticulated water supply. The directions were to take effect from 4 February and remain in force until 18 February. Community meetings were held at Middlemarch, Ranfurly and Kyeburn on 2 February to explain ORC's proposed actions. On 3 February following a slight recovery in river flows and in keeping with Principle 4 (see above) the decision was made to not issue the water shortage directions (Figure 18).

As noted above, the RMA states that a direction may not last more than 14 days. On 4 February a decision was made to renew the water shortage directions for the three water permits upstream of Waipiata subject to daily review by ORC, as the flow at Waipiata was still less than the minimum flow value despite the rainfall (Figure 18). A direction was also issued to a fourth water permit holder upstream of Waipiata. The four directions required the cessation of the taking of surface water over the period to 19 February.

Further rainfall and the recovery in river flows provided some respite for part of the Taieri catchment however flows receded to minimum flow values again in mid-February. The four water shortage directions were revoked on 11 February and four new directions were issued for the period to 25 February with a different set of conditions. The directions restricted the taking of water and rostered water available above the minimum flow amongst the permit holders.

On 20 February ORC advised Taieri water permit holders that it expected the area covered by a water shortage direction to increase to include the Kyeburn and Strath Taieri areas. On 25 February it was decided to not include those areas, as river flows had increased and were expected to remain high over the following days. At the same time the decision was made to reissue the four water shortage directions upstream of Waipiata for the period to 11 March. A direction was also issued in relation to a fifth water permit upstream of Waipiata.

Staff met with representatives of Falls Dam Company on 27 February to discuss how water takes were being managed within the Manuherekia valley and the storage situation with Falls Dam. The company representatives agreed to continue to endeavour to manage to the minimum flow at Ophir.

In late-February conditions eased significantly in the Taieri catchment. River flows exceeded minimum flow values everywhere in Otago from the first week of March (Table 1).

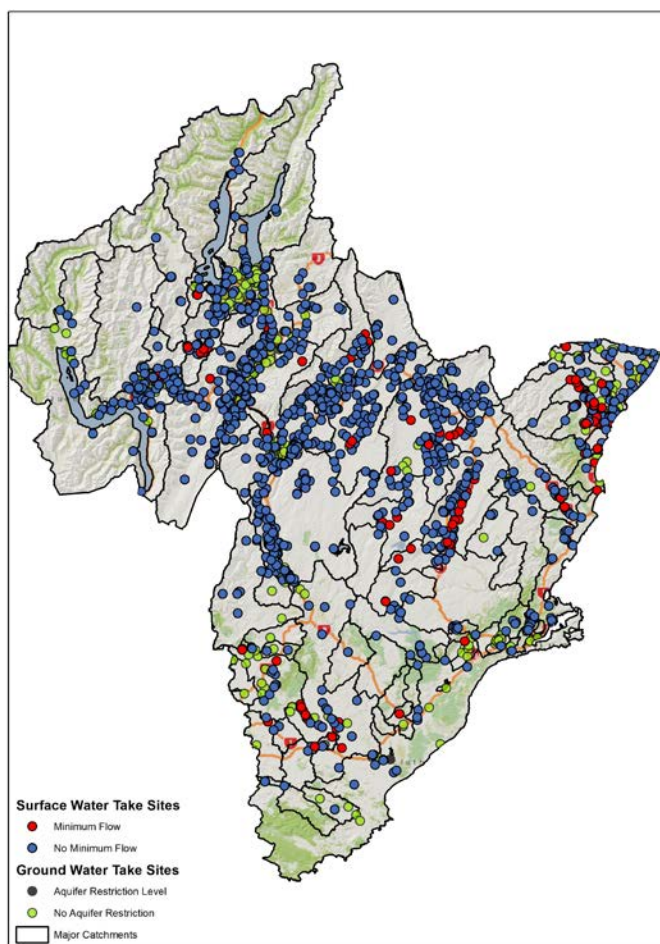
In early-March consideration was given to issuing a water shortage direction in relation to two water permits on the Kauru River for the purposes of managing the effects described in Section 4. Notices were not issued because river flows within the Kauru River increased shortly afterwards.

On 11 March the decision was made to not reissue the five water shortage directions upstream of Waipiata that were to lapse that day and to not issue directions for any other parts of the Taieri catchment, as river flows were expected to continue to increase. The level of activity associated with the 2014/15 event was scaled back.

## **6. Learnings from the 2014/15 event and preparedness for 2015/16**

### **The management context**

ORC's involvement in the exercise of water permits in 2014/15 was necessary because not all permits to take surface water have conditions that adequately provide for a low flow situation. In particular, not all have minimum flows or residual flows. Figure 19 and Table 3 show the scale of the issue.



**Figure 19 Distribution of water permits within Otago**

**Table 3 Summary of water permits in Otago (as at November 2015)**

Total number of water permits to take surface water or groundwater	1849
Total number of water permits to take surface water	1264
Total number of deemed permits to take surface water	433
Total number of water permits with a minimum flow condition	123
Total number of water permits with a residual flow condition	127
Total number of water permits to take groundwater with an aquifer restriction level condition.	34

Table 4 gives data, albeit incomplete<sup>14</sup>, for the Taieri catchment as an example of the situation within a catchment.

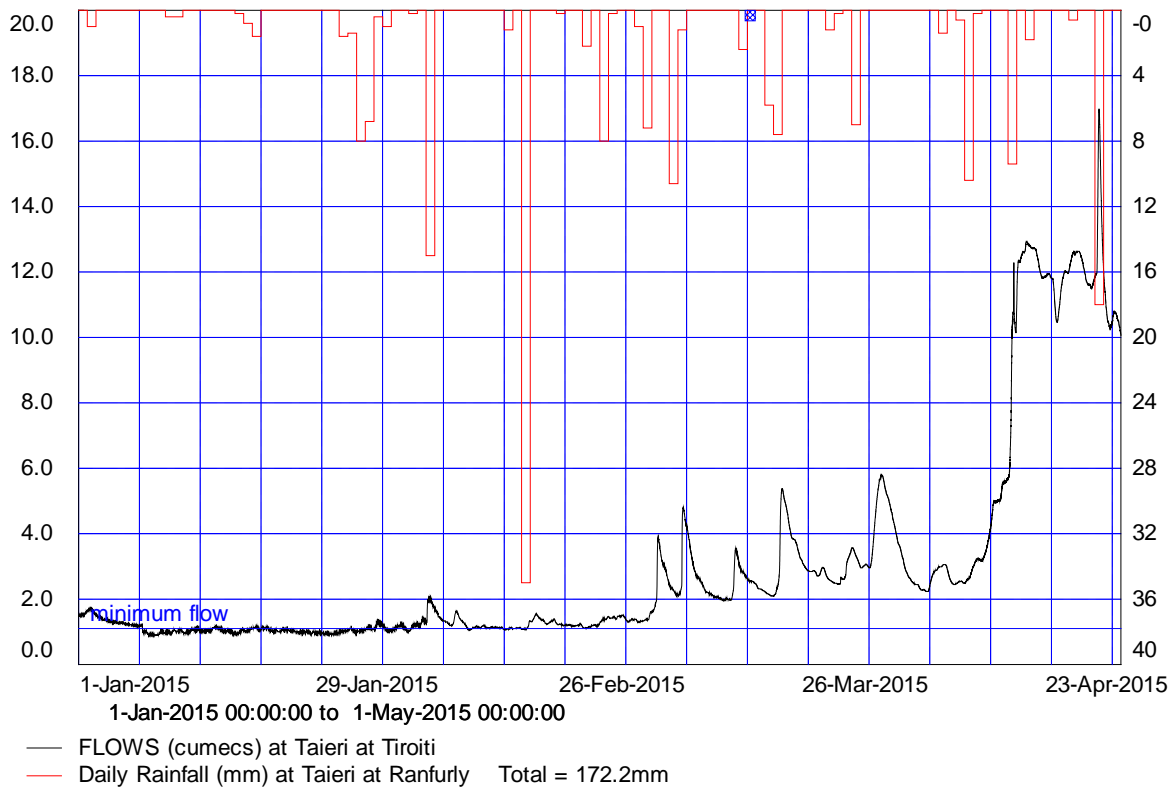
<sup>14</sup> Based on water use measured and reported by holders of water permits. The dataset is incomplete for the reasons given later in this report.

**Table 4 Summary of Taieri catchment water takes 1 November 2014 to 30 June 2015**

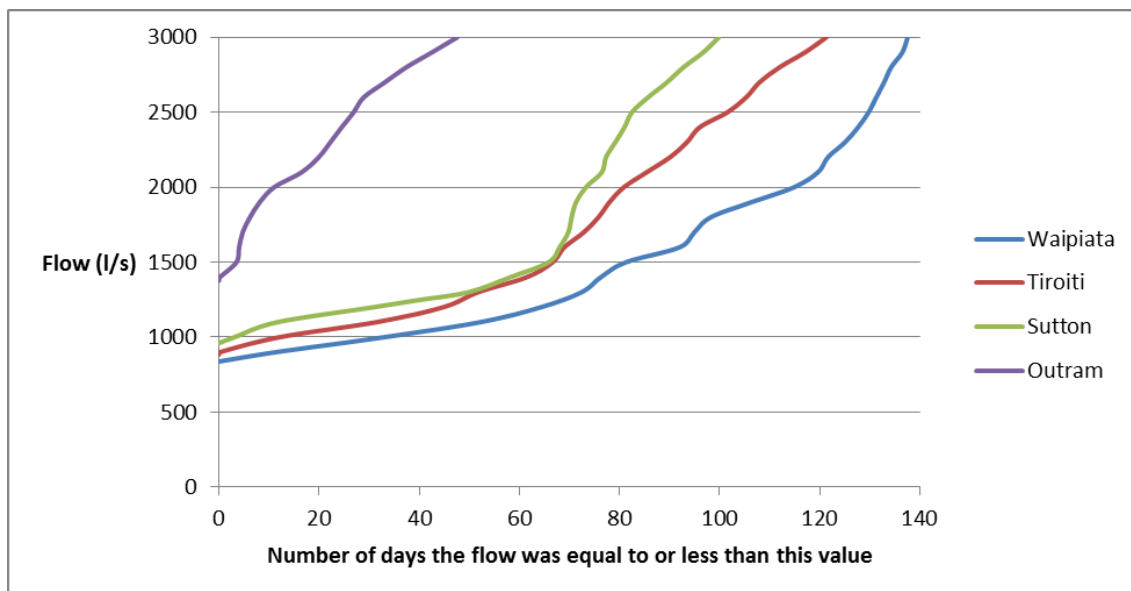
Number of water permits to take surface water	244
Number of water permits to take surface water that were exercised	125
Number of water permits to take surface water that were exercised <u>and</u> controlled by a minimum flow condition	21
Total amount of surface water taken under water permits controlled by a minimum flow condition	>26,072,748 cubic metres
Total amount of surface water taken under water permits <u>not</u> controlled by a minimum flow condition	>173,971,753 cubic metres

The situation will be remedied in time as minimum flows are set for all main rivers and once all water permits have conditions to do with minimum flows and, where appropriate, residual flows. However during the 2014/15 event it created a setting for possible or perceived inequitable taking of water and inadequate protection of ecological and other community values. This necessitated continuous, active management by ORC - one in which some decisions had to be reversed or proposed actions suspended at short notice as the situation changed and as new information became available.

The event was characterised by its long duration (several months) and the way in which river flows hovered around minimum flow values, especially for the Taieri River (Figures 20 and 21). A complicating factor was that recovery in river flows over the course of a day arising from occasional rainfall was typically small when compared with the amount of water that could legally be taken by just a small number of the many water permit holders. This extended the period of flows at or about minimum flow values because, not surprisingly, abstraction was occurring in a way that kept river flows at or not much higher than the minimum flow value.



**Figure 20 Flows in Taieri River at Tiroiti and daily rainfall at Ranfurly, 1 January to 30 April 2015**



**Figure 21 Exceedance of daily average flows at Taieri River minimum flow sites, 1 October 2014 to 30 April 2015.**

In light of this experience and the information presented in Section 3, for planning purposes ORC has made the assumption that flows during summer 2015/16 will be exceptionally low everywhere within Central Otago, North Otago and Dunedin district and that they will require continuous, active management through to April 2016.

### ORC's role and functions

It is vital that ORC's role during a low flow event is defined well and understood within and outside the organisation. This helps ensure that ORC fulfils its statutory responsibilities and that the public, stakeholders and staff are clear as to what ORC will and will not do. Whilst the 2014/15 Annual Plan and 2015-2025 Long Term Plan specify the level of service, objectives and targets for ORC's involvement in flood events there is nothing explicit in either Plan to do with low flow events. Further, during the 2014/15 event ORC focussed on surface water with less attention paid to groundwater and activities that alter river form, such as consented gravel extraction.

In the context of the imminent low flow event, ORC's role and functions will be as follows.

- a. To regulate the taking of water, by enforcing the Regional Plan Water, the Water Metering Regulations<sup>15</sup>, conditions of resource consents and, where appropriate, issuing and enforcing Notices of water shortage direction;
- b. To provide technical information that will help enable holders of water permits to comply with conditions relating to minimum flows, residual flows and minimum aquifer levels;
- c. To gather and report information on the State of the Environment for the purposes of monitoring the effectiveness of the Regional Plan Water and informing the review and setting of minimum flows, residual flows and minimum aquifer levels;
- d. To make available information on how the State of the Environment is or might be affected by the low flow event.

All these functions have a statutory basis under the Resource Management Act.

### **Principles for water management**

The principles and approaches for water management under low flows that were developed and applied during the 2014/15 event have been reviewed for suitability for continued use. Some amendments have been made as a consequence of that review. The amended principles, with changes identified, are as follows.

1. ORC will take all practicable steps to mitigate impacts of low flows on river ecology.
2. ORC will manage water use to achieve minimum and residual flows and minimum aquifer levels.
3. River flows will be managed to allow timely rebound as river conditions improve.
4. ORC will permit the distribution of surplus water for irrigation purposes.
5. ~~ORC will work with the~~ Local irrigators ~~to~~ will determine how available water will be distributed.
6. Water shortage directions do not apply to water held in storage.

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<sup>15</sup> Resource Management (Measurement and Reporting of Water Takes) Regulations 2010.

The principles overlap but that reinforces their meaning and reduces the likelihood of misinterpretation. Principle 4 recognises that ORC would not impose a “minimum flow on a minimum flow”.

In 2014/15 ORC was asked by some water permit holders to help manage their water takes. ORC provided advice on how to operate takes to satisfy minimum flows and advised on the allocation of water. Whilst this was consistent with the management principles developed at the time and probably helpful to the recipients it did compromise ORC’s role as a regulator. It also reduced the incentive for individuals to work together and for groups to take responsibility for allocation decisions. For these reasons Principle 5 has been amended.

Decisions on what particular action should be taken during 2015/16 in relation to rivers that have low flows and aquifers that have low groundwater levels will be made as the event unfolds. Decision-making will be informed by past work on community values<sup>16</sup>, the information and knowledge gained during the 2014/15 event and the event-specific monitoring detailed below.

### **Awareness and assessment of the climate situation**

As noted above, the possibility of low flows in Otago was public knowledge in late 2014. At the time there was no formal process for developing and evaluating climate scenarios and assessing their operational implications for ORC. A formal and systematic method of tracking the climate situation and scenarios was initiated in January and has remained in place. Figure 2 is an output from that process. The purpose is not to take on the role of climate forecaster for Otago but to help fulfil and support the role and functions described above.

### **Access to information on water use**

Complete, accurate and timely water use data is necessary for making good, informed decisions during a low flow event. It assists with compliance monitoring and enables naturalised river flows, and hence resource availability, to be determined.

Relatively few water permits have a condition requiring that daily water use data be submitted to ORC (Table 5). When asked, some permit holders supplied data to ORC on a regular basis during the 2014/15 event, which was very helpful but still fell well short of what was desirable (Table 5). ORC considered utilising water shortage directions to obtain the data but was advised that would not be lawful.

The water metering regulations require that water permits (surface and groundwater) that consent the taking of water at a rate of 5l/s or more be measured continuously<sup>17</sup>. This applies regardless of the type of approval (deemed permit or RMA water permit). Whilst the regulations assist retrospective analysis they do not empower a regional council to obtain information during an event.

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<sup>16</sup> For example, those described in *Kakanui River, Morphology and Riparian Management Strategy*, Version 1.0, October 2015, Otago Regional Council.

<sup>17</sup> The regulations phase in the requirements based on the consented rate of flow. At the time of the 2014/15 event the regulations required that all takes greater than 10l/s be measured. They also require records of daily water use for the 12 months ending 30 June 2015 be submitted to ORC no later than 31 July 2015. There are some exemptions.

**Table 5 Summary of water take measurement and reporting in Otago for the measuring period ending 30 June 2015**

Total number of water permits to take surface water	1264
Total number of water permits to take surface water with a condition requiring water use data to be reported to ORC each day	147
Total number of water permits to take surface water that returned water use data to ORC each day during 2014/15 on a voluntary basis	471
Total number of water permits to take surface water that allow taking of 10l/s or more (i.e. required to measure use from 1 November 2014)	951
Total number of water permits to take surface water that allow taking of 10l/s or more <u>and</u> provided adequate water use data to ORC by the due date (31 July 2015)	366
Total number of water permits to take surface water that allow taking of 10l/s or more <u>and</u> are subject to a minimum flow	119
Total number of water permits to take surface water that allow taking of 10l/s or more <u>and</u> are subject to a minimum flow <u>and</u> supplied adequate water use data to ORC by the due date (31 July 2015)	55

The regulations require that records of the amount of water taken each day (or at the discretion of the regional council, each week) for the 12 months ending 30 June are provided to the regional council by 31 July. The permit holder has no discretion as to whether to provide that information, and records must be provided even if no water is taken. Despite that, compliance for the 12 months ending 30 June 2015 is low in Otago (Table 5). ORC is following-up with permit holders, emphasising the importance and value of water use measurement and reporting. Because of the incomplete dataset, certain analysis of the 2014/15 event cannot be undertaken. That is disappointing as it defeats the purpose of the regulations which is to enable water resources to be accounted for.

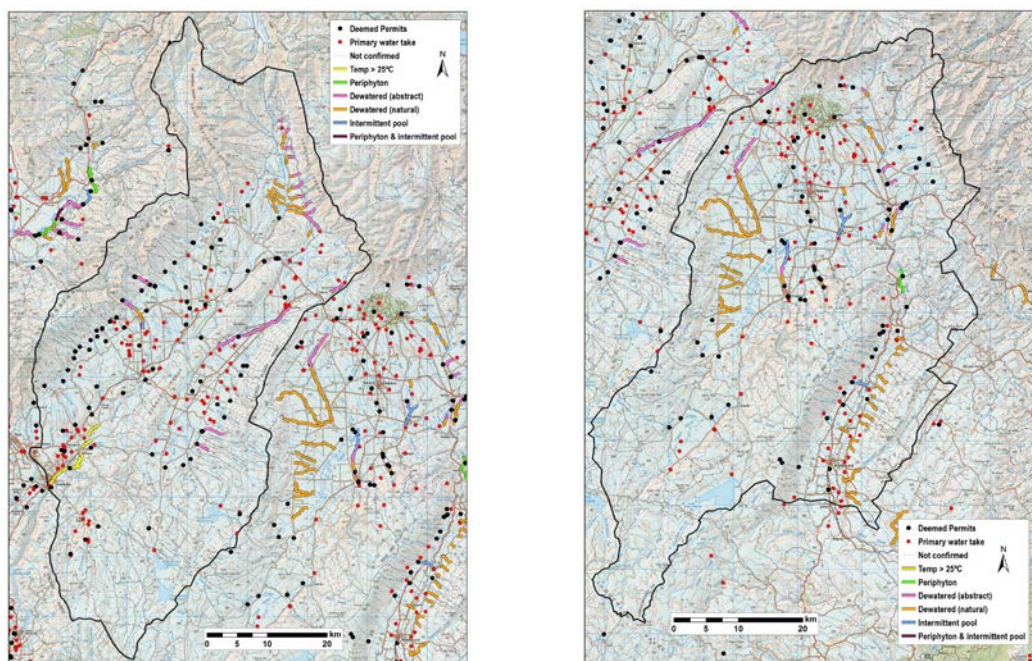
ORC will ask holders of water permits to submit daily water use data to ORC during the next event. The particular catchments, commencement dates and reporting frequencies will be determined later and will be reviewed during the event.

#### **Monitoring and reporting on the state of the environment**

Minimum flows are set primarily for the purposes of maintaining community values. The 2014/15 event presented the opportunity to verify the efficacy of the minimum flows in the Regional Plan Water and to do so during the event. A process was established in which observations being made by ORC as part of routine work along



with event-specific observations were collated and evaluated. This allowed the overall situation for Otago to be understood and helped inform decision-making by ORC. A similar process will be repeated during the imminent event, guided by an Environment Monitoring Plan. The Plan provides for monitoring of water quality, periphyton, macroinvertebrates, fish and phytoplankton. It sets out objectives, methods and frequency of reporting. Based on experience during the 2014/15 event it makes express provision for the monitoring of cyanobacteria in Falls Dam. The Plan has been discussed with Otago Fish and Game, Department of Conservation and KTKO Ltd and will be discussed with other stakeholders too. The results of the monitoring will be shared with permit holders and other stakeholders during the event.



**Figure 22** Examples of mapping of the state of water bodies during the 2014/15 low flow event. Manuherikia (left) and Taieri (right) catchments.

### Taieri River minimum flow regime

The Taieri River has minimum flows specified at more than one location - at Waipiata, Tiroiti, Sutton and Outram. Of the 21 surface water takes on the Taieri River that are subject to a minimum flow condition, only one or other of those sites is referenced in the conditions of each water permit. As noted above, holders of permits without minimum flow conditions voluntarily operated to minimum flows. Whilst this helped sustain flow-related values within each reach (i.e. between each minimum flow site) it did not necessarily provide sufficient (or any) residual flow for other users and uses. The scale of this effect cannot be assessed by the differences between each curve in Figure 21 as they have not been calculated from naturalised river flows i.e. they are influenced by the amount of water taken upstream. Naturalised curves would require complete and accurate water use data and as explained above that dataset is incomplete.

A further issue, not unique to the Taieri River, is that many water takes are on tributaries (Figure 19) and many of those are deemed permits and have not been subject to assessments of effects on the main stem. Those same takes are not subject to minimum flows. During the 2014/15 event ORC was faced with making decisions in the absence of information on effects that would have been available had those takes been subject to a consent application under the RMA and Regional Plan Water. In

particular, information on what effect the taking of water during the event was having on surface flows in the main stem despite the water surface in the tributary being disconnected from the main stem.

Concerns were raised about the equity of allowing water takes on tributaries whilst restricting takes on the main stem, particularly for the Taieri River. There was a desire for a “whole of catchment” approach to water management and the need for robust information to justify decisions by ORC on whether water should or should not be taken from tributaries during the event. The observations made during the 24-hour shutdown were not able to be used for this particular purpose because of the short duration of the shutdown. ORC commissioned NIWA to provide information for the Sow Burn, Ewe Burn and Pig Burn however the information has not assisted with resolving the issue. The matter is being considered further.

### **Compliance monitoring and enforcement**

During the 2014/15 event there was a strong desire by some water permit holders for assurances that other permit holders were complying with conditions, directions and informal agreements and that compliance monitoring was distributed fairly across and throughout water-short catchments. ORC’s compliance monitoring focussed on the water shortage directions that were issued.

A Water Use Monitoring and Enforcement Plan is being prepared for the imminent event. It will have particular regard to the means by which evidence of compliance with water permits and any water shortage directions will be gathered.

Residual flows were not actively monitored during the 2014/15 event nor were groundwater takes or other activities such as consented gravel extraction that have the potential to impact on values at low flows. These matters will receive greater attention during the imminent event.

Some specific technical matters identified during the 2014/15 event will be investigated. These include whether the monitoring site at Scott’s Lane (Kye Burn) should be moved, whether takes on the Un-named Stream and Island Stream should be included in the Kakanui roster and whether a permanent residual flow site should be installed on the Kauru River (for the reasons given in Section 4).

### **Information systems and technology**

ORC provides access to real-time data on flows at minimum flow sites via WaterInfo<sup>18</sup> and FlowPhone<sup>19</sup>. Reliable access is vital for effective water management especially when flows are close to minimum flow values over extended periods (Figure 20) and when the taking of water is not well coordinated between water permit holders. The use of text alerts to supplement WaterInfo and FlowPhone was considered during the 2014/15 event but was not practical due to the flow characteristics described above. That will however be reviewed during the next event.

There is no performance measure or target for availability of ORC’s real-time data however data was accessible during the 2014/15 event for all minimum flow sites on most days. Performance measures and targets are being established for the imminent low flow event and will be incorporated into the 2016/17 Annual Plan.

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<sup>18</sup> [www.water.govt.nz](http://www.water.govt.nz)

<sup>19</sup> 0800 426 463.

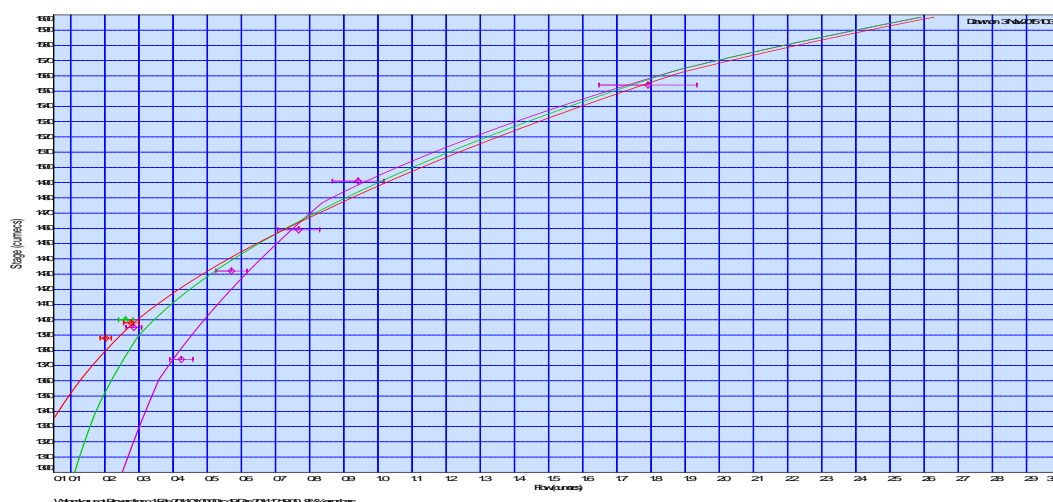
There were three occasions when real-time data was not available for some minimum flow sites. The first was when the water level at one site could not be measured because it was lower than the sensor. Dual sensors have now been placed at all minimum flow sites and at other critical sites, set at appropriate levels.

The second occasion was when software “hung”, causing the transfer of data to WaterInfo to stop. This was compounded by delays in staff becoming aware of the failure and the need to act. Automatic checking has been implemented, with text and email alerts to staff. Staff responsibilities have been clarified.

The third occasion was when the server was reset as part of planned maintenance unrelated to the low flow event. Procedures have been put in place to ensure that full consideration is given to the potential impacts of a planned system outage and that there is both manual and automatic checking of the return to service.

Procedures for promptly communicating system faults to users of WaterInfo and making them aware that ORC is aware of the issue, the timeframe for resolution and the alternative means of getting data in the interim will be improved. In addition, the adequacy of critical information technology and systems for flood and low flows, including procedures for monitoring and responding to outages of flow recorders and of Water Info is being reviewed as part of a new target in the Long Term Plan<sup>20</sup>.

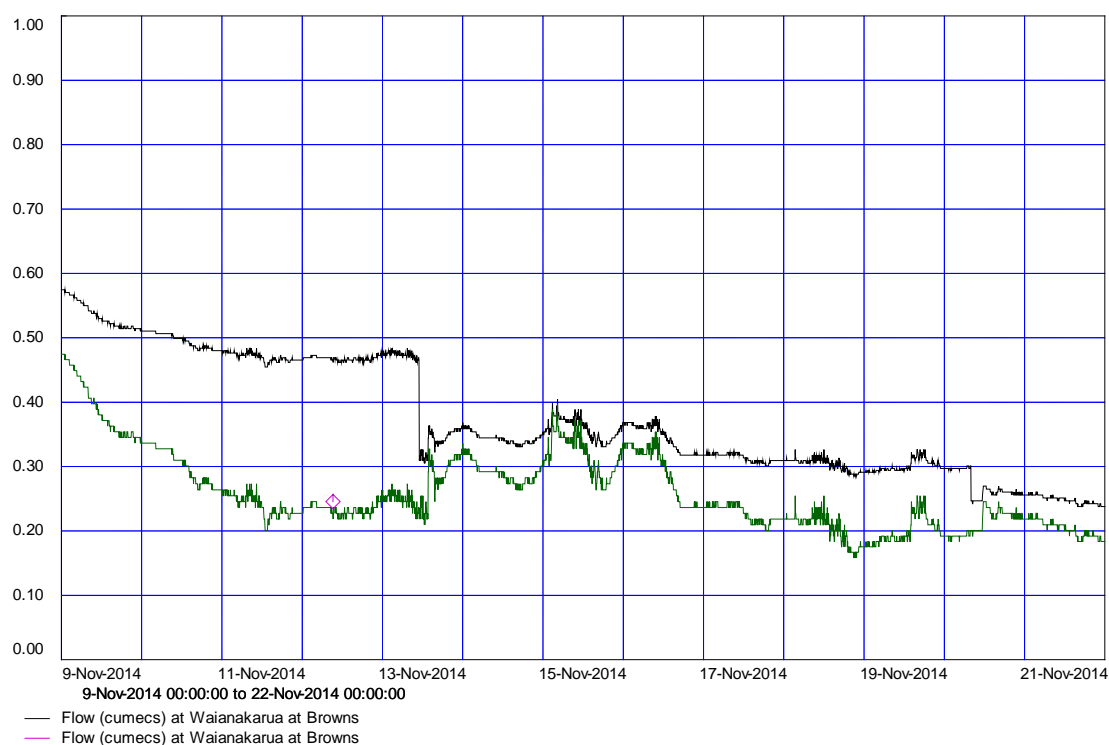
A further issue relates to the way real-time information is presented by ORC (and many other regional councils). The flow data accessed via WaterInfo and FlowPhone are derived from measured water levels and a “rating curve” that converts water level to flow. The rating curve is developed from spot measurements of flow using a current meter or similar (“gaugings”). Each site has a unique rating curve, which changes over time due to changes in site conditions such as bed aggradation and as the number of gaugings at that site increase (Figure 23).



**Figure 23 Flow gaugings and ratings for the Waiakarua River at Browns Pump as at 5 September 2014 (pink), 13 November 2014 (green) and 20 November 2014 (red).**

<sup>20</sup> The 2015-2025 Long Term Plan has the target “undertake an annual review of the resilience and capability of the management and response system for floods and low flow events including the hydrological monitoring network, telemetry system, information technology and staff resources, and links to regional and district level CDEM and territorial authorities”.

As is the case during floods, the 2014/15 event presented both the need and opportunity for an intensified programme of gaugings for the purposes of improving the quality of rating curves. This arose from the unusually low river flows being experienced and the importance of having reliable estimates of flow near minimum flow values. Rating curves were updated and applied immediately to the measured water level data for some minimum flow sites. This had the effect of causing step changes in the flow data displayed on WaterInfo (Figure 24). In some cases this caused the rated flow to instantaneously change from a flow that exceeded the minimum flow value (i.e. taking of water allowed) to one that was less than it (i.e. taking of water is not allowed).



**Figure 24 Unprocessed (black line) and certified (green line) flow data for the Waianakarua River at Browns Pump, 9 to 21 November 2014. It is the unprocessed data that is displayed on WaterInfo. The step changes on 13 and 20 November resulted from changes to the rating curve shown in Figure 23.**

In all cases the gaugings improved the quality of the rating and it was necessary for ORC to immediately apply the new rating however there should have been better communication with water permit holders about the step-change in the data and differences between archived data that has been processed and “corrected” and telemetered data that is unprocessed. Communication about these matters will be improved and explanatory information will be added to WaterInfo.

### **Stakeholder and communications and engagement**

As described in Section 5, there was a significant amount of stakeholder engagement and communication during the 2014/15 event. A Stakeholder Engagement and Communications Plan has been prepared based on that experience and feedback received from stakeholders.

Engagement with water permit holders and the irrigation companies will commence shortly, with a letter highlighting the importance of permit holders being familiar with the conditions of their permit, the value of them working together to roster water use,

and their obligations under the water metering regulations. It will set out ORC's role and functions. It will also ask that they record water use and that they provide it to ORC upon request.

As noted above, Otago Fish and Game, Department of Conservation and KTKO Ltd staff have been briefed on ORC's plans for ecological monitoring and reporting.

Positive feedback was received on the joint stakeholder briefings held earlier this year and they will resume shortly.

Regular liaison with the Ministry for Primary Industries is occurring.

Liaison with the five territorial authorities is occurring. They are being provided with ORC's climate and river flow analysis and kept informed of ORC's planning. Protocols for public communication about the availability of water and the exchange of information will be discussed with them shortly.

Staff will be meeting with Public Health South regarding responsibilities and protocols for monitoring and reporting cyanobacteria. Communication material will include information on how owners of reservoirs should deal with observations of phytoplankton.

### **Resourcing**

As noted above, for planning purposes ORC has made the assumption that flows will be exceptionally low everywhere within Central Otago, North Otago and Dunedin district through to April 2016. The management approach will be scalable to a geographic area that is larger or smaller.

An event that extends over a relatively long period and which involves a large number of staff increases the organisation's susceptibility to being impacted by an unrelated, unplanned event. This issue needs to be monitored.

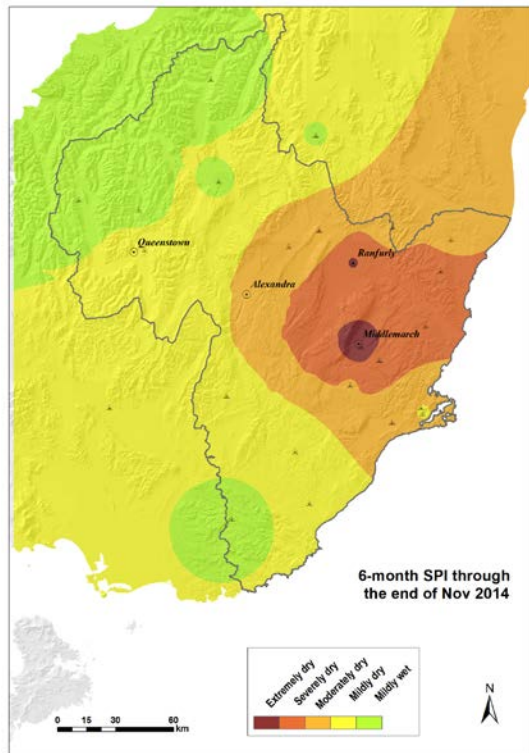
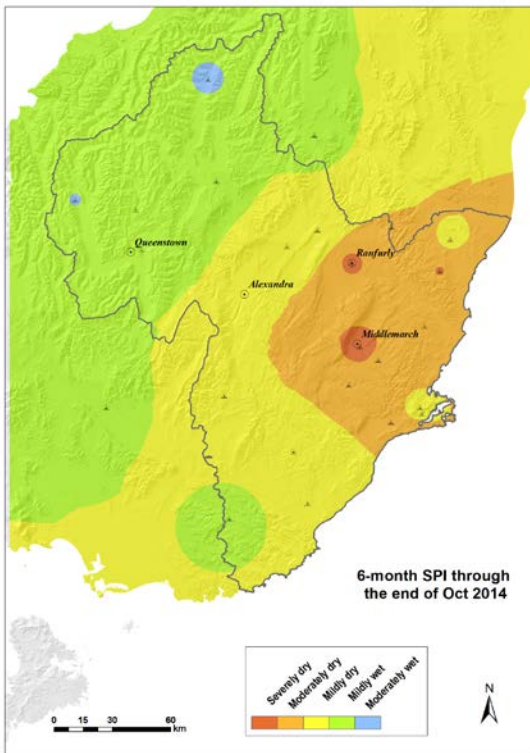
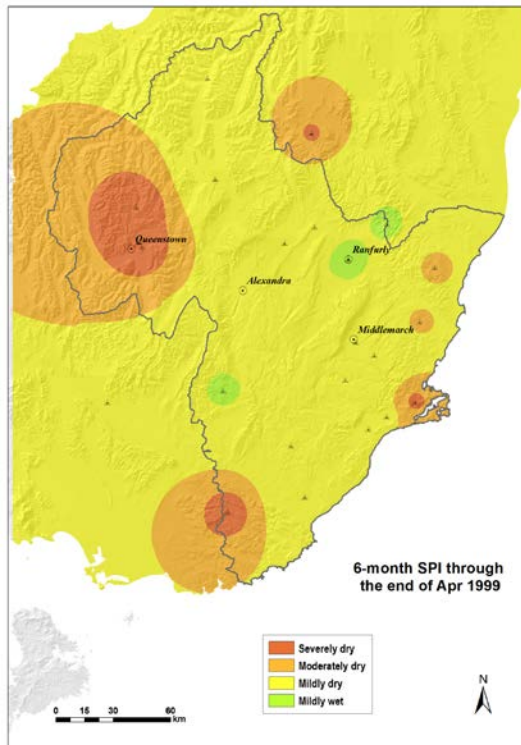
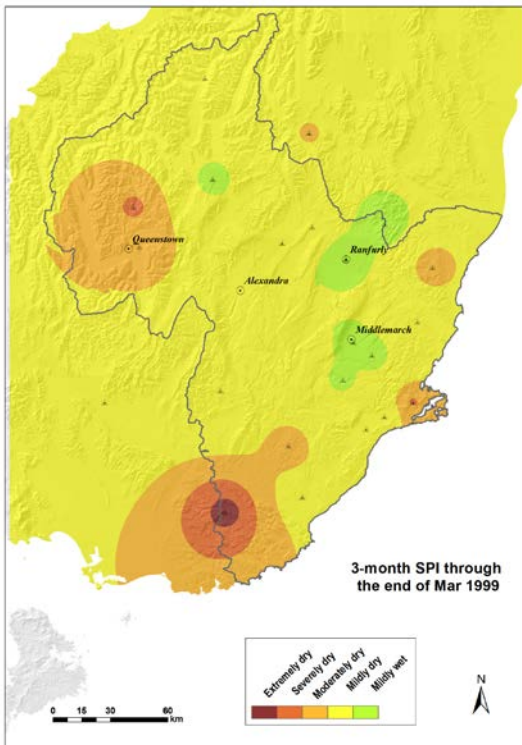
ORC's involvement in the 2014/15 event required a significant amount of staff resourcing. This impacted on some planned work as explained in the 2014/15 Annual Report. Many aspects of a low flow event are part of business-as-usual activity for ORC, brought forward or more focussed. Liaising with water management groups, undertaking compliance audits and monitoring the effectiveness of the Regional Plan Water are examples. Notwithstanding that, the event poses resourcing challenges. A Resourcing and Information Systems Plan has been prepared and options for using staff of other regional councils on a short term basis are being explored.

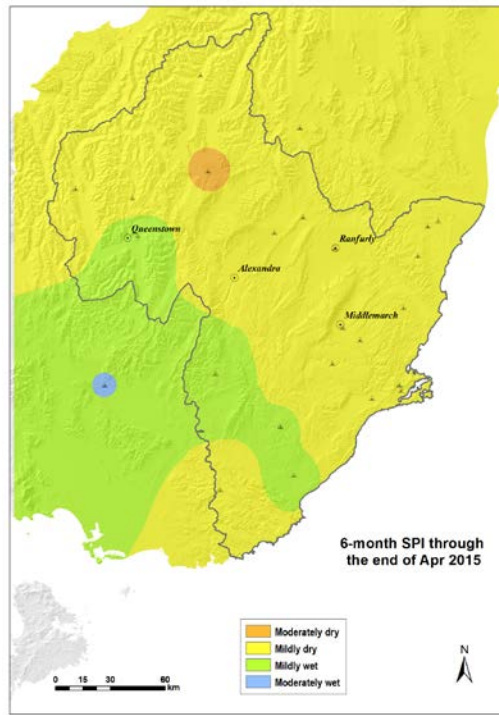
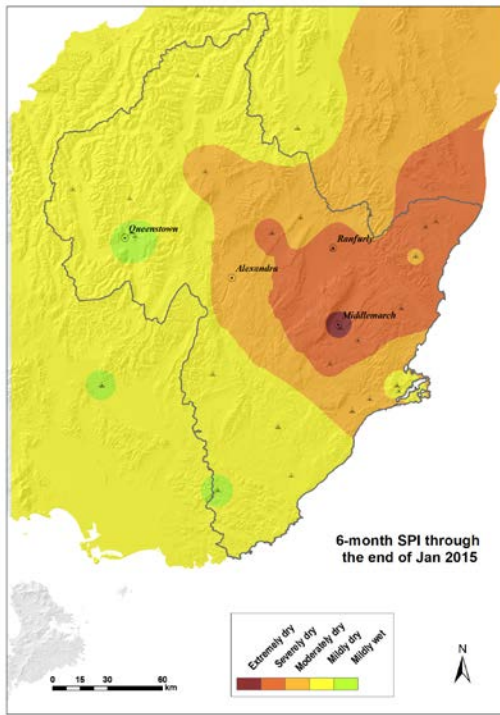
**7. Recommendations**

1. That this report is received and noted.
2. That Council's preparations for an imminent low flow event are noted.

Gavin Palmer  
**Director Engineering, Hazards and Science**

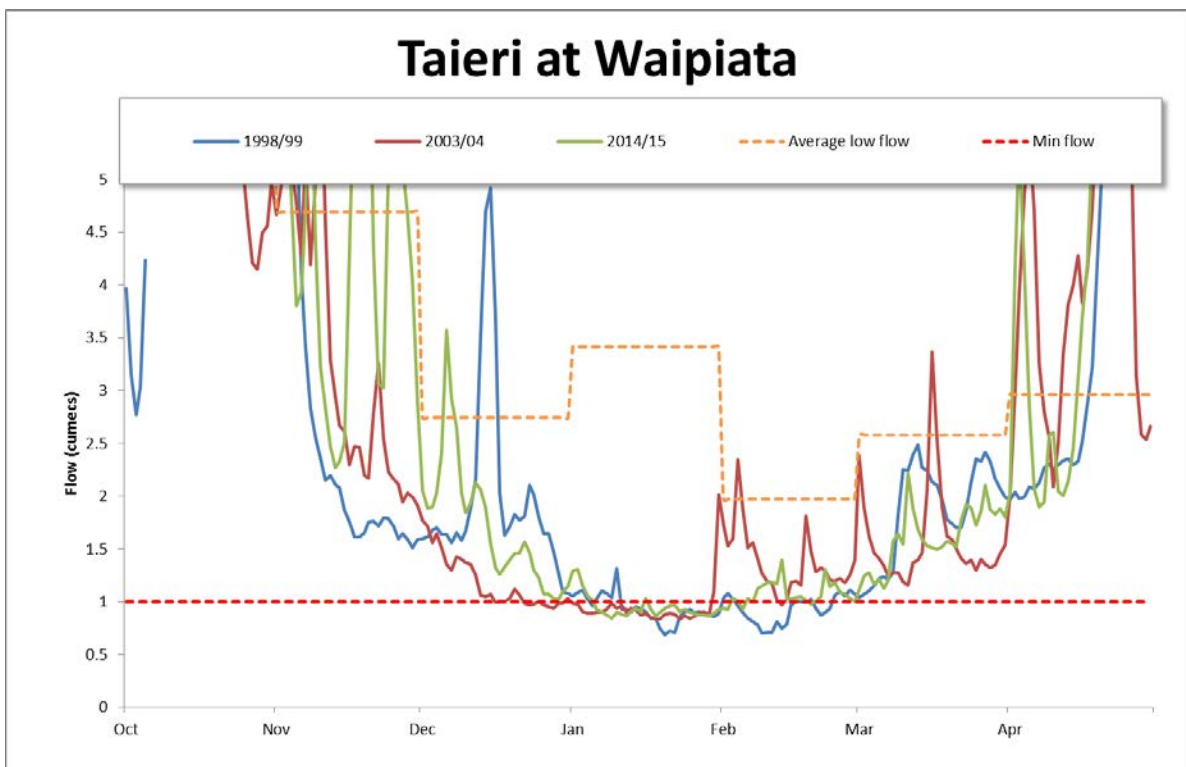
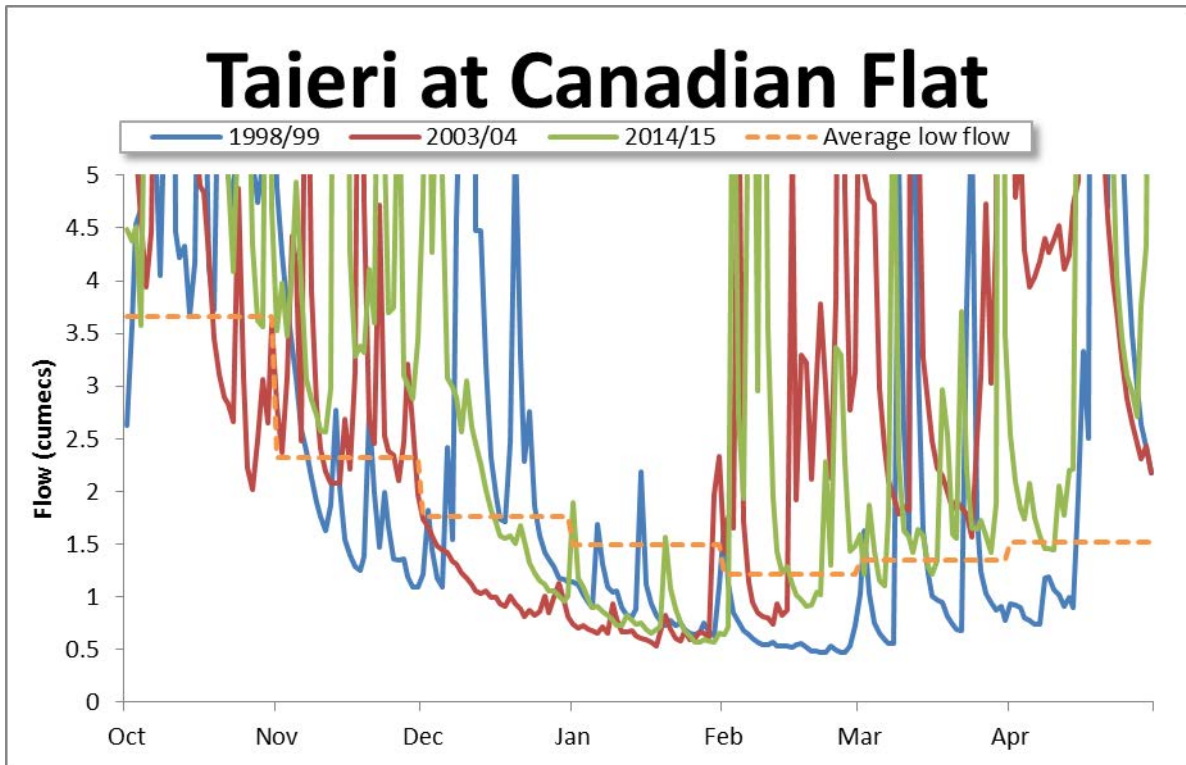
Appendix 1 Maps of the Standardized Precipitation Index (SPI) for Otago



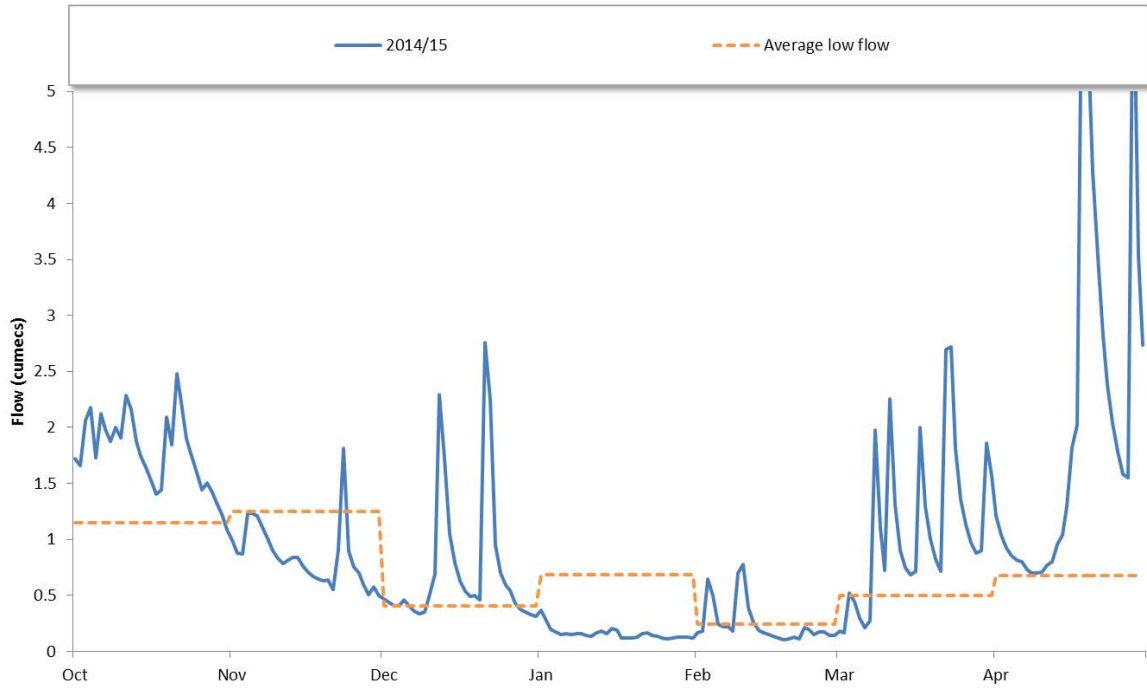




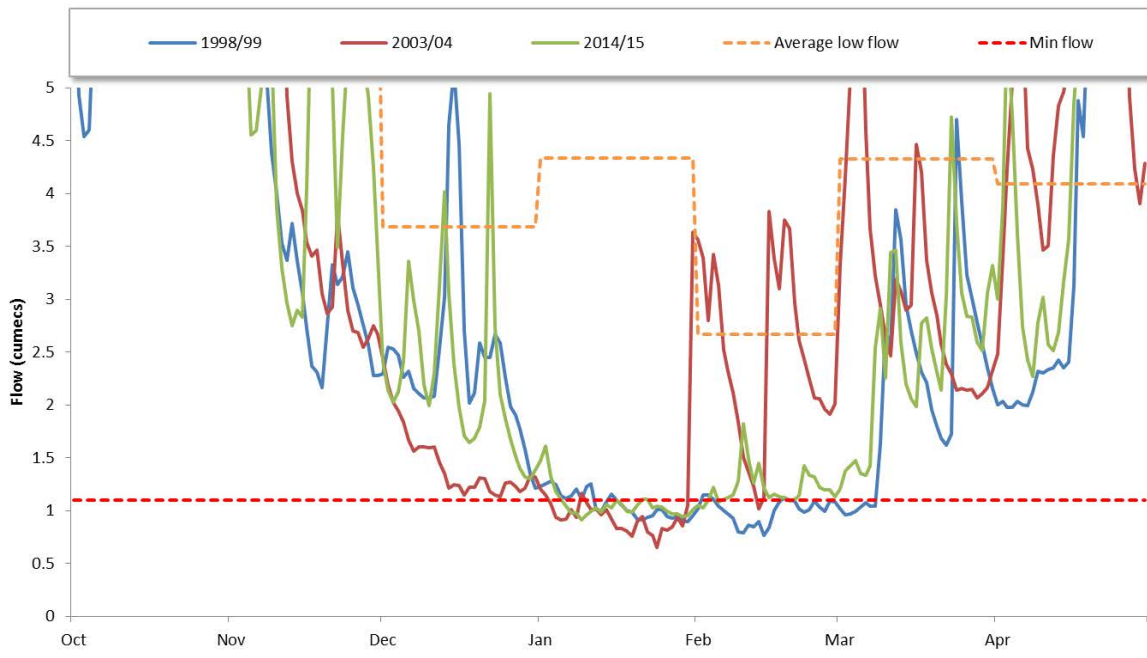
Appendix 2 Representative flows sites from Otago comparing flows during irrigation season in 1998/1999, 2003/2004 and 2014/2015

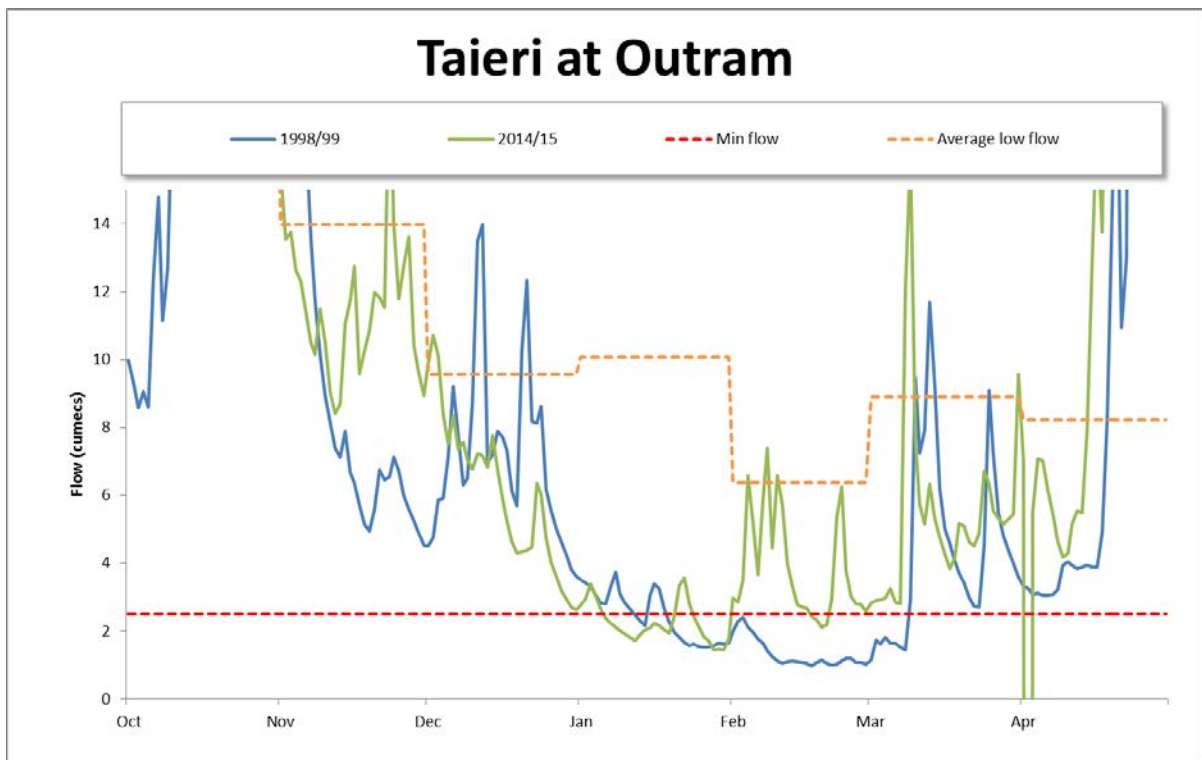
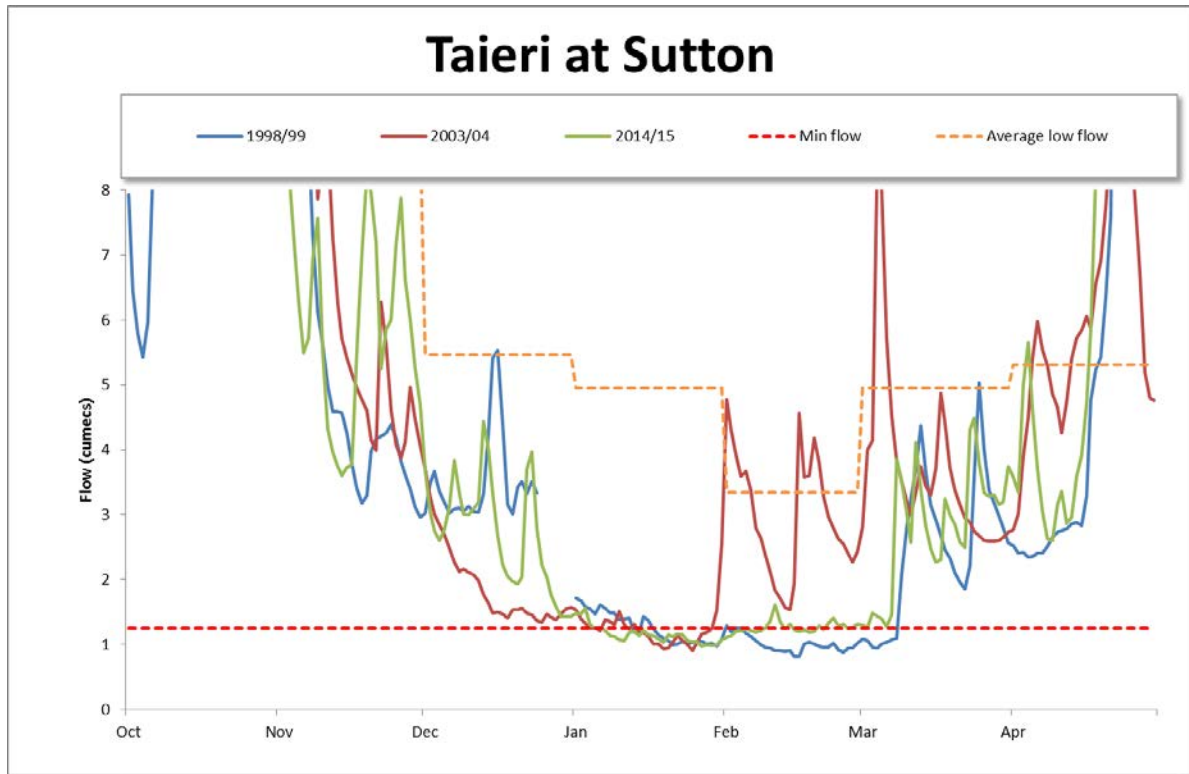


### Kye Burn at Scotts Lane

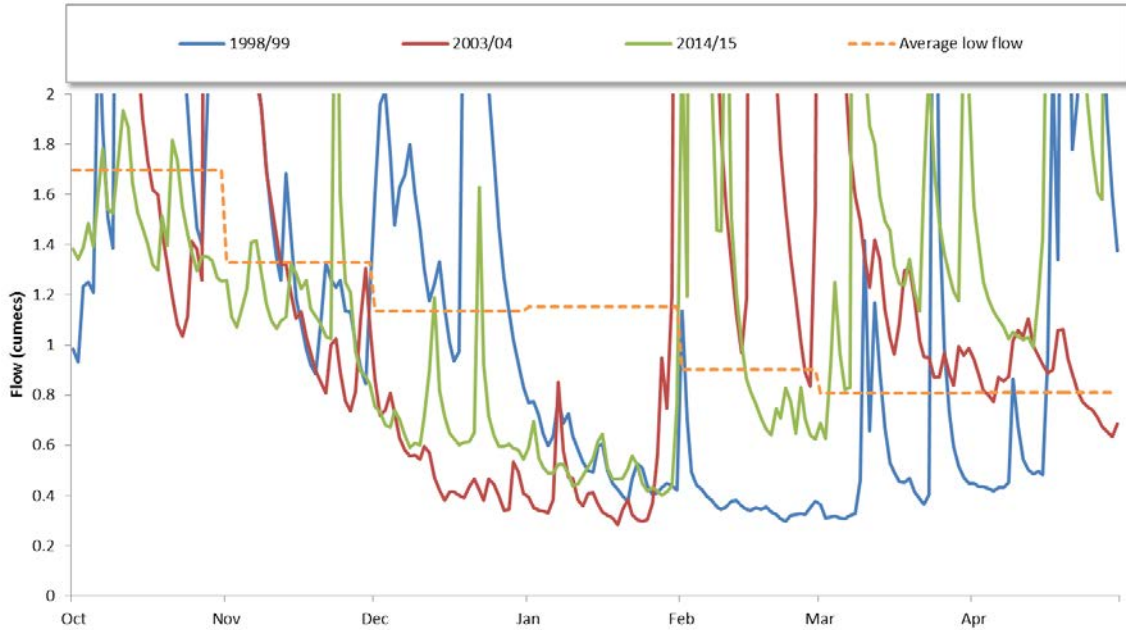


### Taieri at Tiroiti

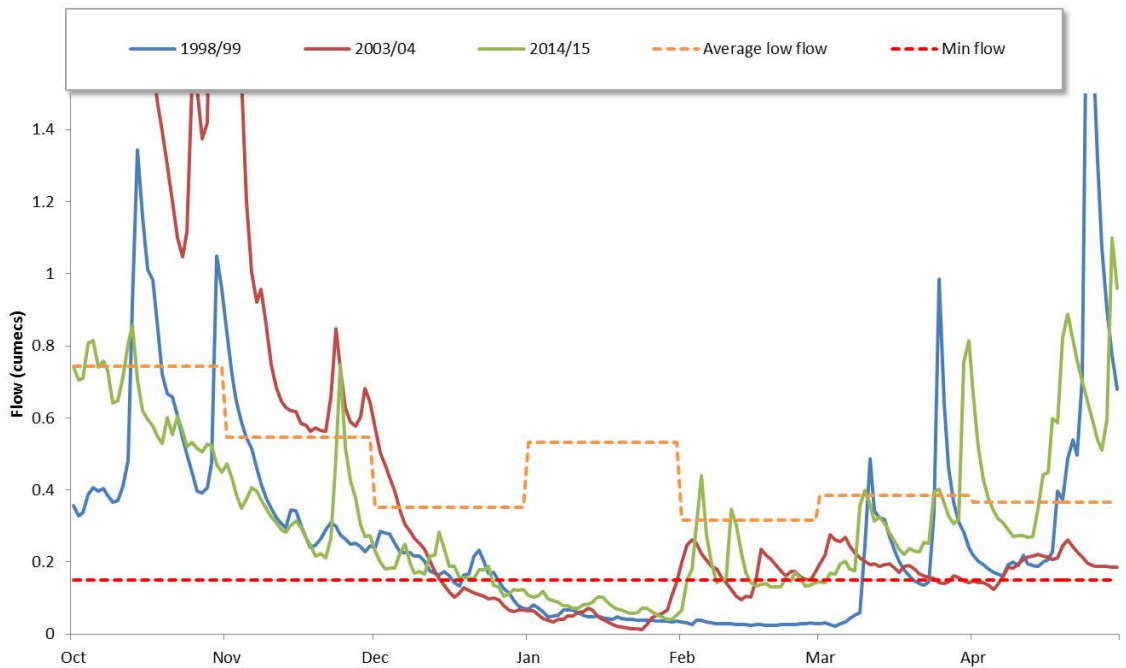




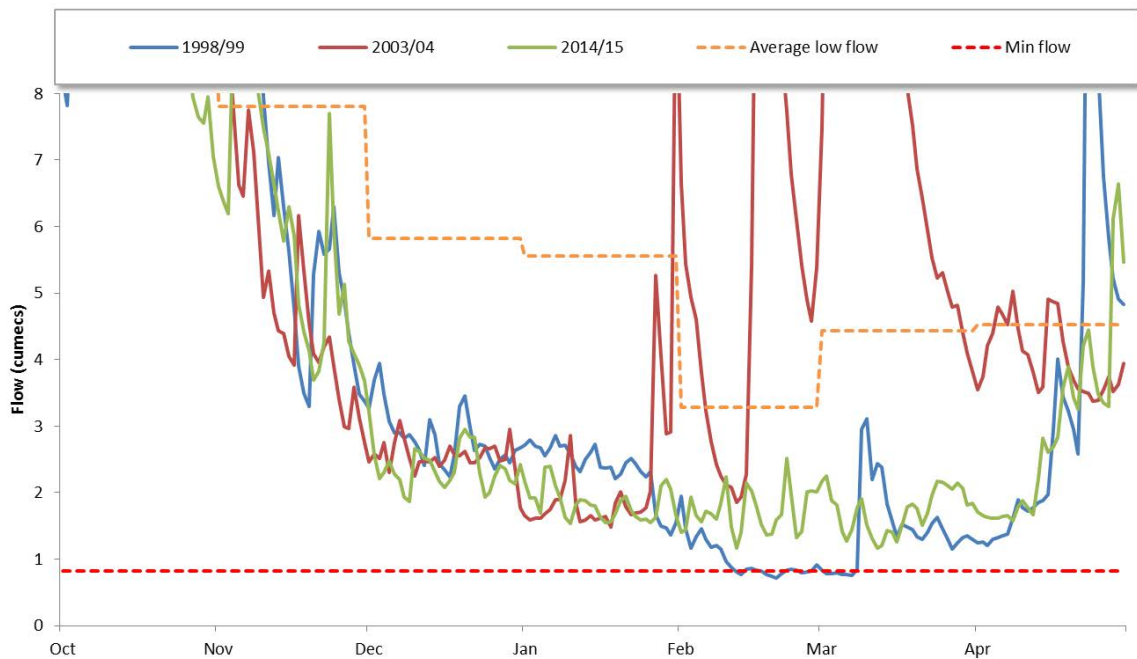
### Kakanui at Clifton Falls



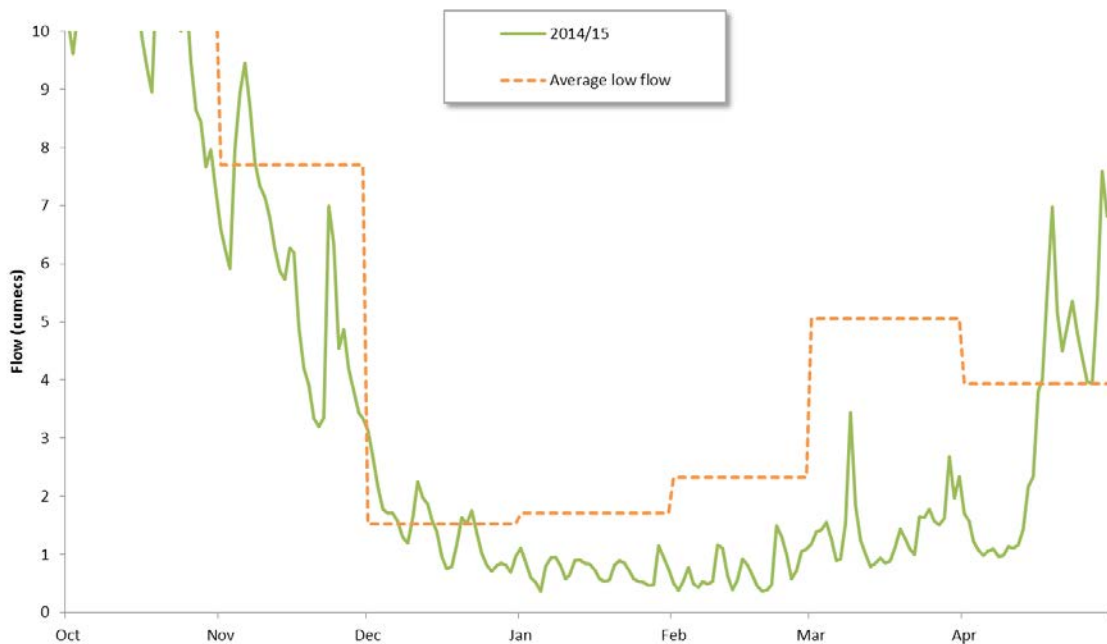
### Shag at Craig Rd



### Manuherikia at Ophir



### Manuherikia at Campground



## Appendix 3 Groundwater levels in Otago aquifers

Aquifer	Aquifer Reference Bore	Regional Plan Water			Monitoring period*		Oct 2014 – Sept 2015			
		Restriction levels (metres above datum)			Groundwater Levels (metres above datum)		Groundwater Levels (metres above datum)			
		25 %	50%	100%	Lowest	Average	Lowest	Average	Current	
North Otago Volcanic	Webster Well	126.0	125.5	125	128.1	129.82	129.96	131.07	129.99 on 2 Oct.	
Lower Waitaki Plains	Dennisons Bore				106.33	108.16	107.13	108.14	<b>107.13 on 24 Sept.</b>	
Waiareka	Isbisters Bore				121.36	122.64	123.81	124.09	<b>123.82 on 23 Sept.</b>	
South Dunedin Coastal	Bathgate Park Bore				0.44	0.69	0.56	0.70	0.70 on 12 Sept.	
	Culling Park Bore				-0.28	0.13	-0.28	0.07	0.04 on 16 Oct.	
	Tonga Park Bore				0.27	0.56	0.27	0.56	0.5 on 12 Oct.	
	Kennedy Street Bore				0.26	0.60	0.32	0.58	0.36 on 24 Aug.	
Lower Taieri	East - Caledonia Drive Piezo1				117.69	118.23 for Harleys P6 118.42 / CaledoniaP1		118.074	118.31	118.36 on 3 Nov.
	East - Caledonia Drive Piezo2	110.5	110	109.5	109.2	111.70 for Harleys P2 111.27 / CaledoniaP2	110.36	111.55	111.70 on 3 Nov.	
	Outram Bore				103.05	103.71	103.11	103.62	103.84 on 7 Oct.	
	West - Momona Bore				100	99.5	99	99.71	100.55	<b>99.71</b>
		Waipori Piezometer 1				99.82	100.32	99.82	100.25	100.60 on 2 Oct.
		Waipori Piezometer 3				99.89	100.41	99.89	100.30	100.65 on 2 Oct.
Ettrick Basin	Cemetery Bore	170.29	169.79	169.29	170.59	171.64 for Calder Bore 171.50/Cemetery bore	170.96	171.53	171.91 on 30 Oct.	
Roxburgh Basin Coal Creek Terrace	White-Hall Bore	188	187.8	187.5	188.08	189.07	188.63	189.51	190.45 on 30 Sept.	
Dunstan Flat	Muttontown Bore				137.09	138.78	137.11	138.01	137.82 on 12 Nov.	
Manuherikia	Galloway Bore				247.11	247.75	247.11	247.57	248.67 on 12 Nov.	
Hawea Flat	Landfill Bore				320.55	321.67	320.55	321.65	320.66 on 14 Oct.	
	Loach Road Bore				319.08	319.68	319.17	319.63	<b>319.08 on 16 Oct.</b>	
Wanaka Basin Cardrona Gravel	Refuse Tip Envirowaste Bore				303.6	306.81 for Wilsons Bore 305.51/RefuseTipEnvirowas		304.53	305.94	306.1 on 6 Nov.

				te			
Wakatipu Basin	Lake Hayes Bore		328.53	328.64	328.56	328.66	328.56 on 23 Oct
	Morven Ferry Bore		358.51	359.08	358.68	359.17	359.03 on 23 Oct.
	Domain Road Bore		352.85	352.88	352.85	352.88	352.93 on 23 Oct

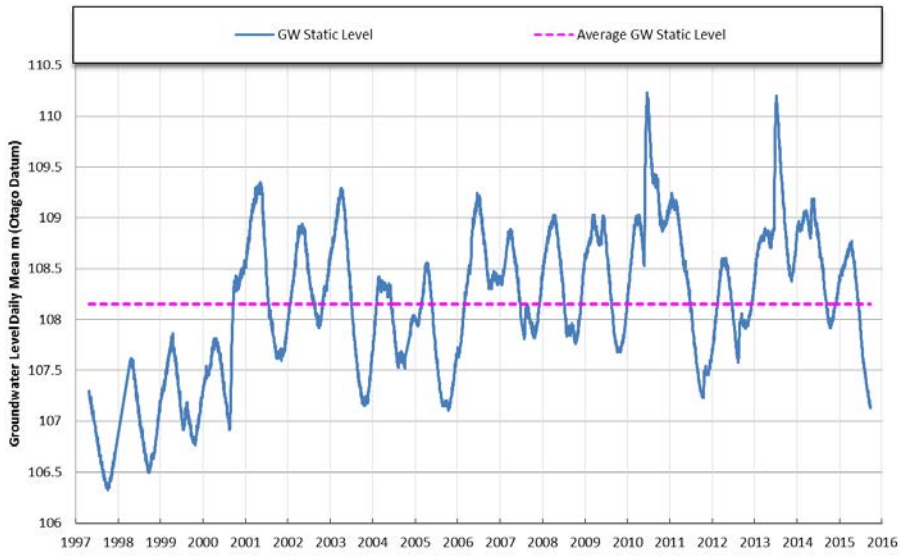
 For these bores the levels are in metres above sea level.

**Aquifer monitoring periods:**

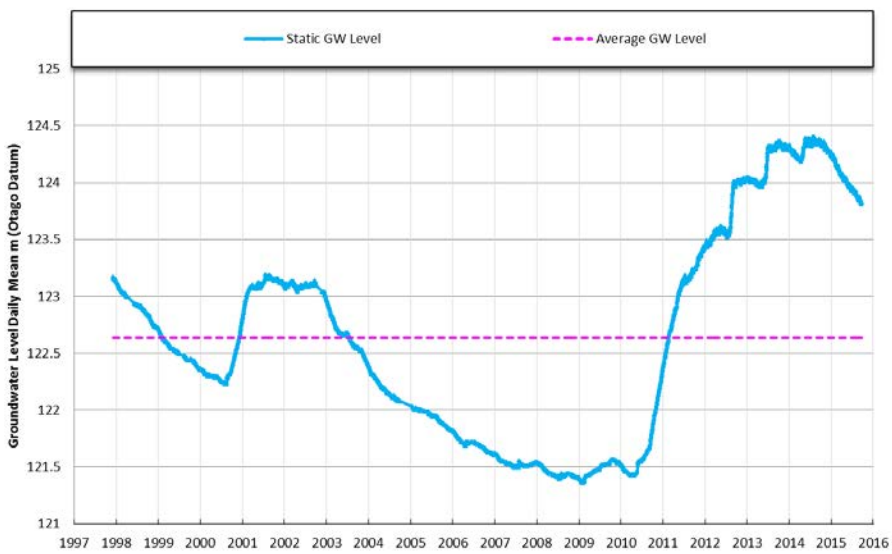
<b>Aquifer</b>	<b>Reference Bore</b>	<b>Monitoring period</b>
North Otago Volcanic	Webster Well	August 1986 – On going
Lower Waitaki Plains	Dennisons Bore	April 1997 – On going
Waiareka	Isbisters Bore	December 1997 – On going
South Dunedin Coastal	Bathgate Park Bore	October 2009 – On going
	Culling Park Bore	May 2014 – On going
	Tonga Park Bore	October 2009 – On going
	Kennedy Street Bore	October 2009 – On going
Lower Taieri	East - (Harleys Well Piezo 6) Caledonia Drive Piezo 1	December 1995 – July 2015 July 2015 – On going
	East - (Harleys Well Piezo 2) Caledonia Drive Piezo 2	December 1995 – July 2015 July 2015 – On going
	Outram Bore	April 1997 – On going
	West - Momona Bore	April 1995 – On going
	Waipori Piezometer 1	July 2006 – On going
	Waipori Piezometer 3	July 2006 – On going
Ettrick Basin	(Calder Bore) Cemetery Bore	July 1995 - October 2009 for Calder Bore August 2009 - On going for Cemetery bore
	White-Hall Bore	July 1995 – On going
Roxburgh Basin (Coal Creek Terrace)	Muttontown Bore	May 1986 – On going
Dunstan Flat	Muttontown Bore	May 1986 – On going
Manuherikia	Galloway Bore	June 2015 – On going
Hawea Flat	Landfill Bore	July 2014 – On going
	Loach Road Bore	July 2014 – On going
Wanaka Basin Cardrona Gravel	(Wilson's Bore) Refuse Tip Envirowaste Bore	November 1995 – September 2000 June 2001 – On going
	Lake Hayes Bore	July 2015 – On going
Wakatipu Basin	Morven Ferry Bore	June 1997 – On going
	Domain Road Bore	July 2015 – On going

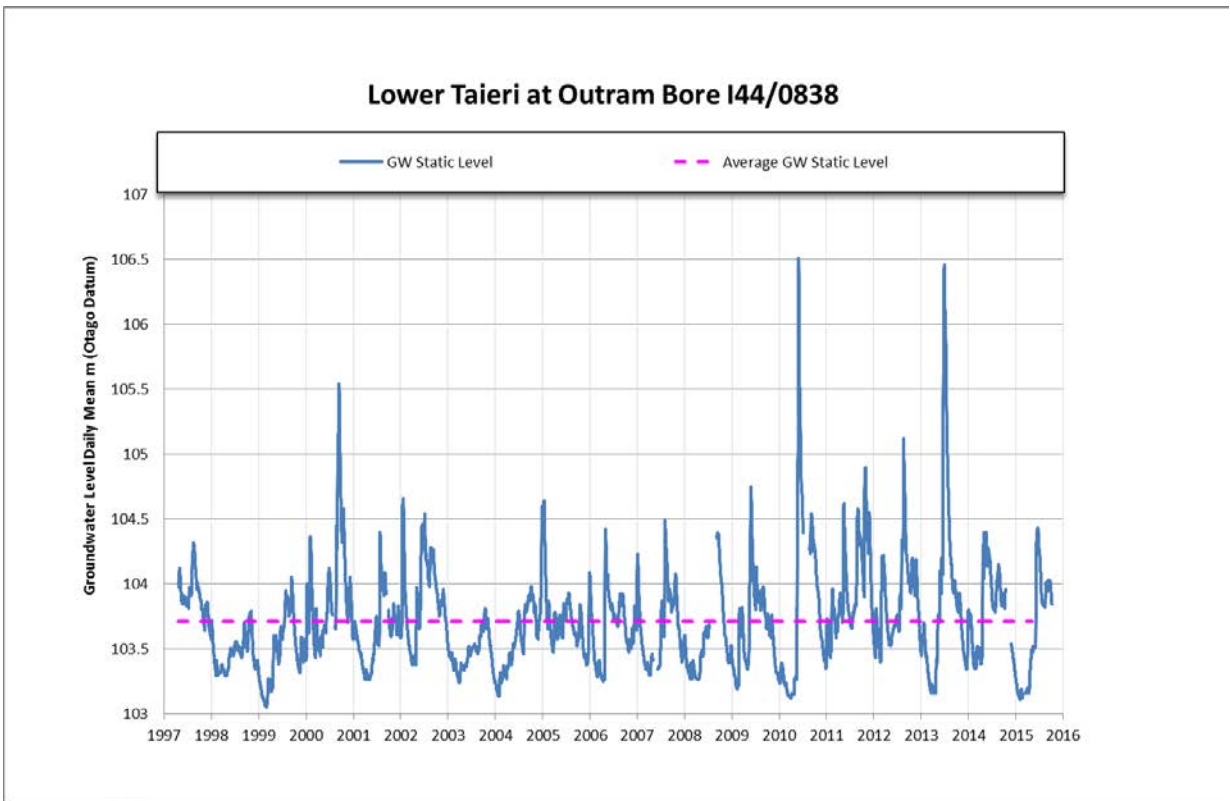
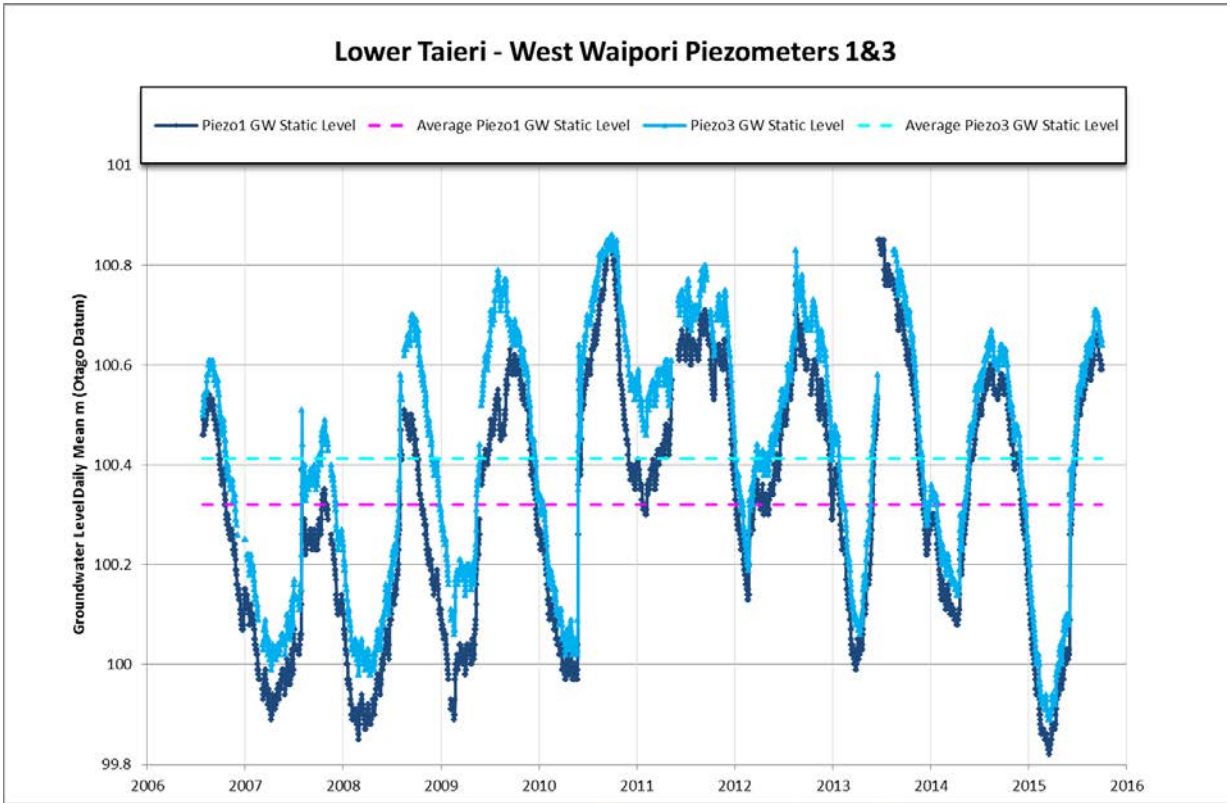


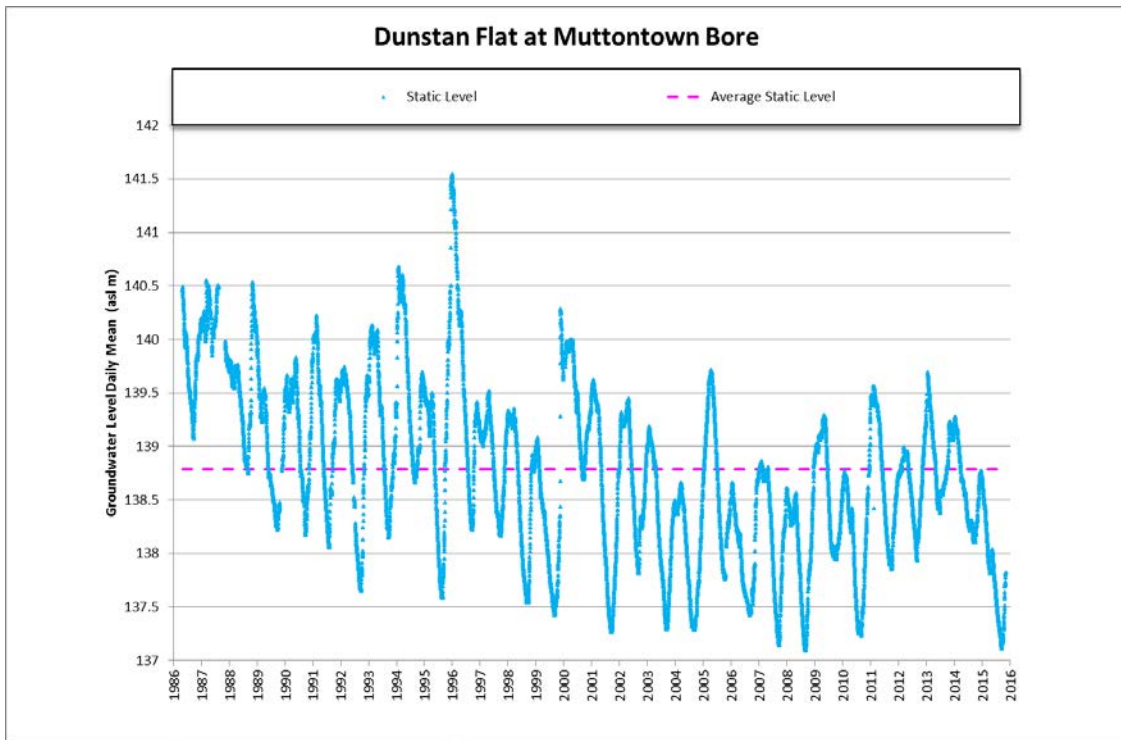
**North Otago - Lower Waitaki at Dennisons Bore  
Long Term Monitoring**



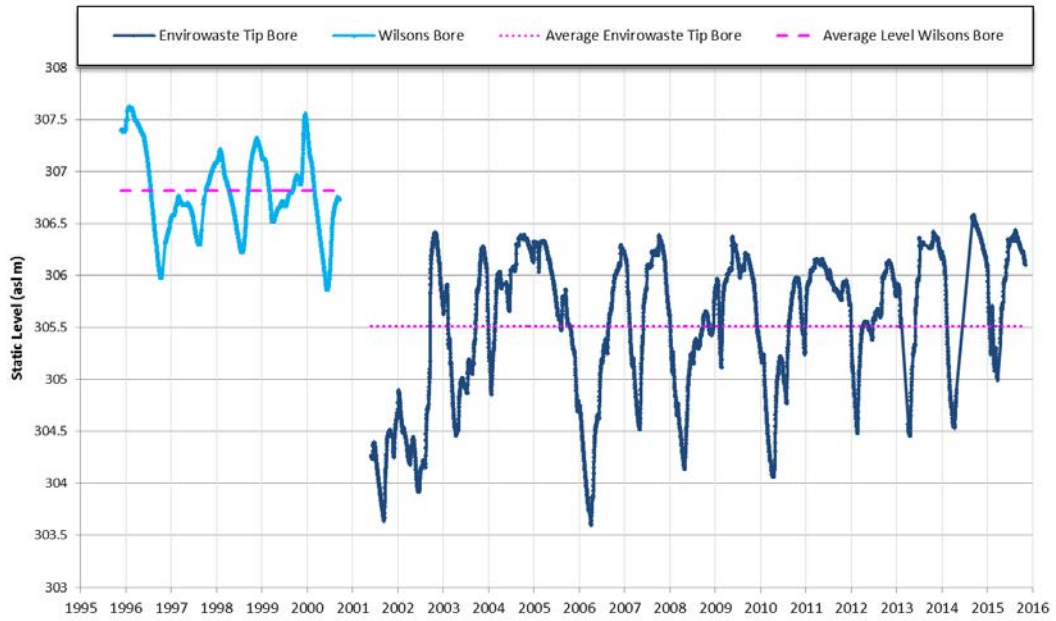
**North Otago Volcanic at Waiareka Isbisters Bore - Long Term Monitoring**



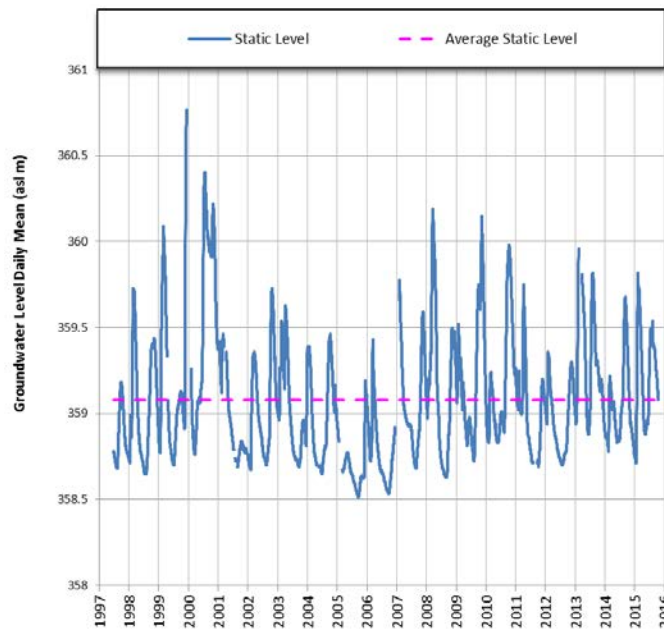




### Wanaka Basin Cardrona Aquifer at Wilsons/Envirowaste Refuse Tip Bores



### Wakatipu at Morven Ferry Bore - Long Term Monitoring



**Appendix 4 Summary of the number of days exceeding acute and chronic thermal criteria for the protection of fish species at sites in catchments affected by low flows between 1 October 2014 – 30 April 2015.**

River	Site	Total record (d)	Total number of dry days (d)	Number of days exceeding thermal criteria							
				Acute (max. 2-h average)			Chronic (weekly average)				
				Rainbow trout	Brown trout	Common smelt	Rainbow trout	Brown trout	Longfin eel (adult)	Longfin eel (elver)	Common bully
				23.8°C	24.6°C	22°C	18.2°C	19.6°C	30°C	28°C	24°C
Kakanui	Clifton Falls Bridge	140	0	-	2	-	-	29	0	0	-
	McCones	212	0	-	0	2	-	15	0	0	0
Kauru	Ewings	211	0	-	10	-	-	30	0	0	-
Lindis	Rutherford's	205	6	0	0	-	0	0	0	0	0
	Ardgour Road	135	>52	3	2	-	5	0	0	0	0
	Bridge	212	0	0	0	-	0	0	0	0	0
	Ardgour Road hydro	212	93	0	0	-	2	0	0	0	0
	Lindis Crossing	212	103	16	13	-	17	9	0	1	1
Manuherikia	Ophir	56	0	-	0	-	-	0	0	0	0
	Campground	56	0	-	0	-	-	0	0	0	0
Shag	Shag at Craig Road	212	0	-	0	-	-	0	0	0	0
Taieri	Taieri at Waipiata	48	0	-	0	-	-	0	0	0	-
	Taieri at Tiroiti	48	0	-	0	-	-	0	0	0	-
	Taieri at Outram	48	0	-	0	-	-	0	0	0	-
Waianakarua	South Branch Railway Bridge	140	0	-	15	-	-	0	0	0	0

**Periphyton data collected during the 2014/15 low flow event including chlorophyll *a* biomass, cover of long filamentous green algae, *Didymo* and cyanobacteria.**

Site	Chlorophyll <i>a</i> (mg/m <sup>2</sup> )					Long filamentous green algae cover (% cover)						Didymo (% cover)						Cyanobacteria (% cover, >0.3 mm thick, incl Nostoc)						
	Oct-14	Dec-14	Jan-15	Feb-15	Mar-15	Oct-14	Nov-14	Jan-15	Feb-15	Mar-15	Apr-15	Oct-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	Oct-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	
Fraser River at Alexandra	3	25	92	91	-	-	-	-	-	3	-	P	P	-	59	51	P	P	-	-	-	-	-	50
Hawea River at Camphill Bridge	7	5	1	1	-	-	-	-	-	-	-	P	-	-	-	-	-	-	-	-	-	-	-	-
Luggate Creek	-	-	-	53	-	-	-	-	83	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
Manuherikia River at Ophir	43	72	46	47	-	1	1	-	8	-	-	83	82	-	54	-	50	P	P	-	-	-	-	-
Manuherikia River at Galloway	2	31	7	2	-	-	-	-	4	-	6	P	P	-	56	-	85	-	39	-	-	-	-	-
Manuherikia River at Loop Road	17	11	22	80	-	1	1	-	5	-	2	16	-	-	6	-	P	-	16	-	-	-	-	6
Pomahaka River at Burkes	13	45	14	-	-	-	-	-	-	-	-	P	P	P	-	-	P	-	-	-	-	-	13	-
Kakanui River at McCones	21	27	15	40	-	-	-	4	6	-	-	44	-	-	P	7	-	-	-	P	7	P	-	-
Shag at Goodwood Pump	-	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shag at Craig Road	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	P	-
Waikouaiti River at Bucklands Crossing	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	26	-
Waikouaiti River d/s of DCC intake	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	P	-
Kye Burn at SH85	-	-	-	-	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sowburn Patearoa	-	-	-	-	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taieri at Waipiata	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taieri at Sutton	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cardrona u/s Cardrona	1	3	2	7	8	-	P	P	-	6	-	P	P	P	P	8	-	-	P	-	-	-	-	-
Cardrona at Waiorau Bridge	10	29	22	57	44	P	P	-	-	12	-	-	44	P	21	P	-	P	P	P	-	-	-	-
Cardrona u/s Boundary Creek	5	12	10	29	54	-	-	-	-	P	-	P	19	P	6	24	-	-	-	-	P	P	-	-
Cardrona at Stockyards Ford	3	5	18	16	21	-	-	P	-	P	-	-	6	P	11	6	-	-	-	P	-	P	-	-
Cardrona at The Larches	1	1	8	9	4	-	-	-	-	-	-	-	P	P	P	-	-	-	-	-	P	-	-	-
Cardrona at Ballantynes Road	4	1	1	1	5	-	-	-	-	-	-	-	P	P	P	P	-	-	-	-	-	-	-	-
Cardrona at SH6	1	1	127	38	69	-	-	-	-	-	-	-	P	-	-	-	-	-	-	P	9	5	-	-
Cardrona at Clutha confluence	0	1	22	20	46	-	-	-	-	-	-	-	P	P	8	11	-	-	-	P	P	-	-	-
Lindis upstream of Pass Burn	3	4	8	19	44	-	P	P	P	P	P	P	-	-	-	-	-	-	-	P	13	31	44	-
Lindis at Black Bridge	16	6	21	32	26	P	P	P	P	P	-	P	14	6	6.25	-	-	-	-	P	P	7	12	-
Lindis at Lindis Peak	4	2	3	20	17	-	-	-	-	-	-	P	-	-	-	-	-	-	-	P	P	6	5	-
Lindis upstream of Cluden Stream	16	42	30	64	26	-	-	-	-	-	-	-	-	-	-	-	-	-	P	8	15	35	-	-
Lindis at Ardgour Rd bridge	19	11	49	5	45	-	-	16	27	18	-	26	28	28	25	29	-	-	P	P	-	17	-	-
Lindis at Ardgour Road hydro site	42	64	53	8	151	P	-	P	18	23.5	-	P	P	15	35	19	-	-	5	16	P	5	P	-
Lindis at SH8	10	10	-	-	-	P	-	-	-	-	-	P	12	-	-	-	-	-	-	-	-	-	-	-

**REPORT**

Document Id: A854706

Report Number: 2015/1241

Prepared For: Regulatory Committee

Prepared By: Marian Weaver

Date: 02 November 2015

**Subject: Report on Communications Plan and Project Plan:  
Water Management Groups**

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**Précis**

1. Plan Change 1C to the Regional Plan: Water (RPW) gave rise to an LTP project that seeks to encourage and assist consent holders to form water management groups for the renewal of deemed permits and water permits in suitable catchments or sub catchments. This report sets out a summary of the work programme proposed for this project and the basis of the communications approach.

**Background**

2. There are approximately 450 deemed permits that expire on 1 October 2021. There are also another 100 water permits that are not deemed permits that expire in the same financial year as the deemed permits. The RPW provides a transition for deemed permit renewal with the formation of water management groups to provide opportunities for sharing water, reduction in compliance costs, and rationing of water in low flow conditions. The project to implement that part of the RPW is underway.

**Project Plan**

3. The options for how to approach the project were considered and the most pragmatic approach for best use of finite ORC resources is to
  - Identify sub/catchments where group water management is prioritised.
  - Rank the sub/catchments in terms of numbers of permits for renewal and geographic suitability, or strategic suitability.
  - Actively work with the water permit holders in the top ranked sub/catchments.
  - Promote sub/catchments up the ranking as other groups form and move to lodge consent applications.
  - Provide information to all others.
4. Note that most tributaries and the main stem of the Manuherikia River are top ranking in terms of numbers of deemed permits. The Manuherikia Strategy group has asked us not to work with those consent holders until they have completed their consultation with the consent holders on the latest proposal for new water storage in the catchment. A decision on that storage proposal is expected next autumn.
5. Working with the consent holders will include having a staff member or contractor organise and attend the first 1-3 meetings of the consent holders for the purpose of explaining the benefits of, and seeding the idea of, group formation. Thereafter input and meeting attendance will be monitored against milestones for group formation and consent application lodgement. Input to groups not making sufficient progress will be suspended until the issue/s preventing progress is addressed. Meanwhile work will continue in other sub/catchments.

6. Once consent holders decide to form a group we assume that lawyers and consultants will be engaged to arrange the formal group entity and prepare the necessary consent application. During this part of the process ORC will be available to assist with process matters including connecting with affected parties, providing advice on future consent configuration and optimum use of water.
7. At the same time the communications plan below will be implemented.

### **Communications Plan**

8. Four key target audiences of the Plan were identified:
  - Individual deemed permit holders
  - Consent holders who may wish to form a group
  - Affected parties (DoC, Iwi and Fish & Game)
  - Consultants, lawyers and others who may be assisting consent applicants.
9. The communications plan will provide for a pack/manual and electronic resource that will contain information about the following:
  - Information to be gathered in preparation of consent renewal
  - Steps and templates for consent renewal
  - Benefits of managing water in groups
  - Steps and options to form a group
  - Options for group entities
10. The communications plan will also include:
  - Liaising with consultants and lawyers to explain aims of project and ensure they have access to the necessary information for supporting those applying for consent
  - Providing meetings of group leaders and would-be groups to share information
  - Providing access to information held at ORC (eg flow data, ecological information) to any person wishing to renew their permit.
  - Providing information and updates in Council's regular communication channels (media, publications, etc)
  - Dedicated section of ORC website on process & resources available

### **Water Allocation Committees**

11. The RPW also provides for water allocation committees, and this option may be pursued by some consent holders where they wish to retain their own permits but cooperate in rationing water as a minimum flow approaches. We already have one example of this in the Kakanui.

### **Recommendation**

12. That the report is noted.

Fraser McRae  
**Director Policy Planning and Resource Management**



## REPORT

File: A854147  
Report No.: 2015/1228  
Prepared for: Regulatory Committee  
Prepared by: Martin King, Manager Environmental Services,  
Date: 19 October 2015

**Subject: Consents Compliance Monitoring and Incident Summary  
Report for the 2014/15 Year**

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### 1. Précis

This report summarises the compliance activities and consent conditions for the 2014/15 year for all major consent holders and prohibited activities. The Council undertook 961 audits/inspections relating to 776 activities and reviewed 3650 consent conditions for performance monitoring during the year, which related to 1127 consents.

### 2. Background

Consent compliance monitoring involves performance monitoring and auditing of consents and is carried out by the Data Management and Environmental Monitoring staff of Council.

#### *Performance Monitoring*

This is reporting provided by the consent holder to Council. Depending on the activity, reporting requirements in consents range from supply of information (e.g. bore logs, site photographs or operation manuals) through to periodic supply of data (e.g. water take amounts, biological studies, water quality data relating to discharges and upstream and downstream receiving waters).

The frequency and complexity of the reporting varies widely depending on the activity and the potential impacts of the activity on the receiving environment. When reporting is received it is reviewed by Data and/or Environmental Officers against the consent conditions and a grade applied. The grading system used is consistent with the national compliance grading system.

#### *Auditing*

For many of the consents it is considered relevant for there to be periodic and active audit inspections by Council staff. The purpose of the audit inspection is to undertake a detailed assessment of compliance against all conditions of the consent. The audit monitoring involves a site inspection, sampling where necessary, assessment of consent holder technical reports, and a discussion of the consent requirements with the consent holder.

Once all data and photographs relating to the audit are collated, an audit report is prepared and an overall compliance grade is awarded. The frequency of auditing varies depending on the intensity of the activity and the potential environmental risk.

The grades that may be awarded include:

- Grade I Compliant
- Grade II Non Compliant - Minor (no actual or potential adverse effects)
- Grade III Non Compliant - Significant (no actual or potential adverse effects)
- Grade IV Non Compliant - Minor (actual or potential adverse effects)
- Grade V Non Compliant - Significant (actual or potential adverse effects more than minor)

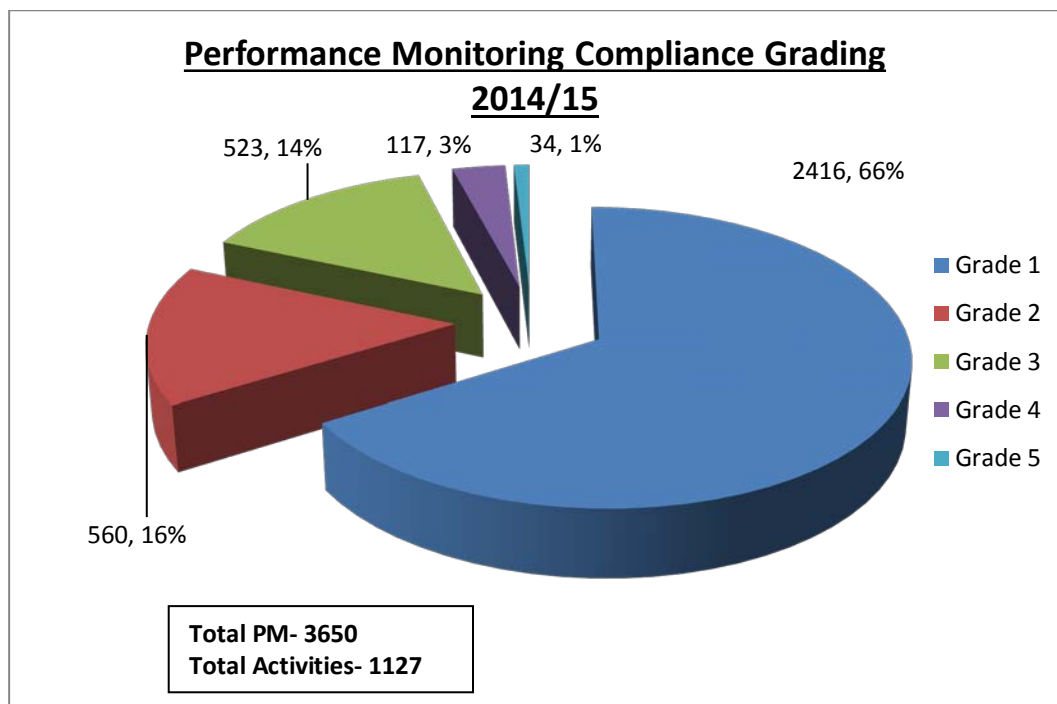
The key consent holders are the Territorial Local Authorities (TLAs) (primarily for water, wastewater and landfills), and major industrial sites including contaminated sites with consents.

### 3. Summary of Compliance

#### 3.1 Performance Monitoring

During the 2014/15 year performance monitoring information relating to 3650 conditions (1127 consented activities) was received. Of these, 2416 (66%) were fully compliant and awarded grade 1, a further 1083 (30%) had non-compliances, but were not expected to have any actual environmental effects as the return data had not been received on time or some data was missing (grade 2 and 3).

There were 117 (3%) occurrences of non-compliance where minor environmental effects were encountered (grade 4) and only 34 (1%) occurrences where grade 5 was awarded, where effects on the environment had the potential to be significant. Figure 1 outlines the overall compliance grading for self monitoring return data.



**Figure 1. Breakdown of Performance Monitoring Compliance Grading 20014/15**

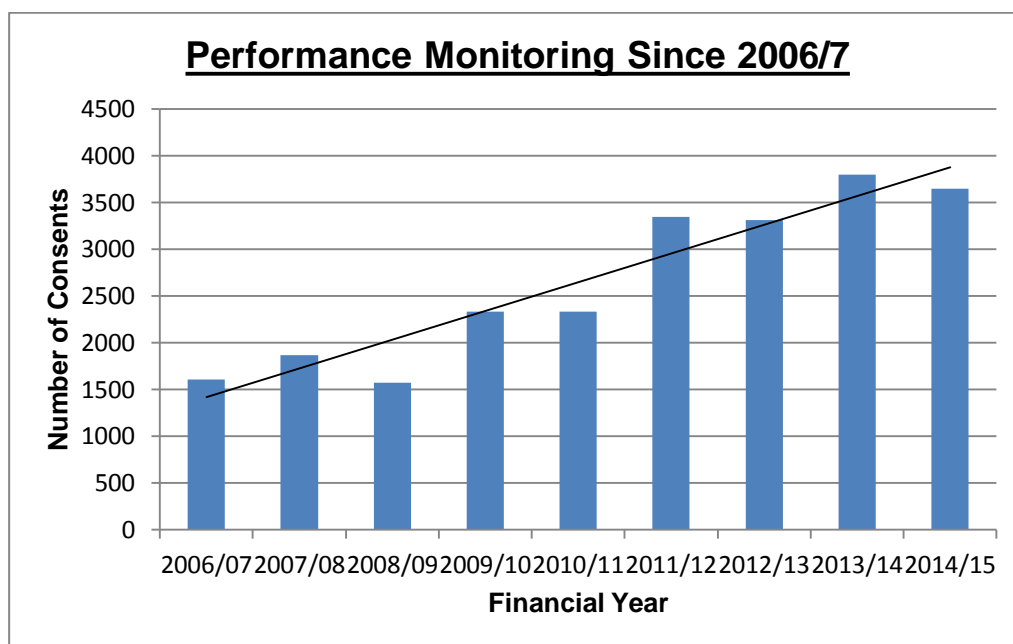
Where grade 4 and 5 non-compliance has been found, staff in the first instance have required written explanations from the consent holder explaining the breach of consent conditions, including how they propose to comply in the future.

The level of compliance and compliance percentage was similar compared to previous year. Table 1 shows a breakdown of compliance history. Of note is the relative steady state of grade 2 non-compliance and the increase in grade 3 non-compliance for the late return of performance monitoring information. The decrease in grade 4 minor non-compliance where environmental effects may be observed was pleasing to see.

**Table 1. Performance Monitoring History**

Year	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5	
2006/07	1067	67%	416	26%	51	3%	54	3%	18	1%
2007/08	1286	68%	384	21%	65	3%	88	5%	49	3%
2008/09	1012	64%	380	24%	50	3%	93	6%	42	3%
2009/10	1496	64%	701	30%	111	5%	23	1%	2	0%
2010/11	1723	74%	404	17%	176	8%	27	1%	5	0%
2011/12	1831	55%	791	24%	278	8%	436	13%	10	0%
2012/13	2149	65%	604	18%	210	6%	332	10%	22	1%
2013/14	2657	70%	627	16%	271	7%	228	6%	19	1%
2014/15	2416	66%	560	16%	523	14%	117	3%	34	1%

More significantly it should be noted that performance monitoring returns to Council have more than doubled since the 2006/7 year (see Figure 2). Part of this can be attributed to having a dedicated Environmental Monitoring data team processing and following up on the performance monitoring returns, water metering regulations that require a mandatory metering of water takes, and staff undertaking a program of auditing of resource consents. It is anticipated that performance monitoring returns will continue to increase over time.



**Figure 2. Trends in Performance Monitoring since 2007/08**

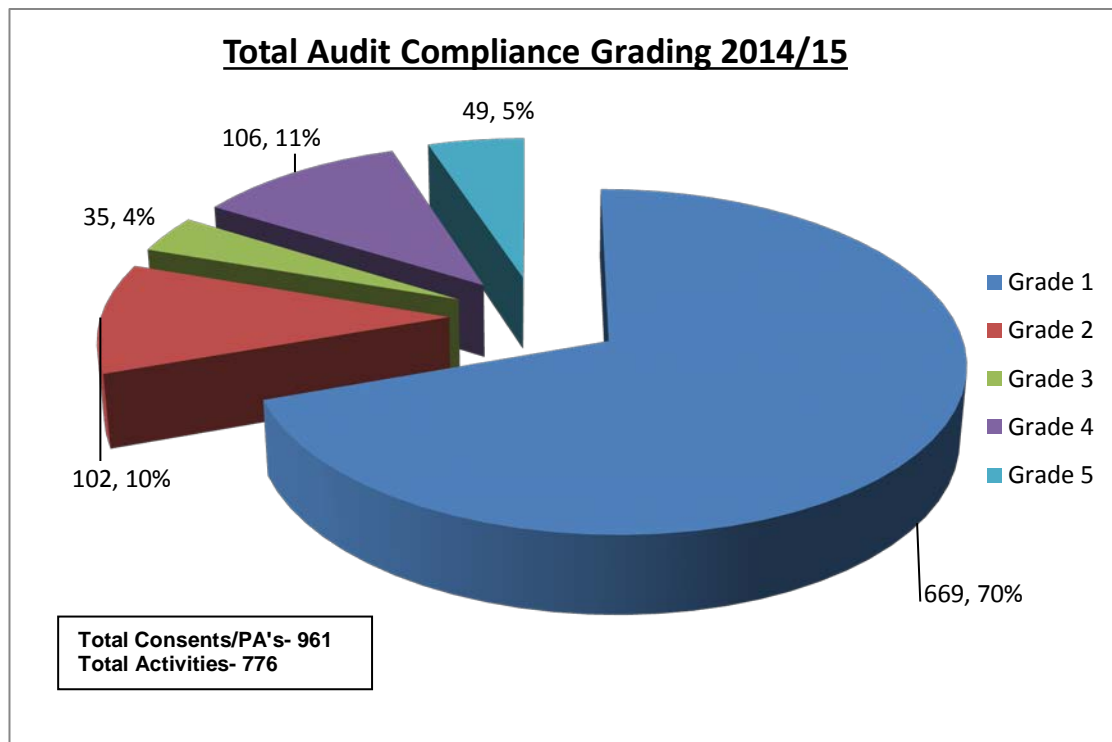
### 3.2 Auditing

Auditing of sites has been prioritised, based on environmental risk and LTP objectives, and organised as a project management structure.

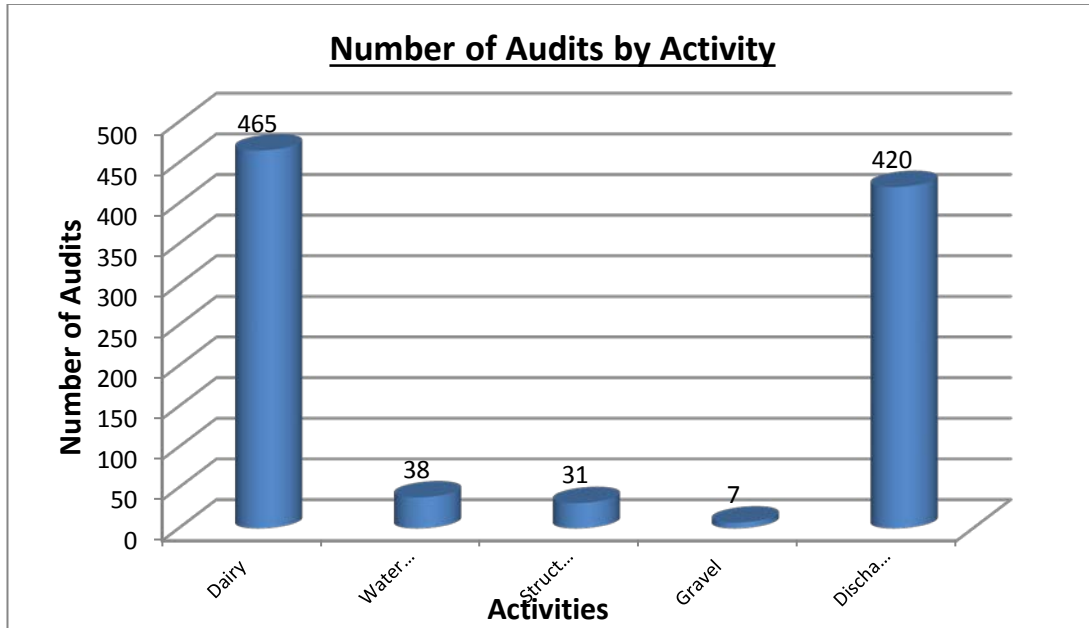
Over the 2014/15 year, a total of 776 activities, involving 961 consents and prohibited activities (relating to animal waste collection systems), were audited, compared to 909 consents/prohibited activities in 2013/14. Of these, 669 consents/prohibited activities (70%) were awarded with grade 1, fully compliant. A further 137 consents/prohibited activities (14%) were awarded grades 2 and 3 due to performance monitoring being late or not received at all, and/or requests for information were not received on time.

A total of 106 consents/prohibited activities (11%) were graded 4, and minor effects were either noted, or had the potential to have, adverse effects on the receiving environment. A further 49 consents/prohibited activities (5%) were graded 5 due to significant non-compliance with consent or permitted activity conditions.

Figure 3 outlines the overall audit grades awarded and Figure 4 details auditing by activity type.



*Figure 3. Breakdown of Total Audit Monitoring Compliance Grades 2014/15*



**Figure 4. Breakdown by Audit Type**

Where grade 5 has been awarded, Council staff, in the first instance, have contacted the consent holder advising them of the non-compliance. Many discussions have been held with consent holders to work through the issues and explanations have been sought for the non-compliance. In these instances, compliance staff have formally written to consent holders requiring compliance by a due date.

The level of compliance since 2006/07 has been seen variations between 62-74%. This in part can be attributed to the dairy monitoring project which gives the fully compliant grading a skewed weighting, and also to the scheduling of monitoring of consented activities in the water take and discharges area, as not every consent is monitored on an annual basis.

Table 2 also shows that grade 4 and 5 non-compliance is relatively steady (and consistent with previous years) at 16% for 2014/15 year compared to 13% the previous year.

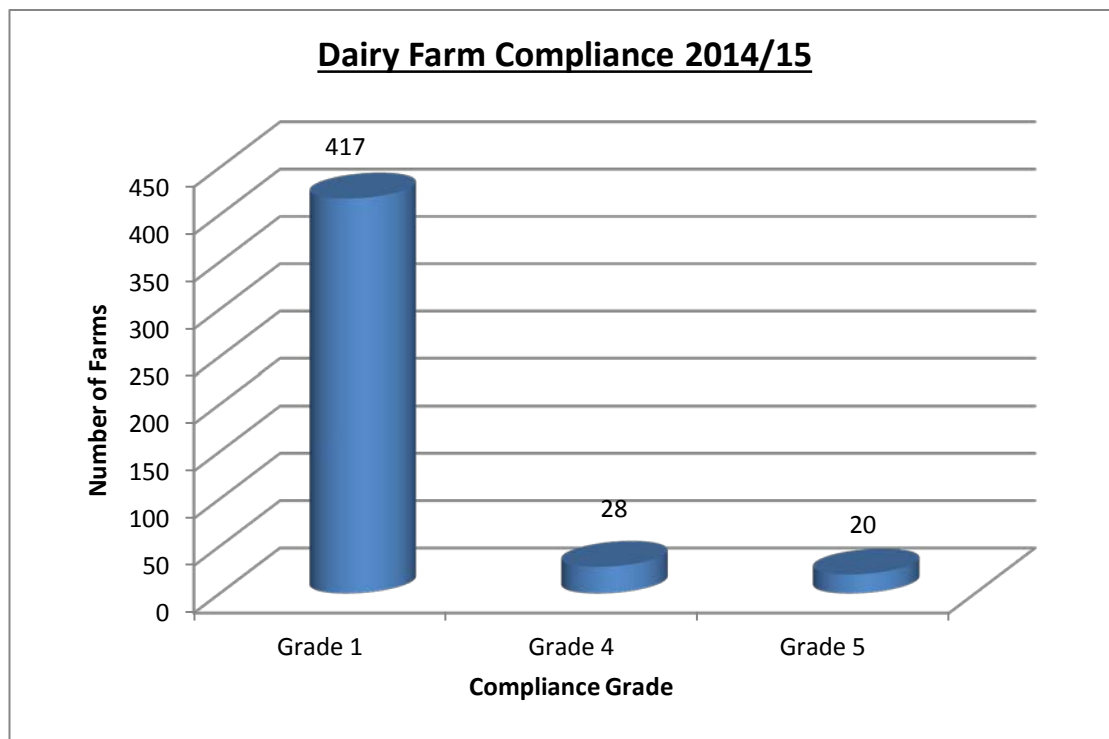
Table 2 shows the breakdown of compliance grading and percentage.

**Table 2. Audit Monitoring History**

Year	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5	
2006/07	957	72%	32	2%	20	1%	181	14%	150	11%
2007/08	747	74%	51	5%	13	1%	126	12%	82	8%
2008/09	668	71%	45	5%	22	2%	140	15%	65	7%
2009/10	752	70%	62	6%	81	7%	147	14%	33	3%
2010/11	544	67%	79	10%	59	7%	109	14%	19	2%
2011/12	856	67%	114	9%	69	6%	193	15%	43	3%
2012/13	756	62%	181	15%	42	3%	113	9%	133	11%
2013/14	652	72%	112	12%	28	3%	64	7%	53	6%
2014/15	669	70%	102	10%	35	4%	106	11%	49	5%

### 3.3 Summary of Audit Compliance by Activity

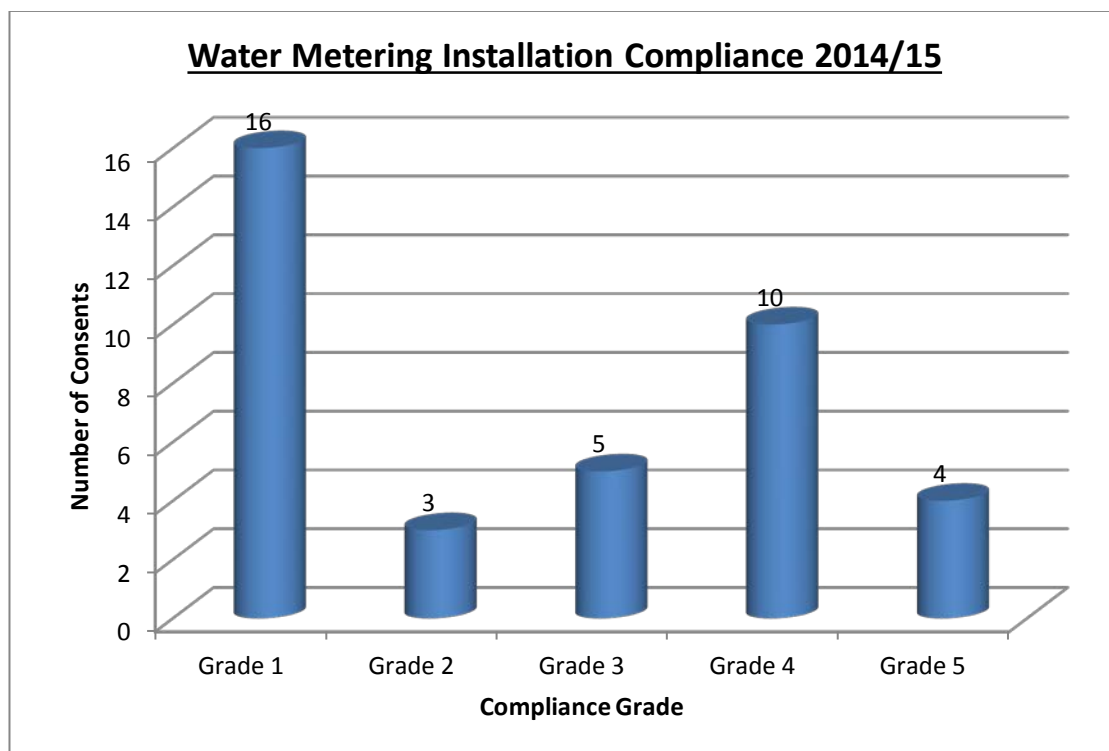
Figure 5 shows a summary of compliance grading for the dairy permitted activity monitoring. This has been reported to Council in a separate report.



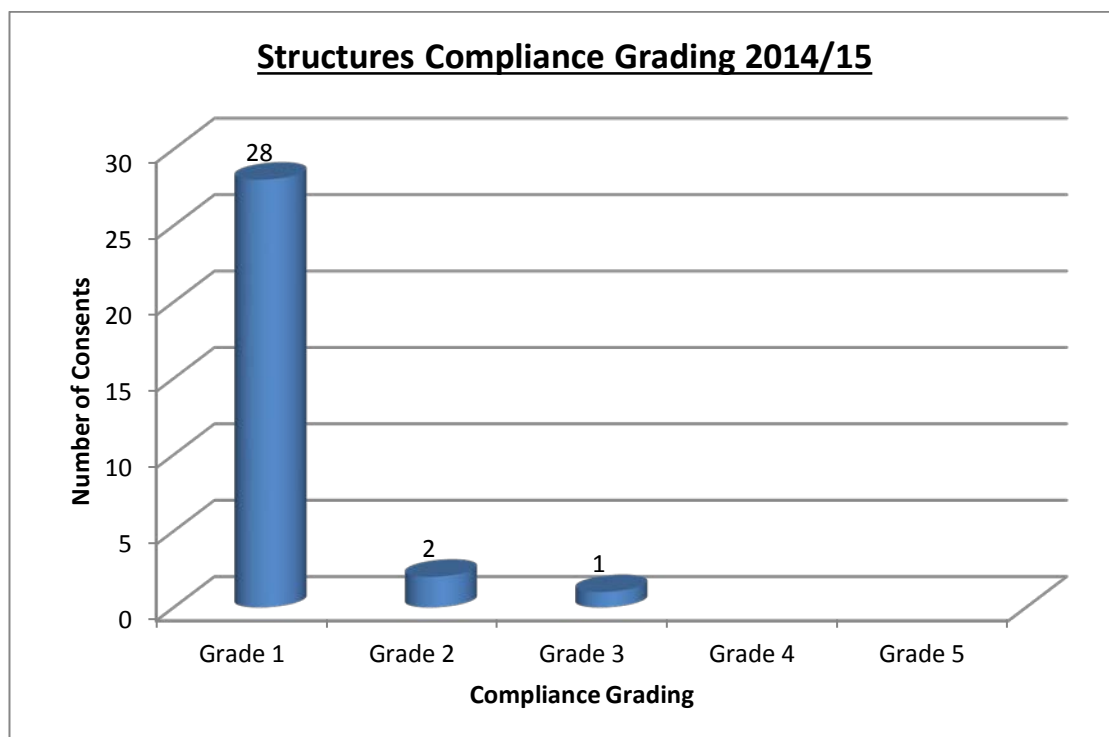
*Figure 5. Dairy Farm Compliance Grading*

Figures 6 and 7 show the compliance levels found for our water metering installation and structures monitoring programme. It was of some concern that staff found that some meters had not been installed correctly therefore they had the potential to record the volume of water taken incorrectly, and a number of consent holders did not send in their water metering installation certification on time. The consent holders were advised of the findings and asked to rectify the matter with their installer.

A high level of compliance has been found with the structures monitoring project. Structures include bridges, culverts, bores, etc. On 3 occasions non-compliance was observed as a result of very late performance monitoring being received.

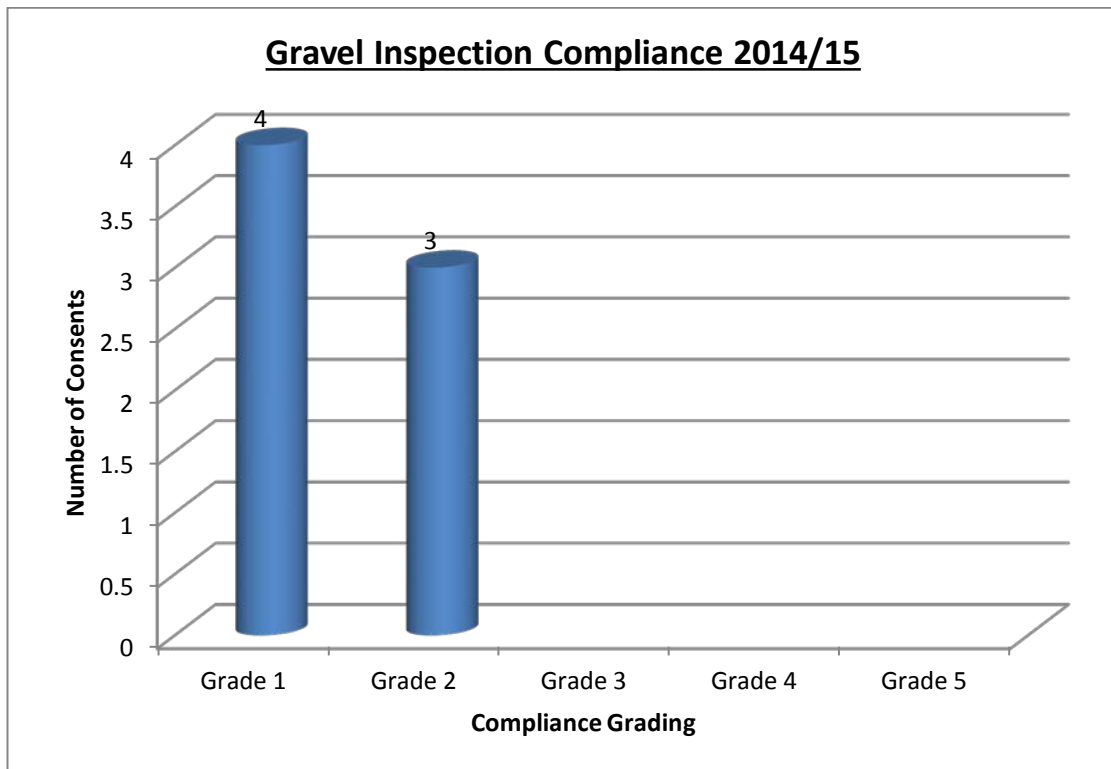


*Figure 6. Water Meter Installation Compliance Grading*



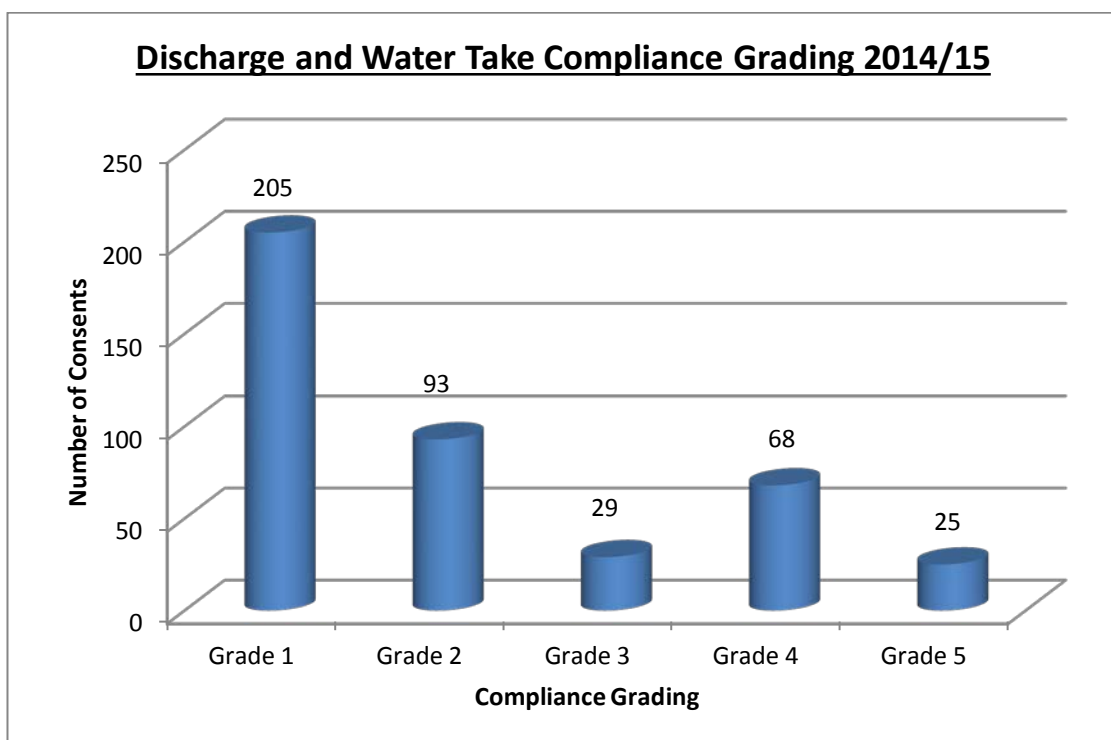
*Figure 7. Structures Compliance Grading*

Figure 8 shows gravel inspection compliance observed during the year. A total of 7 inspections were carried out with 4 being fully compliant and 3 were non-compliant due to late performance monitoring..



*Figure 8. Gravel Inspection Compliance Grading*

Figure 9 shows the compliance levels found for activities that relate to discharges and water takes. Discharge activities include discharges to land, air and water, including private septic tanks to large industrial type activities.



*Figure 9. Discharge and Water Take Compliance Grading*



A total of 420 (compared to 347 in 2013/14) consents were monitored and the level of full compliance found was 48.8%, or 205 consents. A total of 122 (29.1%) consents were awarded either grade 2 or 3 due to performance monitoring information being sent into the Council late. A total of 93 consents (22.1%) received grade 4 and 5 non-compliance and environmental effects observed..

Non-compliance observed in the field related to:

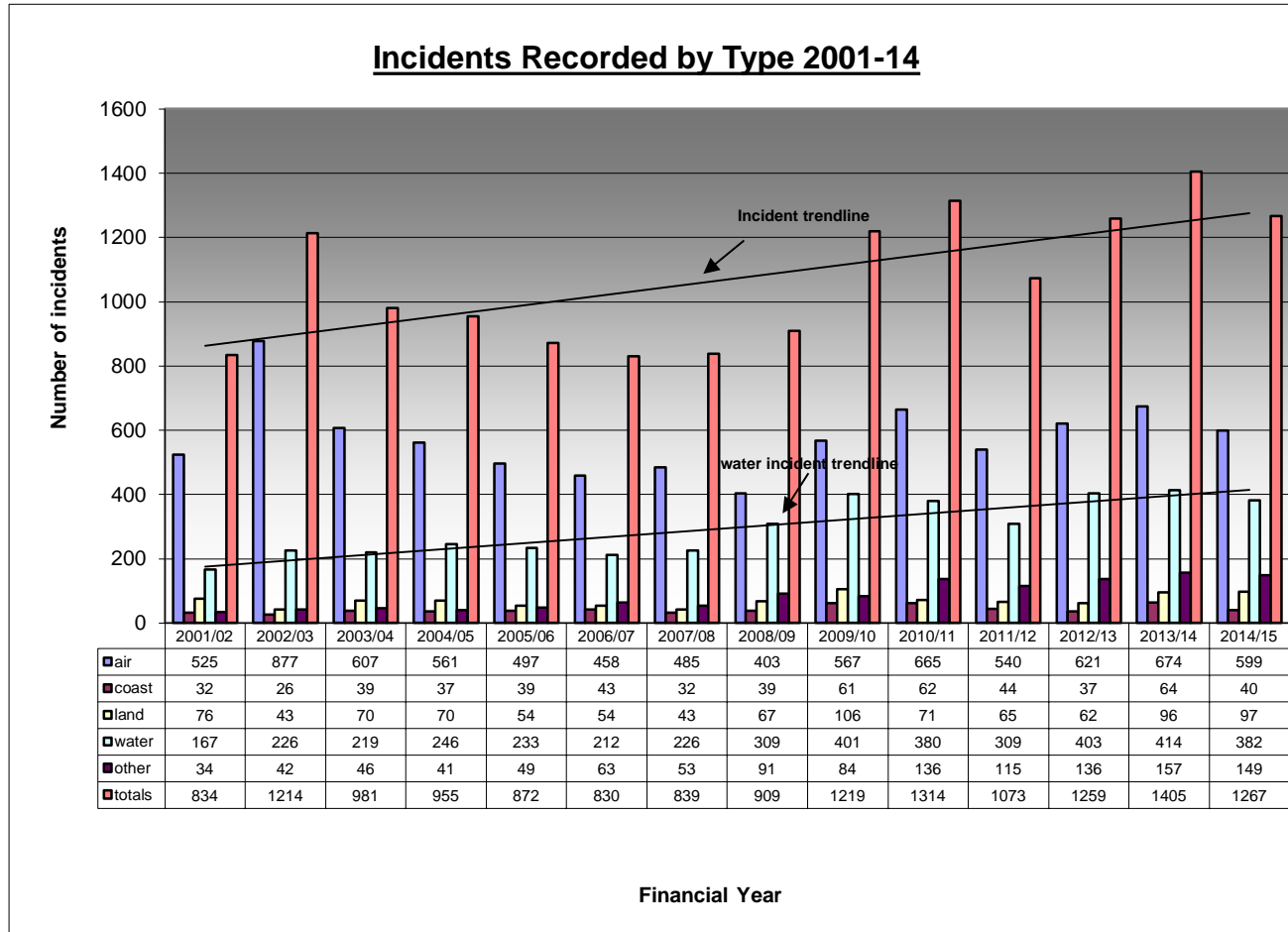
- Poor performance of effluent systems e.g. disposal bed failures;
- Poor effluent quality from commercial wastewater system;
- Poor effluent quality into the receiving environment from Industrial discharges;
- Air discharge quality parameters not being met;
- Offensive and objectionable odour beyond the boundary; and
- Water take data not being received and devices not installed correctly.

In all situations where grades 4 and 5 have been awarded written explanations have been sought from the consent holder, including remedial action plans where appropriate.

#### **4. Summary of Environmental Incidents**

For the 2014/15 year, the Council received a record total of 1267 incidents. Approximately 47.3% of the incidents related to air issues (odour 118 incidents, domestic heat systems 181 incidents, and rural burning/backyard burning 239 incidents featuring strongly) and 30.2% relating to water issues (307 fresh water pollution, the majority of incidents).

Figure 10 provides a trend analysis of the incidents reported to Council during the period 1 July 2001 to 30 June 2015.



*Figure 10. Environmental Incidents between 1 July 2001 and 30 June 2015*

Incident response over the last six years has remained at an elevated level. Reasons for the sharp increase in incidents since the 2008/09 year can in part be attributed to the increase in calls that the Council has received.

Of note is the ongoing steady increase in water pollution complaints received and responded to and similarly the increase in burning and domestic smokey chimney related incidents and subsequent follow up.

This trend may be attributed to increased public awareness and less toleration of activities that present actual or perceived environmental harm.

## **5. Recommendations**

That this report be noted.

Scott MacLean

**Director Environmental Monitoring and Operations**

## REPORT

Document Id: A854135

Report Number: 2015/1227

Prepared For: Regulatory Committee

Prepared By: Director Environmental Monitoring and Operations

Date: 10/11/2015

Subject: **Biosecurity & RMA Monitoring Report 4 September to 6 November 2015**

### Précis

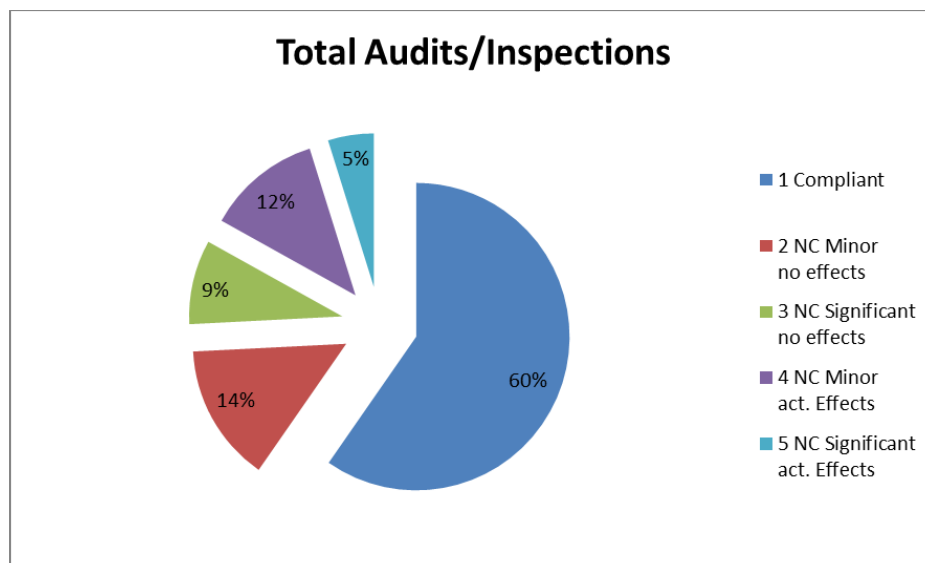
This report describes the Regulatory activity for the reporting period.

### 1. Water Quality and Quantity

#### 1.1 Regional Plan: Water and Resource Consent Monitoring

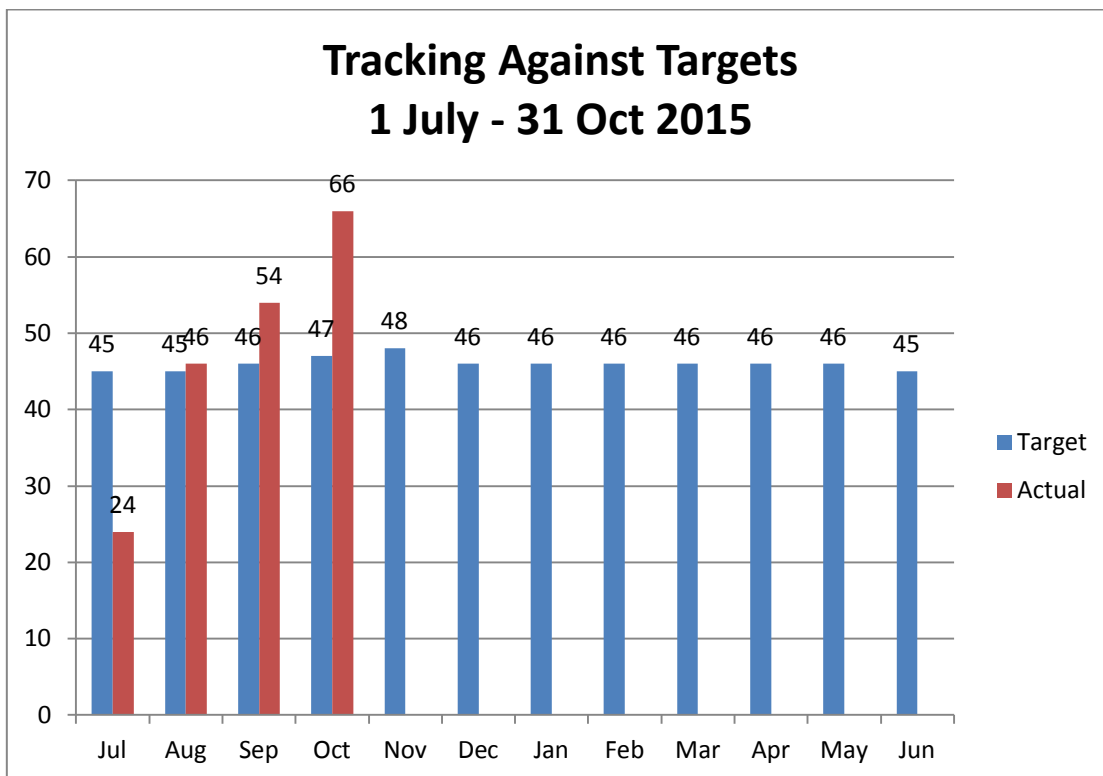
##### 1.1.1 Audit & Inspection Monitoring

124 consent audits/inspections were conducted over this reporting period, with five inspections of water measuring equipment and 18 other structure and bore inspections.

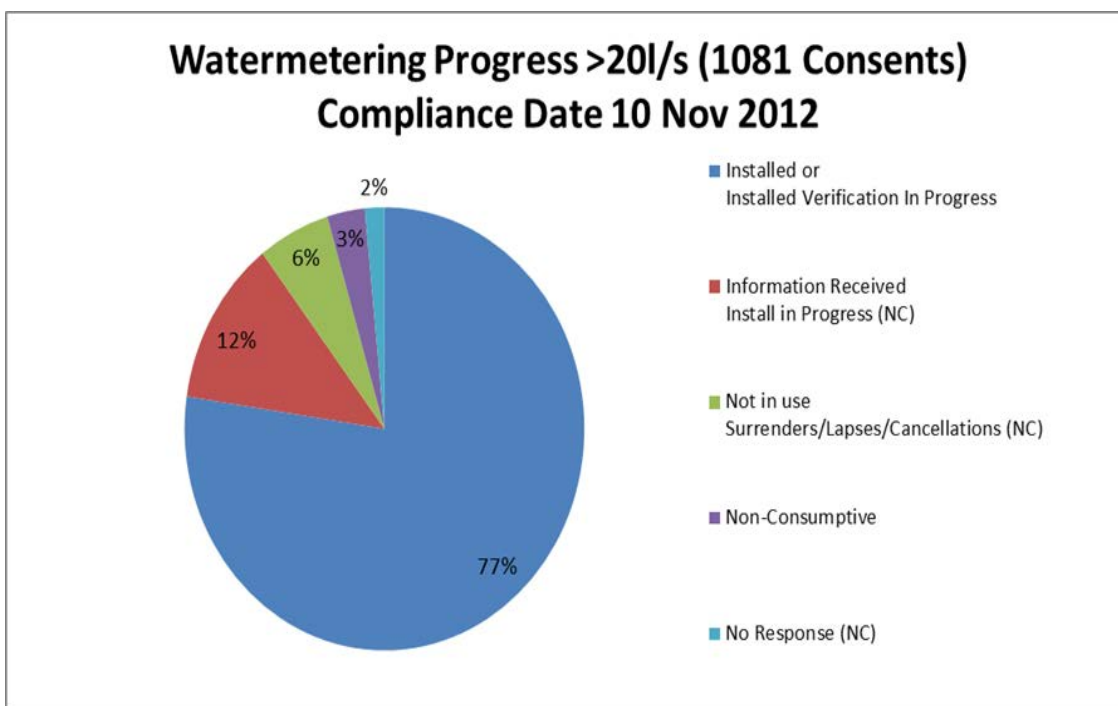


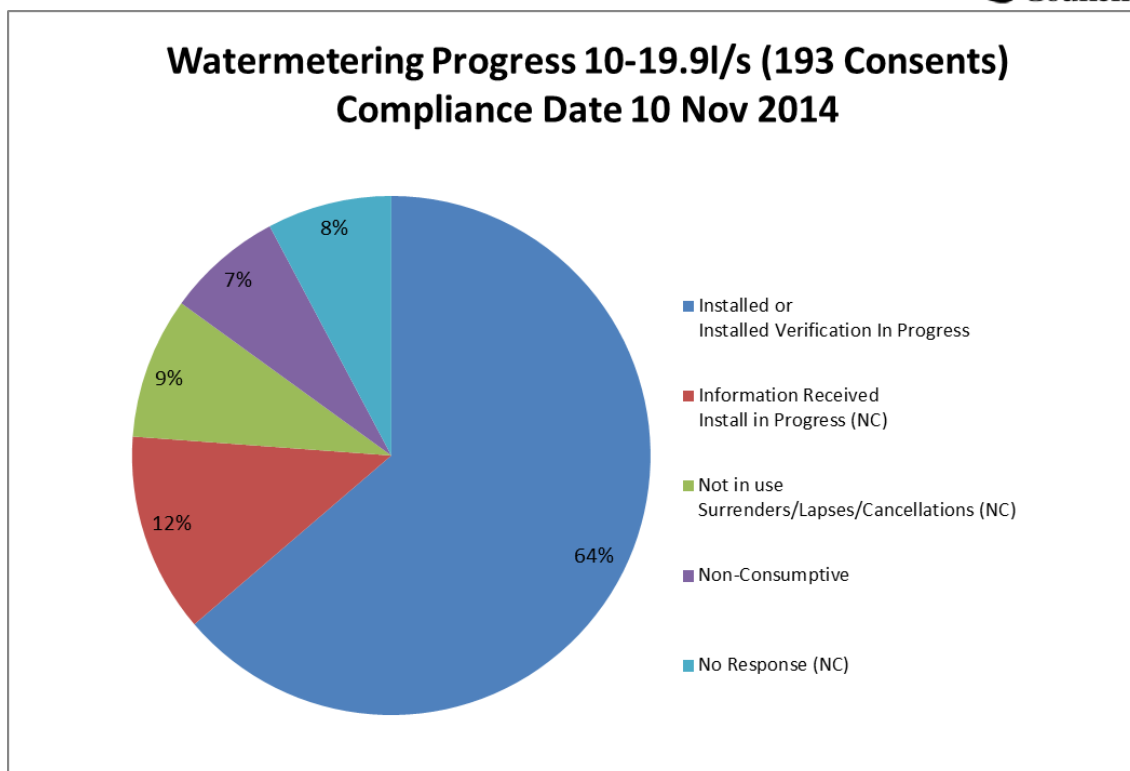
#### An explanation of the gradings are:

- **Grade 1** – fully compliant with the conditions of the consent including providing information on time;
- **Grade 2** – compliant with the parameters of the consent that they are required to stay within but some information was provided late;
- **Grade 3** – hasn't provided information so no assessment of effects has occurred;
- **Grade 4** – are non-compliant with some parameters of the consent but not having a significant environmental effect. *An example would be e-coli is required to be no higher than 10 but results show it is 500.*
- **Grade 5** – are non-compliant with some parameters of the consent but are having a significant environmental effect. *An example would be e-coli is required to be no higher than 10 but results show it is 20,000.*



1.1.2 Water Metering – RMA Regulations





A total of 6 abatement notices were prepared this reporting period for non-compliant consents that had a deadline of 1<sup>st</sup> October 2015 to comply. Of those, two have been withdrawn due to the consents being surrendered. The majority of the 31 outstanding consents from last reporting period have been followed up this period, with most having had metering equipment installed and awaiting verification and calibration. Two have applied for an alternative point of take to that identified on their consent and one has applied for an exemption. Six remain outstanding and require follow up and site visits. These will be completed in the coming weeks.

## 1.2 State of the Environment Monitoring

NIWA audited Environmental Monitoring's Office Practices. The audit found office practices were of a high standard overall and field activities were well planned.

The Dart River at The Hillocks stations was upgraded to have dual water level sensors and backup communication through satellite.

## 2. Pest Management Strategy Implementation and Biosecurity Compliance

### 2.1 Pest Management Strategy

#### 2.1.1 Rabbits

Rabbit Control Plans continue to be audited. Those that have been assessed this period have shown an encouraging level of compliance.

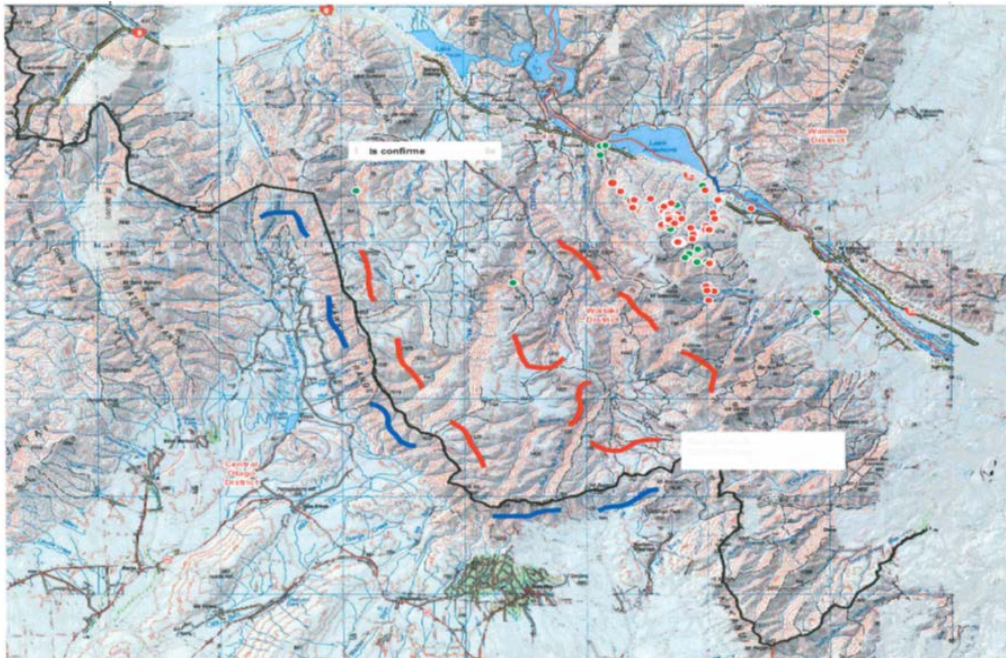
Initial rabbit inspections have commenced for the season as access to properties frees up after lambing. In general, a good level of compliance has been found in the Roxburgh area. Some blocks in the Wanaka area are being found to be non-compliant and as such Rabbit Control Plans are being requested.

The number of complaints being received regarding rabbit numbers is on the increase as the breeding season commences. Most complaints are originating in the urban and peri-urban areas of the Upper Clutha Basin.

Anecdotal reports of the RHD virus becoming active in the Roxburgh and Alexandra areas have been received this reporting period.

### 2.1.2 Wallabies

Biosecurity staff met with their Environment Canterbury counterparts this reporting period to discuss a strategic joint surveillance programme for the coming months. Surveillance on the Otago side of the Hawkdun Range will focus on likely incursion areas and will complement Environment Canterbury's surveillance programme to ensure efficient and optimum area coverage. Data gathered during this surveillance programme will be analysed jointly by staff from both organisations and will inform control operations on both sides of the Hawkduns respectively.



*Proposed Wallaby Surveillance transects 2015. Blue = ORC. Red = Ecan*

A further surveillance and control operation is planned for December focussing on an area of confirmed wallaby kills, recently reported by DOC, in the Hawea area.

## 3.2 Plant Pests

### 3.2.1 Gorse and Broom Surveillance

There have been a number of public enquiries regarding gorse and broom in the urban areas of Dunedin City. Two notices for non-compliance were issued for rural properties on the rural / urban boundary of the city with further inspections to be carried out.

### 3.2.3 Low incident plants

#### Bomarea

A total of 184 inspections have been completed, the majority within the Otago Peninsula. Of those 184, 122 were compliant, 26 minor non-compliant. Thirty six of

the DCC sites inspected were found to be non-compliant. DCC will be notified regarding control. Re-inspections are currently being undertaken and on-going monitoring will continue over the summer period.

#### Old Mans Beard

116 inspections completed within Dunedin City, 47 found to be compliant with 22 non-compliant (12 minor, 10 major). Re-inspections scheduled for the non-compliant properties, with on-going monitoring through to April 2016. Forty seven DCC sites inspected and found to be non-compliant. DCC will be notified regarding control.

#### Cape Ivy

Twenty one inspections completed (based on public feedback) with 7 non-compliant properties found and control work completed. The 14 compliant properties were adjacent properties to the non-compliant sites.

#### Boneseed

Inspections are due to be completed prior to the end of 2015.

## **4 Environmental Incident Response**

### **4.1 Contaminated Sites**

Seventy-one enquiries regarding the land-use history or contamination status of specific properties were received.

#### 4.1.1 Remediation Projects

An application for funding to assist the Dunedin City Council with remediation planning for the former Dunedin City Gasworks was submitted to the Ministry for the Environment. A decision on funding is expected in November.

#### 4.1.2 Investigations

One underground petroleum storage system (UPSS) removal report was received during the reporting period. The report has been assessed, and found to comply with Ministry for the Environment Guidelines. Work was carried out in accordance with industry best practice and ORC has no concerns about any environmental effects.

Two detailed site investigations were received during the reporting period. At one site in central Dunedin, elevated lead concentrations were identified. Site redevelopment will take place in accordance with city council requirements and an approved soil management plan. At the other site, the report confirmed that contaminant concentrations were acceptable for redevelopment at a site previously used as a service station.

#### 4.1.3 Landfills

Clutha District Council's closed landfill and transfer station facilities were visited to assess compliance with relevant resource consents. Nineteen sites were visited to evaluate compliance with a total of forty-one resource consents.

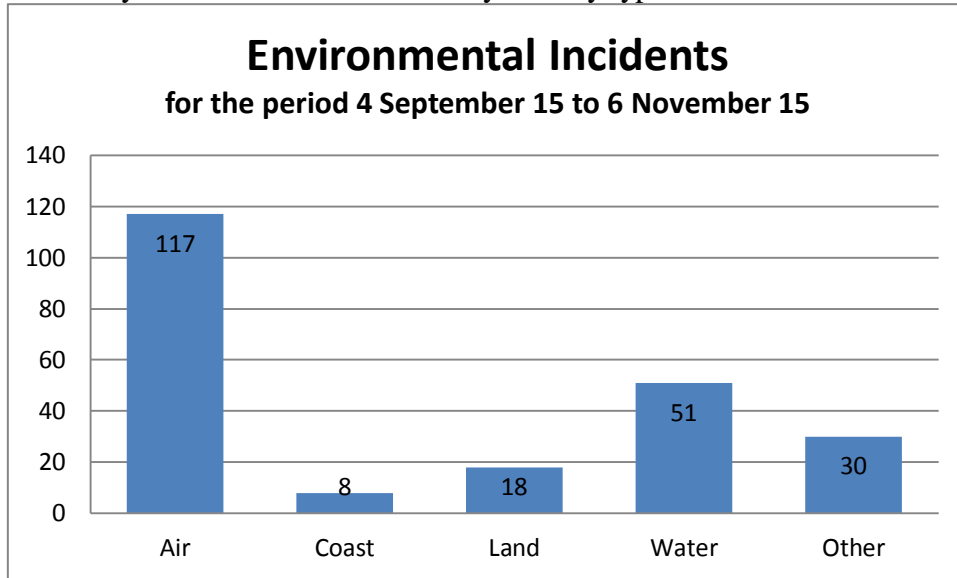
Overall, compliance with resource consent conditions was high. Thirty out of the forty-one consents were deemed to be fully compliant. Eleven consents, relating to nine closed landfill sites, were found to be non-compliant. At these sites, areas



requiring maintenance were identified. These have been noted in the respective compliance monitoring reports, and recommendations have been made for improvements as part of CDC's on-going asset management.

#### 4.2.1 Environmental Incidents

A total of 224 incidents were reported for this period. The following is a summary of the incidents received by activity type.



The majority of the air incidents can be attributed to rural burnings and back yard burnings. This was closely followed by domestic chimneys. The coastal incidents were mostly to do with Marine Pollution. The majority of land incidents were from disturbances and land contamination. Concerns about fresh water pollution were the cause of the majority of water investigations. The other types of incidents were varied however most of them were in regard to the impacts of pest animals.

#### 5. Recommendation

That this report be noted.

Scott MacLean  
**Director Environmental Monitoring and Operations**

## Summary of RMA Incident Complaints (General Location)

From 4 September – 6 November 2015

General Location		AIR							COAST					LAND				WATER				OTHER			
	Row Summary	Backyard burning	Burning	Domestic chimneys	Dust	Industrial air discharge	Odour	Spray Drift	Coastal structures	Marine oil spill	Marine pollution	Reclamation	Removal	Deposit	Disturbance	Land contaminati	Mining	Abstraction	Damming	Diversion	Fresh water pollution	Stormwater	Noise	Other	Staff performance
Catlins	5	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Central Otago	28	3	7	6	3	0	1	0	0	0	0	0	0	0	0	0	0	1	3	0	2	0	0	2	0
Clutha Plains	17	3	3	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	5	1	0	1	0
Dn - Abbots/Green Is	8	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
Dn - Coast North	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Dn - Coast South	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Dn - Inner City	35	6	2	7	0	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	7	2	0	7	0
Dn - Mosgiel	7	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
Dn - Otago Harbour	8	0	0	0	0	0	0	0	0	3	1	0	0	0	2	0	0	0	0	0	1	0	0	1	0
Dn - Peninsula	5	0	0	2	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Dn - West Harbour	7	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0
East Otago Uplands	4	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
Lakes	45	5	14	0	2	4	3	0	0	0	0	0	0	1	4	1	0	0	0	0	3	1	0	6	1
Maniototo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Otago	31	6	3	5	0	2	2	0	0	0	0	0	0	1	0	1	0	0	3	0	5	0	0	3	0
Roxburgh	7	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0
South West Otago	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0
Strath	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taieri Plains	8	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	1	0	0	1	0
<b>TOTALS</b>	224	29	33	25	7	10	12	1	1	3	4	0	0	4	7	7	0	2	7	4	33	5	0	29	1



**REPORT**

Document Id: A857323  
Report Number: 2015/1257  
Prepared For: Regulatory Committee  
Prepared By: Marian Weaver  
Date: 10/11/2015  
Subject: **Consents and Building Act report 25 September to 6 November 2015**

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**1. Consent Processes**

**1.1** Consent applications where status has not changed since the last report are summarised in Appendix 1. There have not been any applications publicly notified during the period.

**1.2 Limited Notified Applications**

There are 7 applications currently going through the limited notification process where either written approvals have not been forthcoming, or the applicant has requested limited notification. Hearings will be set up where there are opposing submissions. 5 limited notified consents were granted during the period.

***RM14.206 Mt Campbell Station Ltd***

The application is for the construction of two dams in a tributary of Bickerstaff Creek near Alexandra. Three submitters oppose the application and one wishes to be heard. The hearing is in Alexandra on 30 November.

***RM15.089 Waitaki Riparian enhancement Society Inc***

This application to have a salmon rearing facility in Welcome Creek was opposed by a submitter who did not wish to be heard. The hearing was on September 8<sup>th</sup> and the decision to grant the permits subject to conditions was given on 22 September. There was no appeal.

**2. Consent Reviews**

28 water permits in the Pomahaka catchment have been reviewed in order to update the minimum flow or impose the new minimum flow. Permit holders were given 20 days to make a submission before the consents were updated. Of the 28, 2 wish to be heard. A hearing is being set up.

Once the decision to update the conditions has been made, a permit holder has the right to object to the decision. One has indicated that they may object and confirmation of this is awaited.

### 3. Consent Statistics

**Table 1. Consents Statistics Summary**

Reporting Period	Lodged			Rejected	Decision Given		
	Consents	Variations			Consents	Variations	
		Regular	Water reporting date			Regular	Water reporting date
<b>14/15 year total to date</b>	<b>348</b>	<b>33</b>	<b>24</b>	<b>10</b>	<b>356</b>	<b>54</b>	<b>31</b>
<b>1 Jul – 14 Aug 15</b>	47	5	4	0	44	3	4
<b>16 Aug – 25 Sept 15</b>	51	2	0	2	40	6	0
<b>28 Sept – 6 Nov 15</b>	36	6	1	2	36	4	1
<b>15/16 YTD</b>	<b>134</b>	<b>13</b>	<b>5</b>	<b>4</b>	<b>120</b>	<b>13</b>	<b>5</b>

All decisions on consents were given within RMA allowed timeframes.

### 4. Consent Administration

**Table 2. Consent Administration Statistics**

Reporting Period	Transfers Received	Transfers Issued	S417 Certs Received	S417 Certs Issued
<b>14/15</b>	89	91	2	6
<b>1 Jul – 14 Aug 15</b>	30	29	0	0
<b>16 Aug – 25 Sept 15</b>	25	17	0	0
<b>28 Sept – 6 Nov 15</b>	23	26	0	0
<b>15/16 YTD</b>	<b>78</b>	<b>72</b>	<b>0</b>	<b>0</b>

### 5. Building Consent Authority (BCA) Administration

#### 5.1 In Progress:

Dam Building Consents	7
Code Compliance Certificates	3
PIM	0
Certificate of Acceptance	2

#### 5.2 Dam Safety.

As the Dam Safety Regulations have been revoked, standard consent conditions for dams which require resource consent under the RMA have been drawn up. This will include identification of dam hazard classification, ongoing surveillance of the facilities and appurtenant structures and review conditions.

## 6. Public Enquiries

Appendix 2 shows that 289 enquiries were received during the reporting period.

**Table 3. Public Enquiries Statistics**

<b>Period</b>	<b>Number of Enquiries</b>
<b>14/15 year</b>	<b>2259</b>
<b>1 Jul - 14 Aug 15</b>	366
<b>16 Aug - 25 Sept 15</b>	264
<b>28 Sept – 6 Nov 15</b>	289
<b>YTD 15/16</b>	<b>919</b>

## 7. Recommendation

That this report is noted.

Fraser McRae

**Director Policy Planning and Resource Management**

## **Appendix 1: Summary of applications that have not changed since the last report to the Committee**

**RM12.066 – Environment Canterbury** - erosion protection works in the Lower Waitaki River.

An officer at Environment Canterbury has applied for consents to allow them to undertake erosion protection works in the Lower Waitaki River. Numerous erosion protection measures are proposed over a 3 km stretch of river. DoC, Iwi, Fish and Game and owners of land on which the works are to take place are all considered to be affected parties. The applicant is continuing to work through a consultation process to determine whether or not the works applied for will continue to be undertaken.

### **Pending Applications of Interest**

***RM13.423 – Manuherikia Catchment Water Strategy Group (MCWSG)***

A working party has been established comprising MCWSG, Golder Associates and ORC staff. The aim of the working party is to develop a consenting strategy giving regard to existing mining privileges, individual water takes and irrigation options within the Manuherikia catchment. A decision on the viability of the scheme is expected in the first half of 2016.

## Appendix 2

### Total Number of Enquiries 289

Enquiry Type	No.	% of Total
Current Consents	94	32.5 %
Mining Privileges	3	1 %
Other	34	11.8 %
Permitted Activities	92	31.8 %
Pre-application	39	13.5 %
Property Enquiries	13	4.5 %
Students	1	0.3 %
TLA Enquiries	2	0.7 %
Transfers	11	3.8 %

Enquiry Location	No.	% of Total
Central Otago District Council	85	29.4 %
Clutha District Council	20	6.9 %
Dunedin City Council	43	14.9 %
Outside Otago	2	0.7 %
Queenstown Lakes District Council	54	18.7 %
Throughout Otago	7	2.4 %
Unspecified	51	17.6 %
Waitaki District Council	27	9.3 %

Enquiry Method	No.	% of Total
Counter	11	3.8 %
Email	158	54.7 %
Internet	1	0.3 %
Letter	4	1.4 %
Telephone	115	39.8 %



## REPORT

Document Id: A855864

Report Number: 2015/1247  
 Prepared For: Regulatory Committee  
 Prepared By: Peter Kelliher, Legal Counsel  
 Date: 6/11/2015

Subject: **Resource Management Act 1991, Biosecurity Act 1993 and Building Act 2004 Enforcement Activities from 25 September 2015 to 6 November 2015**

This report details Resource Management Act 1991, Biosecurity Act 1993 and Building Act 2004 enforcement activities undertaken by the Otago Regional Council during the period 25 September 2015 to 6 November 2015.

### 2. Resource Management Act 1991

#### a) Permitted Activity Rules - Inspections

**Table 1. Infringement Notices**

Details	Period – 25 September 2015 to 6 November 2015	Total – from 1 July 2015
Discharge of contaminants to land in breach of a regional rule – effluent	5	5
TOTAL	5	5

**Table 2. Authorised Legal Proceedings**

Details	Period – 25 September 2015 to 6 November 2015	Total – from 1 July 2015
Discharge of contaminants to land in breach of a regional rule – effluent	1	1
TOTAL	1	1

#### b) Incidents

**Table 3. Infringement Notices**

Details	Period – 25 September 2015 to 6 November 2015	Total – from 1 July 2015
Discharge of contaminants to air – outdoor burning	1	3
Discharge of contaminants to land in breach of a regional rule – effluent	0	1
TOTAL	1	4

**Table 4. Authorised Legal Proceedings**

Details	Period – 25 September 2015 to 6 November 2015	Total – from 1 July 2015
Discharge of contaminants to land in breach of a regional rule – effluent	1	1

Disturbing the bed of a river – mechanical excavation	1	1
TOTAL	2	2

**Table 5. Abatement Notices**

Details	Period – 25 September 2015 to 6 November 2015	Total – from 1 July 2015
To cease damming water within a river in breach of a regional rule	1	1
TOTAL	1	1

#### 4. Building Act 2004

Six Notices to Fix were issued with respect to earth embankment dams in the Otago region. The Notices required:

- a) The dam's owner to either remove the dam or undertake remedial works to ensure compliance with the Building Act 2004, and regulations under that Act (5);
- b) The dam's owner to apply for a certificate of acceptance (1).

#### 5. Recommendation

That this report be noted.

Fraser McRae  
**Director Policy Planning and Resource Management**

## REPORT

Document Id: A859125

Report Number: 2015/1266

Prepared For: Regulatory Committee

Prepared By: Director Policy, Planning and Resource Management

Date: 13 November 2015

Subject: **Appointment of Hearing Commissioners to November 2015**

### 1. Précis

An amendment to the Resource Management Act in 2005 means that consent hearing commissioners must be appointed by the Council. The Commissioner Appointment Subcommittee has this function and reports to the Regulatory Committee. The appointments made in this reporting period are set out in this report.

### 2. Meeting 27 October to 3 November 2015 (by email)

Present	Crs Woodhead and Robertson
Applicant	Mt Campbell Station Ltd
Appn. No.	RM14.206
Activity	To dam, discharge contaminants to, and disturb the bed of a tributary of Bickerstaffe Creek and Mt Campbell Creek for the purpose of constructing two water storage dams.
Note	Crs Scott and Neill, with Cr Kempton as reserve, were appointed in May to hear this application. The application was then put on hold at the applicant's request. Crs Scott and Kempton were unavailable for a hearing on the rescheduled days.
Mover/seconder	Cr Woodhead moved, Cr Robertson seconded
Appointment	Crs Neill and Kelliher

### 3. Meeting 28-29 October 2015 (by email)

Present	Crs Robertson and Woodhead
Activity	Pomahaka minimum flow review
Mover/seconder	Cr Robertson moved, Cr Woodhead seconded
Motion	Crs Croot (Chair) and Neill

### 4. Recommendation

That the report be noted.

Fraser McRae  
**Director Policy, Planning and Resource Management**

**OTAGO REGIONAL COUNCIL****Agenda for a meeting of the Communications Committee to be held in  
the Council Chamber, 70 Stafford Street, Dunedin on  
Wednesday 25 November 2015 following the Regulatory Committee  
meeting**

**Membership:**

**Cr Trevor Kempton** (Chairperson)  
**Cr Graeme Bell** (Deputy Chairperson)  
**Cr Doug Brown**  
**Cr Louise Croot MNZM**  
**Cr Michael Deaker**  
**Cr Gerrard Eckhoff**  
**Cr Gary Kelliher**  
**Cr Sam Neill**  
**Cr Gretchen Robertson**  
**Cr Bryan Scott**  
**Cr David Shepherd**  
**Cr Stephen Woodhead**

**Apologies:**

**Leave of absence:** **Cr Bryan Scott**

**In attendance:**

**Please note that there is an embargo on agenda items until 8.30 am on Monday 23 November.**

**CONFIRMATION OF AGENDA**

**PUBLIC FORUM**

**MINUTES**

The minutes of the meeting held on 14 October 2015, having been circulated, for adoption

**Matters arising from minutes**

**FOR NOTING**

Item 1

2015/1237 **Stakeholder Engagement Report.** Manager Communications/ Manager Community Liaison and Education, 13/11/15

Reporting on community, stakeholder and staff engagement activities carried out by Stakeholder Engagement directorate staff since the last meeting.

**OTAGO REGIONAL COUNCIL****Minutes of a meeting of the Communications Committee held in the  
Council Chamber, 70 Stafford Street, Dunedin on  
Wednesday 14 October 2015 commencing at 2:37pm**

**Present:** Cr Graeme Bell (Deputy Chairperson)  
Cr Michael Deaker  
Cr Gerrard Eckhoff  
Cr Gary Kelliher  
Cr Sam Neill  
Cr Gretchen Robertson  
Cr Bryan Scott  
Cr David Shepherd  
Cr Stephen Woodhead

**Apologies:** Cr Doug Brown

**Leave of absence:** Cr Trevor Kempton (Chairperson)  
Cr Louise Croot MNZM

**In attendance:** Peter Bodeker  
Nick Donnelly  
Gavin Palmer  
Fraser McRae  
Scott MacLean  
Caroline Rowe  
Peter Taylor  
Lauren McDonald  
Charlotte Stickings

**CONFIRMATION OF AGENDA**

There were no changes to the agenda.

**MINUTES**

The minutes of the meeting held on 2 September 2015, having been circulated, were adopted on the motion of Crs Bell and Robertson.

**Matters arising from minutes**

There were no matter arising from the minutes.

**FOR NOTING**

Item 1

2015/1182 **Stakeholder Engagement Report.** Manager Communications/ Manager  
Community Liaison and Education, 30/9/15

A report on community, stakeholder and staff engagement activities carried  
out by Stakeholder Engagement directorate staff since the last meeting.

Cr Bell moved

Cr Robertson seconded

*That:*

*The report be noted*

**Motion Carried**

The Meeting closed at: 2.40pm.

**Chairperson**

## REPORT

Document Id: A854642

Report Number: 2015/1237

Prepared For: Communications Committee

Prepared By: Director Stakeholder Engagement

Date: 13 November 2015

Subject: **Communications Committee – Report November 2015**

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This report records stakeholder engagement activity between 26 September and 6 November 2015.

### 1. Water Quality

The Council's Rural Water Quality Implementation Programme (6A) for stakeholder engagement and education has been undertaken this period with a range of stakeholders. These are summarised below.

#### 1.1 Key industry stakeholder meetings

On 9 November, we held the quarterly meeting of our external stakeholder group (including representatives from: Dairy NZ, Fonterra, Beef and Lamb NZ, Federated Farmers, Otago Deer Farmers Association, Clutha Development Trust, NZ Landcare Trust, North Otago Irrigation Company and the Waitaki Irrigators Collective. Deer Industry NZ and Horticulture NZ are also part of this group).

The purpose of the group is to provide updates about 6A implementation, enable stakeholders to share with others the work they are undertaking, and identify opportunities to collaborate to deliver effective water quality programmes to the rural community.

Opportunities for collaboration were identified around; farmer leadership programmes, rural professional workshops on effluent management, developing pragmatic messages and advice to farmers, industry working with farmers to ensure uptake of farm practice change while ORC science and compliance water monitoring programmes are undertaken. The next meeting is planned for late March 2016.

Staff met with Central Otago Fish and Game officers in Cromwell on 13 October to discuss 6A and build an on-going relationship. An upcoming meeting is planned with all the Fish and Game Otago staff.

Staff presented the rules and water quality limits in Plan Change 6A to the New Zealand Institute of Primary Industry Management (NZIPIM) at Cromwell on 15 October. This was an opportunity to talk about 6A to seventy rural and urban professionals.



Manager of Community Liaison & Education Nicola McGrouther was invited to speak about the ORC approach to management water quality and Plan Change 6A at the National New Zealand Association of Resource Management Conference in Hamilton. This was a good opportunity, alongside Environment Canterbury, Waikato Regional Council and Horizons, to outline Otago's approach to achieving good water quality to a national audience, and learn from other approaches around the country. It was well attended, and included representatives from MFE and Regional Council staff, Waikato iwi and Federated Farmers.

## 1.2 Dairy Focus

Council staff are working with industry to develop a collaborative approach to working with farmers to reduce dairy effluent non-compliance.

The North Otago Dairy Working Group held their third meeting on 29 October. The group consists of DairyNZ, Fonterra, Federated Farmers, Oceania and ORC (NOIC and LWIC are to be included going forward). The terms of reference have been agreed and work is underway on piloting an on-farm visit late November.

As expanding Central Otago dairy wintering has the potential to impact on waterways, ORC currently support the Sustainable Farming Fund Central Otago Sustainable Winter Grazing project. The latest meeting of the group, held in October, identified the key factors required to maintain successful dairy farmer and grazier relationships with respect to both technical and environmental management. This will form the basis of information that will be posted on a range of industry websites. It is intended to include a link on this site to the Council website for enquiries relating to 6A rules.

Staff met with Fonterra and Dairy NZ on 27 October to view effluent irrigation testing and discuss how to assess ponding. One of the outcomes of the day is that ponding resource for farmers has been requested by Industry to better understand how ponding is assessed.



**Fonterra, Dairy NZ and ORC session on effluent irrigation and ponding**

In South Otago, the Crookston Burn Dairy Discussion group, run by Dairy NZ, invited ORC staff to speak on 2 October about the upcoming intensive compliance monitor sampling program starting shortly. The farmers who attended requested to be kept in the loop as to the results and progress. Staff will be sending regular water monitoring

results which will assist farmers to consider the best way of managing the impacts of their land management activities.

### 1.3 Sheep, Beef and Deer Focus

Beef & Lamb NZ held at fieldday at Mt Aspiring on 14 October where ORC was invited to speak about 6A. The main focus of this event was to showcase the work done so far on the Land Environment Plans undertaken at 3 lakes properties, the Overseer validation project (also being undertaken on Mt Aspiring Station and partly funded by the ORC) and the Otago Water Plan. Sixty people attended – both farmers and rural professionals. Staff are continuing discussions with the farmers in the Matukituki valley to discuss pragmatic mitigation measures to maintain good water quality.



**Mt Aspiring Fieldday**

Staff held a meeting in the Waiwera catchment (South Otago) to ensure farmers are aware of a Waiwera catchment focused science water monitoring project. Farmers were initially wary of ORC testing in the catchment and welcomed the opportunity to discuss the work. At the request of farmers, staff will provide the monitoring results via email. Farmers are keen to spread the message about the programme further. A follow up meeting will be held to discuss the results once a number of sample rounds have been taken.

### 1.4 Overseer

Staff set up an external Overseer liaison group earlier this year to discuss questions being raised by Industry as to how we will implement the Overseer rule. Two meetings of this group have been held, with a third planned for early December. The purpose of the group is to clearly outline how the Council will implement the Overseer rule, find out how the use of Overseer is going, and identify any issues with implementation. In this committee round an internal staff meeting was held to finalise responses to a series of external group questions. These responses will be presented to the external group on 30 November.

### 1.5 Contractors

Staff are working with the Otago Contractors Federation to develop a series of workshops for contractors on 6A. As part of the preparation for these events, staff are

working with the consents team to discuss messages and processes around getting a consent for working in waterways. These workshops are expected to take place prior to Autumn 2016.

Staff spoke at a workshop in Cromwell on 6 October on sediment control measures for application on urban and commercial development sites. The workshop was presented by RST Environmental Solutions. CLEO staff spoke with personnel from RST about rules under 6A that align with the remedial measures that were outlined. 45 people, mainly contractors, attended the workshop.

### **1.6 North Otago**

The Otago Regional Council was asked to speak at the NZ Landcare Trust Kakanui Community Catchment Project on 18 October. The event brought together guest speakers on a range of different topics focussing on the health of the Kakanui River and aimed to heighten awareness in the community of water quality issues. Council staff gave an overview of the three key areas of management of the Kakanui River: water quantity, water quality, and river form, SOE water quality results and the NIWA Estuary Report.

### **1.7 Other**

Staff attended the Ecotago Ocemes Spring Symposium which was held on 17 October. This is a collective of community groups interested in water measuring. The main focus of this event was to discuss the development of a suitable project to further develop community water quality monitoring in Otago, which would be eligible for Participatory Science Platform funding. The outcome was to develop a smaller scale pilot project focussing on the Tomahawk Lagoon with the view to expand the concept in the future. Project members also gave an update on their respective projects. Sixteen people attended.

CLEO staff spoke to 12 youth attending the Farmhand programme, run by Annika Korsten of the Malcam Charitable Trust on 30 September. The ORC offered in-kind support to this new programme through the LTP process. ORC's role was to provide information to the group, so that they could understand the key ecological aspects of riparian management in the context of wildlife, biodiversity, and farm nutrients. Staff ran a discussion session about the roles of ORC in relation to water quality and biodiversity, as well as the risks associated with farming in relation to these aspects.

We were requested to present to an Enviro-schools committee meeting in Cromwell on 20 October. Staff presented the principles of 6A and encouraged schools to utilise the Council's web based information. Twelve schools were represented.

Pupils (years 7 & 8) from Kakanui, Maheno and Five Forks schools participated in a Waterwatch event at Gemmels Crossing on the Kakanui River on 15 October. Run by Lincoln University, the water measuring training course is available for both school and community groups. The event was organised in the catchment by Landcare Kakanui

Community Catchment Project. A key learning from the event was the possibility of Otago farmers and groups using the water measuring tools developed by Lincoln.



Waterwatch event

## 2. Water Quantity

Staff attended an Irrigation New Zealand annual general meeting in October in Alexandra. The meeting included an update on renewing deemed permits. A key message coming through was that irrigators are seeking support and guidance with regard to how they ought to be addressing the renewal process with the many factors that need to be considered.

Staff met with consultants from Landpro, OPUS and Patterson Pitts on the 3<sup>rd</sup> November in Alexandra to discuss current challenges, issues and options for promotion of group managed water.

## 3. Land, Biodiversity, and Biosecurity

Two Council staff attended the New Zealand Plant Conservation Network Biannual Conference in Dunedin in late October. The conference provided staff a chance to upskill on the biodiversity values and important biodiversity issues faced in Otago, as well as meeting with those actively working locally in this space.

## 4. Hazard and Risk Mitigation

Natural hazards staff presented the draft Kakanui River Morphology and Riparian Management Strategy to key stakeholders. The presentation focussed on the key objectives of the strategy, and the identified mechanisms for implementation.

## 5. Media and Communications

### Media activity

Over the period we had 60 print media mentions, and two broadcast media mentions. Stories covered included:

- Wakatipu public transport
- Wallabies in Wanaka

- Water quality
- Outdoor burning
- Preparations for low-flows
- Safer boating
- Farm prosecutions
- Flooding awareness in QLDC
- Dam safety
- Civil defence management
- Emergency preparedness and ShakeOut
- Waterway buffer zones
- Proposed city bus hub and other bus changes
- Wilding conifers.

Three media releases were issued – topics covered were safer boating week, farm waterway buffer zones, and Taieri and Lower Clutha flood and drainage scheme economic benefit review.

#### Social media

There were 25 posts on Facebook. As at 06 November the ORC Facebook page had 950 likes. Topics posted included Safer boating week, World Rivers Day, ShakeOut, and bus service disruptions.

We sent out 29 Tweets or retweets on topics similar to those featured in media releases and on Facebook – our Twitter account had 494 followers as of 06 November.

#### Communications

A spring/summer issue of Waterlines newsletter has been prepared for publication in late November. The topics include Invermay deer farm compliance with ORC water quality rules, Kakanui estuary nutrient report findings, wilding conifer management, El Nino river conditions, buffer zone protection for waterways, ORC water quality work with industry and lagarosiphon control.

Six natural hazards reports were published.

#### Web development and traffic summary

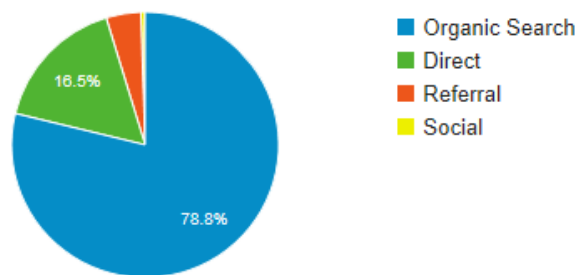
Updates are made daily to the ORC website and Intranet. Altogether 122 changes were made during this period.

Some important updates made during this period include:

- SurveyMonkey survey set up for the Clutha and Taieri Flood and Drainage schemes – Economic assessment to support public meetings planned for these areas.

- A new page has been set up to support upcoming Lake Wakatipu and Lake Wanaka flood awareness work; this includes a link to a survey.
- Updates to the Otago Regional Policy Statement Review page including further submissions added and hearing of submitters times and dates.
- A new page for Wilding conifer control is almost complete including public survey which will be created using SurveyMonkey.

Top Channels



Visits to the ORC website

During this period visits to the website were fairly consistent.



The top documents downloaded during this period have been the:

- 2015 bus timetable (4,227 downloads)
- Regional Plan Water – Rules: Water take, use and management (110 downloads)
- Rates email application form (97 downloads).

General website statistics



The graph below shows how people are getting to our website and indicates a heavy reliance on an organic search. As our social media presence grows we are expecting more people to link to the website from those channels.

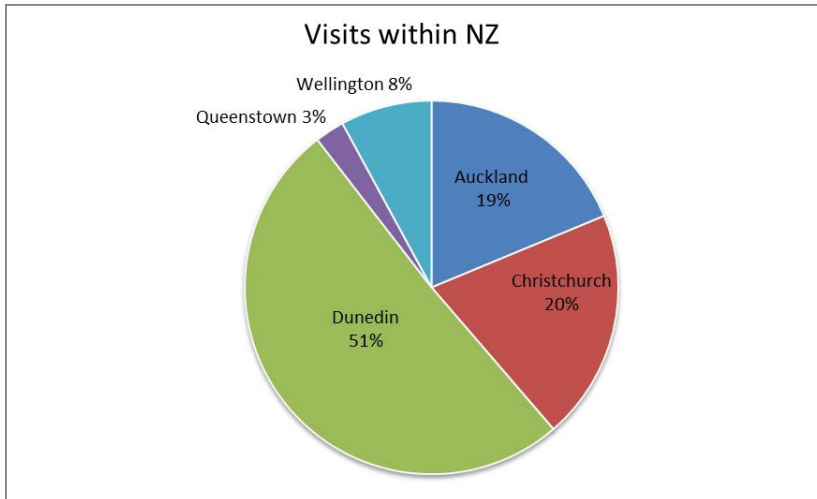
Number of visits resulting from these channels:

**Organic Search:** Google, Bing. (29,656 visits)

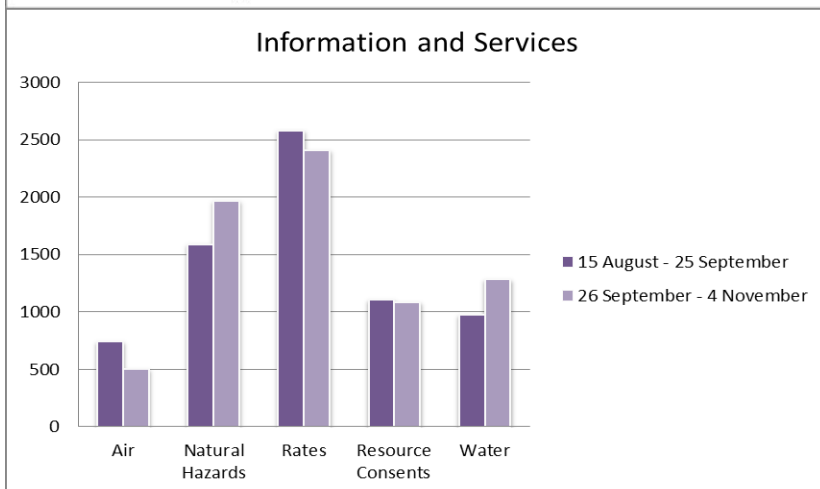
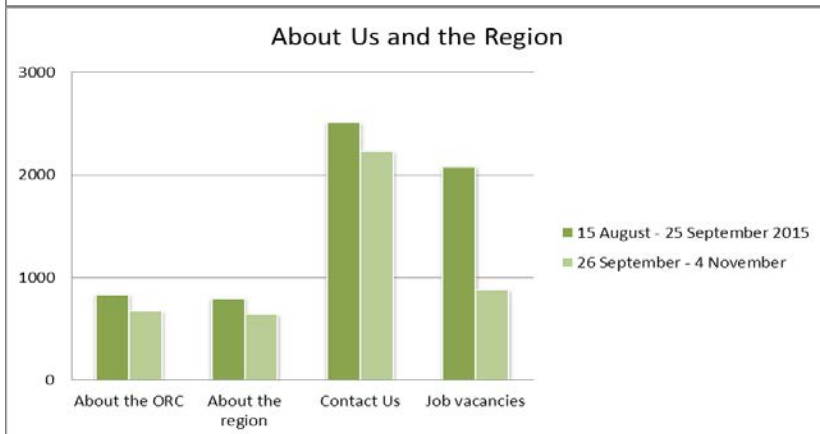
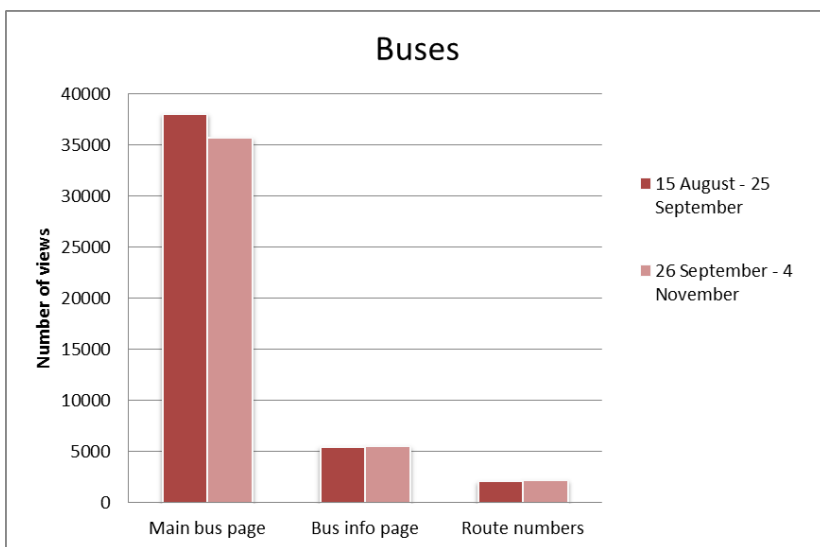
**Direct:** Typing website address directly into browser. (6,206 visits)

**Social:** Visitors have clicked on a link from social media. (195 visits)

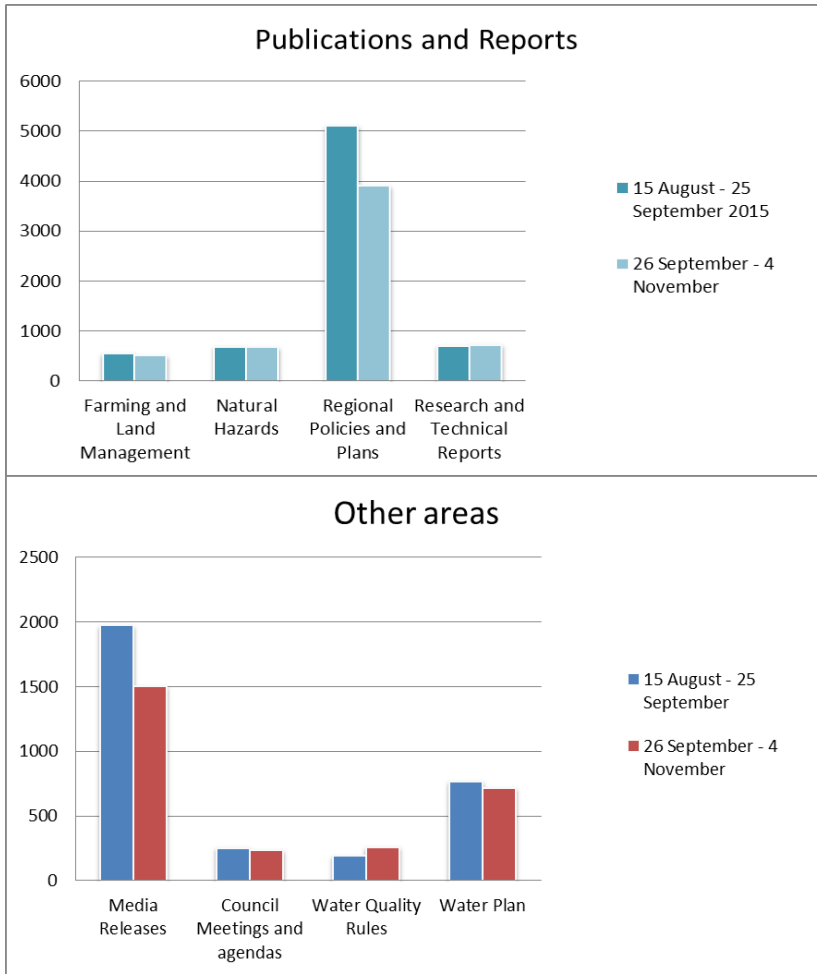
**Referral:** Visitors have clicked on a link from another website. (1,578 visits)



Analysis of webpages viewed







**6. Recommendation**

That this report is noted.

Caroline Rowe  
**Director Stakeholder Engagement**

**OTAGO REGIONAL COUNCIL**

**Agenda for a meeting of the Technical Committee to be held  
in the Council Chamber, 70 Stafford Street, Dunedin  
on Wednesday 25 November 2015 following the Communications  
Committee meeting**

**Membership:**

- Cr Bryan Scott (Chairperson)**
- Cr Doug Brown (Deputy Chairperson)**
- Cr Graeme Bell**
- Cr Louise Croot MNZM**
- Cr Michael Deaker**
- Cr Gerrard Eckhoff**
- Cr Gary Kelliher**
- Cr Trevor Kempton**
- Cr Sam Neill**
- Cr Gretchen Robertson**
- Cr David Shepherd**
- Cr Stephen Woodhead**

**Apologies:**

**Leave of Absence:**           **Cr Bryan Scott**

**In attendance:**

**Please note that there is an embargo on agenda items until 8.30 am on Monday 23 November.**

**CONFIRMATION OF AGENDA**

**PUBLIC FORUM**

**MINUTES**

The minutes of the meeting held on 14 October 2015, having been circulated, for adoption.

**Matters arising from minutes**

**ITEMS FOR NOTING**

## Item 1

2015/1215    **2015 Air Quality Results.** DEHS, 23/10/15

This annual State of the Environment report describes the air quality monitoring results for 2015 and provides a comparison to the current ambient condition as reported in the 10-year SoE.

## Item 2

2015/1238    **Director's Report on Progress.** DEHS, 12/11/15

Topics covered in the report are: Queenstown lakes flood awareness program, Dunedin District Plan and Natural Hazards, Leith Flood Protection Scheme, and Lake Tuakitoto.

**OTAGO REGIONAL COUNCIL****Minutes of a meeting of the Technical Committee held  
in the Council Chamber, 70 Stafford Street, Dunedin  
on Wednesday 14 October 2015 commencing at 1.42pm**

- Present:** Cr Bryan Scott (Chairperson)  
Cr Graeme Bell  
Cr Gerrard Eckhoff  
Cr Gary Kelliher  
Cr Sam Neill  
Cr Gretchen Robertson  
Cr Stephen Woodhead  
Cr David Shepherd  
Cr Michael Deaker
- Apologies:** Cr Doug Brown (Deputy Chairperson)
- Leave of Absence:** Cr Louise Croot MNZM  
Cr Trevor Kempton
- In attendance:** Peter Bodeker  
Scott MacLean  
Nick Donnelly  
Fraser McRae  
Gavin Palmer  
Caroline Rowe  
Chris Valentine (Item 3)  
Dean Olsen (Items 1 and 4)  
Michael Goldsmith (Item 2)  
Jacob Williams (Item 2)  
Charlotte Stickings

**CONFIRMATION OF AGENDA**

There were no changes to the agenda.

**MINUTES**

The minutes of the meeting held on 2 September 2015, having been circulated, were adopted on the motion of Crs Scott and Robertson.

## Matters arising from minutes

It was noted that the seismic hazard presentation to the wider community was still to be scheduled.

## PART A – RECOMMENDATIONS

### Item 1

2015/1078 **Spatial variability of air quality in Clyde.** DEHS, 20/8/15

The report detailed an investigation into the spatial air quality in Clyde completed during winter 2015.

Highest levels of PM<sub>10</sub> were noted in the centre of the town, comment was made that this report re-affirmed what had been found in other areas.

It was noted that continued exposure to PM<sub>2.5</sub> is the indicator for health issues and a large problem in Central Otago is the inversion layers.

Cr Woodhead moved

Cr Kelliher seconded

*That:*

1. *The report be noted;*
2. *The results from the report be used to inform the monitoring component of the new air quality management strategy.*

### **Motion carried**

### Item 2

2015/1163 **Kakanui river morphology and riparian management strategy.** DEHS, 22/09/15

The Kakanui river morphology and riparian management strategy had been prepared to help protect and enhance the recreational, cultural and ecological values of the Kakanui and Kauru riverbeds and their margins.

Staff were congratulated on a comprehensive strategy, having gathered a lot of high quality information and noting this was something that the community were passionate about. It was noted that the strategy was not a statutory document but was live and regularly reviewed.

Cr Woodhead moved

Cr Robertson seconded

*That:*

1. *The report be received;*

2. *The Kakanui River morphology and riparian management strategy is endorsed;*
3. *The financial considerations associated with the strategy are noted.*

**Motion carried**

Item 3

2015/1184

**Leith Dundas to St David St.** DEHS, 09/09/15

The report sought endorsement of the design and landscaping and approval to invite tenders for construction of the Dundas Street to St David Street Footbridge reach of the Leith Flood Protection Scheme.

It was noted that the extent of work would depend on tendered prices as it included some maintenance items.

The question was raised asking if there was any provision for the culvert at the Dundas St Bridge, and it was noted that these planned works enabled for the culvert but that would be the very last piece of work done as it controlled outbreak at the northern end.

Cr Deaker moved  
Cr Shepherd seconded

*That:*

1. *The report be noted*
2. *The design and landscaping of the Leith Flood Protection Scheme works in the Dundas Street to St David St reach be endorsed;*
3. *Tenders be invited to complete construction of the Leith Flood Protection Scheme works in the Dundas Street to St David Street reach.*

**Motion carried**

**PART B - ITEMS FOR NOTING**

Item 4

2015/1050

**Kakanui River and Estuary.** DEHS, 20/07/15

The report detailed modelling work in the Kakanui Estuary.

The Plan Change 6A mediation led to NIWA being contracted to look at the relationship between estuarine water quality, flows and nutrient loads in the Kakanui Estuary.

It was noted that the community acknowledged these issues, management practices needed to alter and the report re-affirmed this. This information gave direction for working with landowners and the wider community.

Cr Kelliher moved  
Cr Robertson seconded

*That:*

*This report and the technical report 'Kakanui Estuary Hydrodynamic Model' produced by NIWA be received and noted.*

**Motion carried**

Item 5  
2015/1166

**Director's Report on Progress.** DEHS, September 2015

The report discussed the South American Tsunami 17 September 2015, Tomahawk Beach and Lagoons, preparation for low river flows and Pomahaka and Strath Taieri river morphology and riparian management strategies.

The preparation for low river flows was noted, this would set out how Otago Regional Council would engage with the community and stakeholders to inform of ORC responsibilities and expectations. The importance of managing rivers and tributaries for the protection of ecology, and indigenous species was also noted. A report would be prepared for the next committee round noting preparation made and incorporating lessons learnt from last year.

Cr Neill moved  
Cr Deaker seconded

*That the report be noted.*

**Motion carried**

The meeting closed at 2.35pm.

**Chairperson**

## REPORT

Document Id: A852754

Report Number: 2015/1215

Prepared For: Technical Committee

Prepared By: Director Engineering, Hazards and Science

Date: 23/10/2015

Subject: **2015 Air Quality Results**

### 1. Précis

Ambient air quality monitoring of PM<sub>10</sub><sup>1</sup> continued this year at eight sites throughout Otago. Year-round monitoring fulfilled requirements of the National Environmental Standard for Air Quality (NESAQ) at four sites: Alexandra, Arrowtown, Mosgiel and Central Dunedin. At the remaining four sites monitoring was performed from April-September.

The NESAQ sets a daily PM<sub>10</sub> threshold concentration of 50 micrograms per cubic metre of air ( $\mu\text{g}/\text{m}^3$ ); one day a year over that threshold is allowed. The NESAQ sets a final compliance date of 1 September 2020, with an interim target of no more than three days over the threshold by 1 September 2016. Days with PM<sub>10</sub> greater than 50  $\mu\text{g}/\text{m}^3$  are referred to as exceedances, or high-pollution days.

The following table shows the number of days with PM<sub>10</sub> values exceeding 50  $\mu\text{g}/\text{m}^3$  this year at locations around Otago.

**Table 1. Number of exceedances recorded at Otago PM<sub>10</sub> monitoring sites.**

Location	Number of exceedance days
Alexandra	24
Arrowtown	29
Balclutha	11
Clyde	9
Cromwell	26
Dunedin	0
Milton	32
Mosgiel	8

Central Dunedin is meeting the NESAQ this year; no exceedances have been recorded to date for this calendar year. The remainder of the monitored centres have all had multiple exceedances, with Milton having the greatest number (32 days).

All Central Otago towns had better-than-usual air quality this winter, with Alexandra and Cromwell having their lowest numbers of exceedances since continuous monitoring began in those towns (2005 in Alexandra, 2008 in Cromwell). The increased frequency of weather patterns favourable to dispersion is the likely cause of this result; this is discussed in Section 4 of this report.

<sup>1</sup> Particulate matter with an aerodynamic diameter of less than 10 micrometres



## 2. Introduction

A 10-year State of the Environment (SoE) report was presented to Council earlier this year<sup>2</sup>. That report described the current state of Otago's ambient air quality and the long-term trends in air quality over the 10 years from 2005 through 2014.

This annual State of the Environment report describes the monitoring results for 2015 and provides a comparison to the current ambient condition as reported in the 10-year SoE. The relationship of Otago airsheds to the NESAQ is also discussed.

## 3. Winter summary

Air quality monitors were operated in Alexandra, Arrowtown, Clyde, Cromwell, Balclutha, Central Dunedin, Milton and Mosgiel this year.

The key indicators in the table below show that the numbers of exceedances range from zero in Central Dunedin to 32 in Milton. The table also lists the maximum one-day values, the second-highest value, and the winter average (May – August) for each site.

**Table 2. Annual summary statistics for daily PM<sub>10</sub> in 2015.** (Unless noted, all units are µg/m<sup>3</sup>).

Location	Number of exceedances (days)	Winter average (May-Aug)	Maximum PM <sub>10</sub>	Second highest PM <sub>10</sub>
Alexandra	24	38	111	76
Arrowtown	29	38	168	148
Balclutha	11	31	72	70
Clyde	9	27	62	61
Cromwell	26	35	93	86
Dunedin	0	18	42	41
Milton	32	39	121	108
Mosgiel	8	27	93	80

A spreadsheet with a wider range of descriptive statistics for each site is attached.

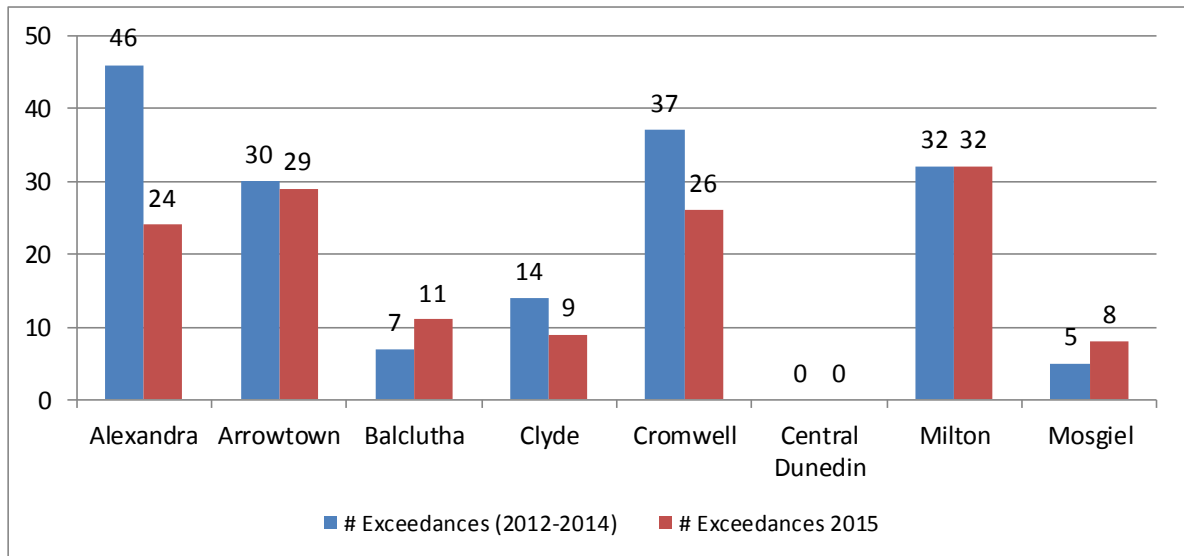
## 4. Comparison to typical winter PM<sub>10</sub> conditions

A State of the Environment (SoE) paper was submitted to Council earlier this year describing the condition of ambient air quality in Otago. In the report, the typical situation was derived by aggregating PM<sub>10</sub> data over the three most recent years, 2012-2014. This was done to minimise the influence of annual climatic differences.

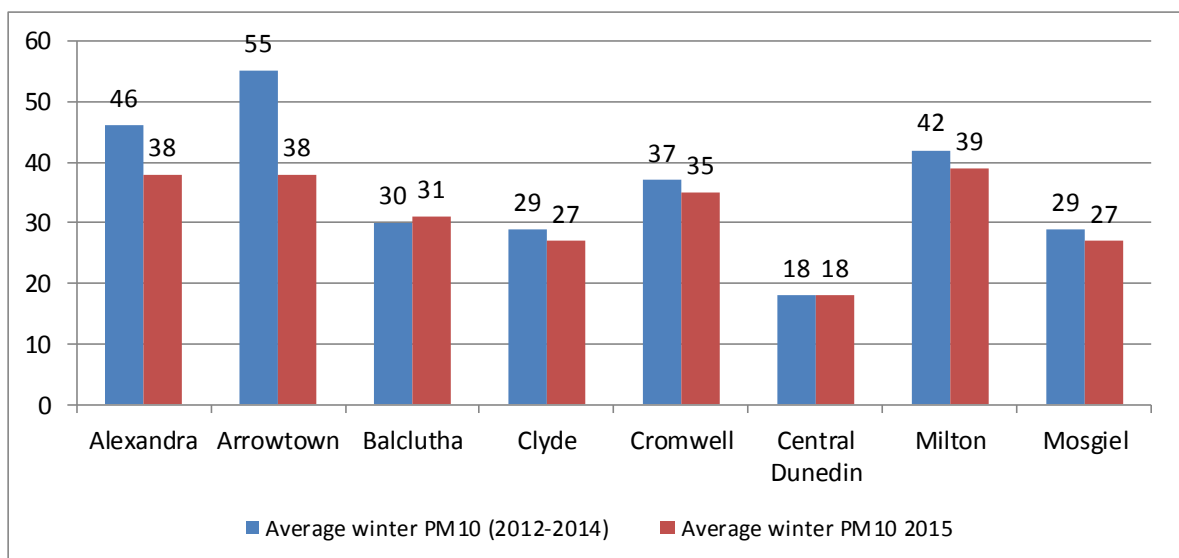
PM<sub>10</sub> statistics for 2015 are compared to that aggregated dataset to see if this year's air quality was better or worse than usual at the monitored sites. Figures 1 and 2 show the following values for both 2015 and for the defined typical period (2012-2014):

- the number of exceedances, and
- the average winter PM<sub>10</sub>

<sup>2</sup> Air Quality State of the Environment in Otago Report: 2005-2014, Report Number 2015/0927



**Figure 1. Comparison of number of days exceeding the NESAQ for 2015 (red bars) versus the typical condition (blue bars).**



**Figure 2. Comparison of average winter PM<sub>10</sub> for 2015 (red bars) versus the typical condition (blue bars).**

These graphs show that this year ambient air quality was better than usual in most centres, particularly in Central Otago. The important features of this comparison include:

1. Alexandra had only 24 exceedances this year compared to the typical 46 days (Figure 1). This is the fewest number of exceedances ever recorded in Alexandra.

2. Cromwell had 26 exceedances, 11 fewer than the usual 37 days. This is the fewest number of exceedances ever recorded in Cromwell.<sup>3</sup>
3. The winter average for all sites, except Balclutha and Central Dunedin, was lower this year than usual. This was most pronounced in Arrowtown and Alexandra.
4. Central Dunedin continues to meet the national standard for daily PM<sub>10</sub> (50 µg/m<sup>3</sup>) and the World Health Organisation guideline for annual PM<sub>10</sub> (20 µg/m<sup>3</sup>).

Ambient PM<sub>10</sub> concentrations reflect the synergistic relationship of emissions and atmospheric conditions at any given time. This year's better-than-usual result in Central Otago implies that one or both of these settings were significantly different than in previous years. A brief discussion of both emissions and weather patterns follows.

### Emissions

This calendar year<sup>4</sup>, 112 building consents were granted for installations of new burners into existing Central Otago residences located in Alexandra, Arrowtown, Clyde and Cromwell. The geographic breakdown follows:

- Alexandra 37 (includes the 5 Bridge Hill consents)
- Arrowtown 18
- Clyde 15
- Cromwell 42

These numbers are all tracking slightly behind 2014 consent numbers and are well down on most years. To provide some context, in Alexandra during 2011, 147 consents were issued for new wood burners; this was the greatest number in one year. On average, about 65 consents are issued each year in Alexandra over the past 11 years.

In 2006<sup>5</sup>, there were about 1400 solid-fuel burners in use in Alexandra, presumably none of them compliant with the 0.7 g/kg or 1.5 g/kg required emission rate. Since 2005, approximately 740 consents have been issued in Alexandra.

Based on these figures, it is reasonable to assume that the lower-than-usual PM<sub>10</sub> figures are not due to a sudden and large reduction in emissions.

### Weather

According to NIWA's winter climate summary<sup>6</sup>, Central Otago experienced some of the lowest temperatures ever recorded in New Zealand during late June. This is reflected in the temperature record at the four Central Otago air quality monitoring sites where minimum temperatures were significantly lower this year than last.

<sup>3</sup> In 2011, there were 20 exceedances reported, but only 56% of winter days were sampled.

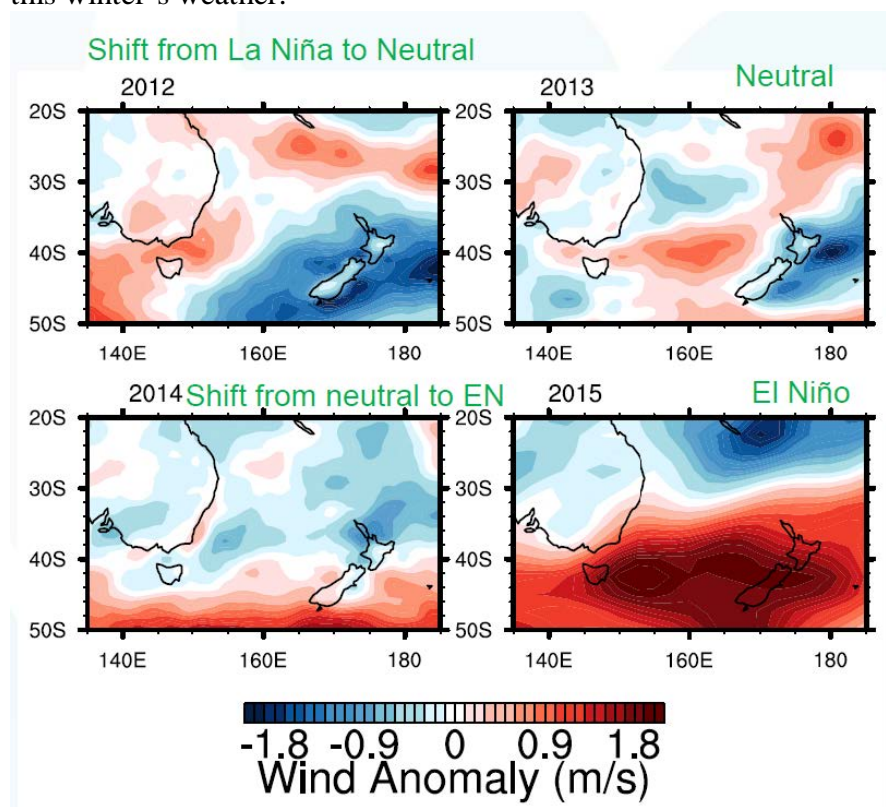
<sup>4</sup> Through the end of September 2015

<sup>5</sup> Statistics New Zealand, 2013 Census

<sup>6</sup> NIWA National Climate Centre, *Seasonal Climate Summary: Winter 2015*, Issued: 4 September 2015

In addition to low temperatures, the configuration of synoptic patterns this winter resulted in increased zonal flows (westerly winds) over the South Island, creating windier conditions in Central Otago.

A recent analysis of wind anomalies (differences from the normal situation) done by Greater Wellington Regional Council<sup>7</sup> indicates that the strong El Niño conditions this year resulted in much more frequent periods of zonal (westerly) winds and stronger-than-normal seasonal average wind speeds. Figure 3 depicts the winter wind anomalies for the years 2012-2015. The red tones show stronger westerlies, a distinct feature of this winter's weather.



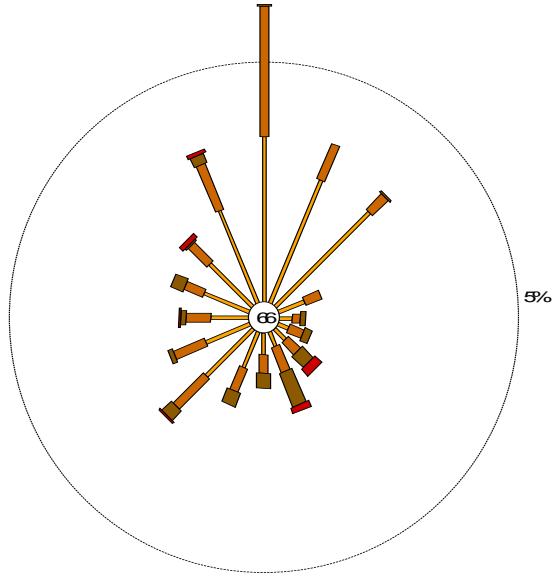
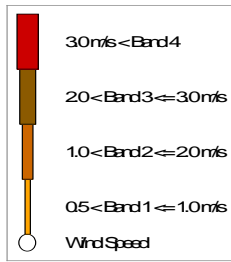
**Figure 3.** Winter (May-August) wind anomalies are shown from 2012-2015. Red tones indicate stronger westerlies, blue tones indicate weaker westerlies. Strong westerlies influenced the New Zealand weather this winter as evidenced by the bottom right-hand map where the large-scale climate dataset indicates that mean winter wind speeds were almost 2 m/s higher than normal this year.

Examining the wind record in Alexandra revealed that there were fewer periods of calm winds this year as compared with last year (Figure 4). The percentage of hours with wind speeds less than 0.5 m/s for 2014 and 2015 is shown below for annual and winter time periods.

Time period	2014	2015
All year	57	43
Winter (May-Aug)	66	48

<sup>7</sup> Fiddes S., Pezza A., Mitchell T., Kozyniak K., Mills D.; *Synoptic weather evolution and climate drivers associated with winter air pollution in New Zealand*, under review

Wind Direction at Alexandra Air Quality  
 Wind Speed at Alexandra Air Quality  
 From 1-Jan-2014 00:00:00 to 9-Nov-2014 08:59:00  
 Month Filter: May-Aug



Wind Direction at Alexandra Air Quality  
 Wind Speed at Alexandra Air Quality  
 From 1-Jan-2015 00:00:00 to 9-Nov-2015 08:59:00  
 Month Filter: May-Aug

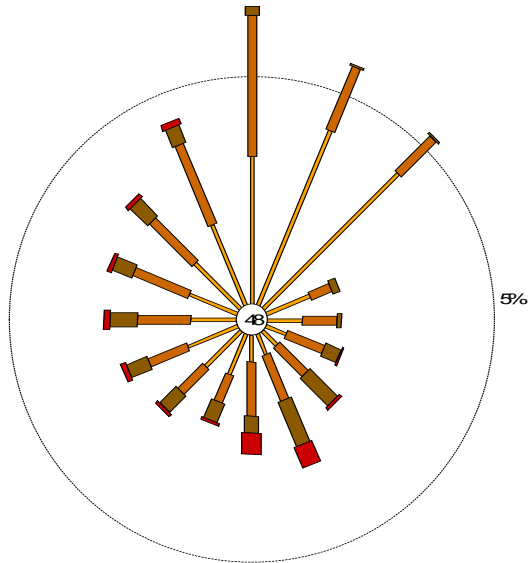
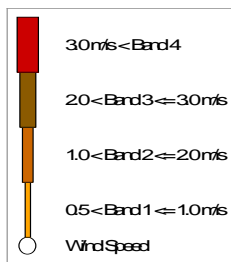


Figure 4. Alexandra winter wind roses for the past two years show that, overall, winter 2015 was windier than 2014 with considerably fewer periods of calm winds.

Discussions held at the recent National Air Quality Working Group meeting<sup>8</sup> revealed that several councils across the country reported better-than-usual air quality results this winter.

These features point to the likelihood of increased dispersion of PM emissions this winter in Central Otago towns and underscore the influence that weather and climate have on air pollution.

## **5. Relation to NESAQ compliance**

The NESAQ sets an average daily threshold concentration of  $50 \mu\text{g}/\text{m}^3$  as sufficient for protecting public health. By 2020, only one exceedance per year is allowed. As an interim target, by 1 September 2016, three exceedances per year are allowed.

Currently, Central Dunedin meets the NESAQ target. All other monitored sites exceed the daily target on multiple days every year.

Given the results from this winter it is unlikely that most towns, particularly those in Central Otago, will meet the 2016 interim target.

## **6. Recommendations**

1. That this report be received.
2. That the state of air quality in Otago be noted.

Gavin Palmer  
**Director Engineering, Hazards and Science**

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<sup>8</sup> 29-30 October meeting of the National Air Quality Working Group, Wellington

2015	Alexandra	Arrowtown	Balclutha	Clyde	Cromwell	Dunedin	Milton	Mosgiel
<b>Summary</b>								
Winter average PM <sub>10</sub> (May-Aug)	38	38	31	27	35	18	39	27
Number Exceedances (days)	24	29	11	9	26	0	32	8
Maximum PM <sub>10</sub>	111	168	72	62	93	42	121	93
2 <sup>nd</sup> highest PM <sub>10</sub>	76	148	70	61	86	41	108	80
Number of days > 100µg/m <sup>3</sup>	1	7	0	0	0	0	2	0
<b>Monthly exceedances (days)</b>								
January	0					0		0
February	0					0		0
March	0					0		0
April	0	0	1	0	2	0	2	0
May	6	7	2	1	4	0	5	2
June	5	5	1	1	6	0	7	2
July	7	11	4	5	10	0	9	4
August	6	6	3	2	4	0	9	0
September	0	0	0	0	0	0	0	0
<b>Winter days (123 days)</b>								
# days < 35 µg/m <sup>3</sup>	56	76	78	85	64	118	62	90
# days between 35-50 µg/m <sup>3</sup>	43	18	31	29	19	2	31	16
# days > 50 µg/m <sup>3</sup>	24	29	10	9	24	0	30	8
% days < 35 µg/m <sup>3</sup>	46	62	66	69	60	98	50	79
% days between 35-50 µg/m <sup>3</sup>	35	15	26	24	18	2	25	14
% days > 50 µg/m <sup>3</sup>	20	24	8	7	22	0	24	7
<b>Monthly averages</b>								
May	37	32	29	24	30	17	35	25
June	35	38	28	24	32	14	39	25
July	43	54	35	31	44	19	43	32
August	37	29	32	30	36	20	39	26

**REPORT**

Document Id: A854653

Report No: 2015/1238

Prepared For: Technical Committee

Prepared By: Gavin Palmer, Director Engineering, Hazards and Science

Date: 18 November 2015

**Subject: Director's Report on progress**

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**1. Queenstown lakes flood awareness program**

The annual flood awareness program for Queenstown and Wanaka was completed between 28 and 30 October, together with the Queenstown Lakes District Council (QLDC). A total of 173 businesses / residences within the low-lying parts of the Queenstown and Wanaka CBD's were visited. An assessment of the resilience of businesses and buildings to the effects of flooding was undertaken this year. This included an on-site assessment by QLDC and ORC staff, as well as an on-line survey targeted towards building and business owners and managers. The results of this assessment will be analysed and provided at a later date.

**2. Dunedin District Plan and Natural Hazards**

ORC has been participating in a second round of consultation sessions for Dunedin City Council's proposed changes to the natural hazards provisions of the District Plan (2GP). Sessions have been held as follows, with approximate numbers of members of the public attending each session shown bracketed: Mosgiel (70), Macandrew Bay (130+), Middlemarch (21), Portobello (38), Waitati (40), Port Chalmers (24), Brighton / Ocean View (60), Waikouaiti (17). Approximately 400 people attended these sessions in total. Staff also assisted DCC staff on a stall providing 2GP information at the South Dunedin Street Festival, where approximately 15 parties made enquiries. The DCC publicly notified the proposed Plan Change on 26 September, with submissions closing on 24 November.

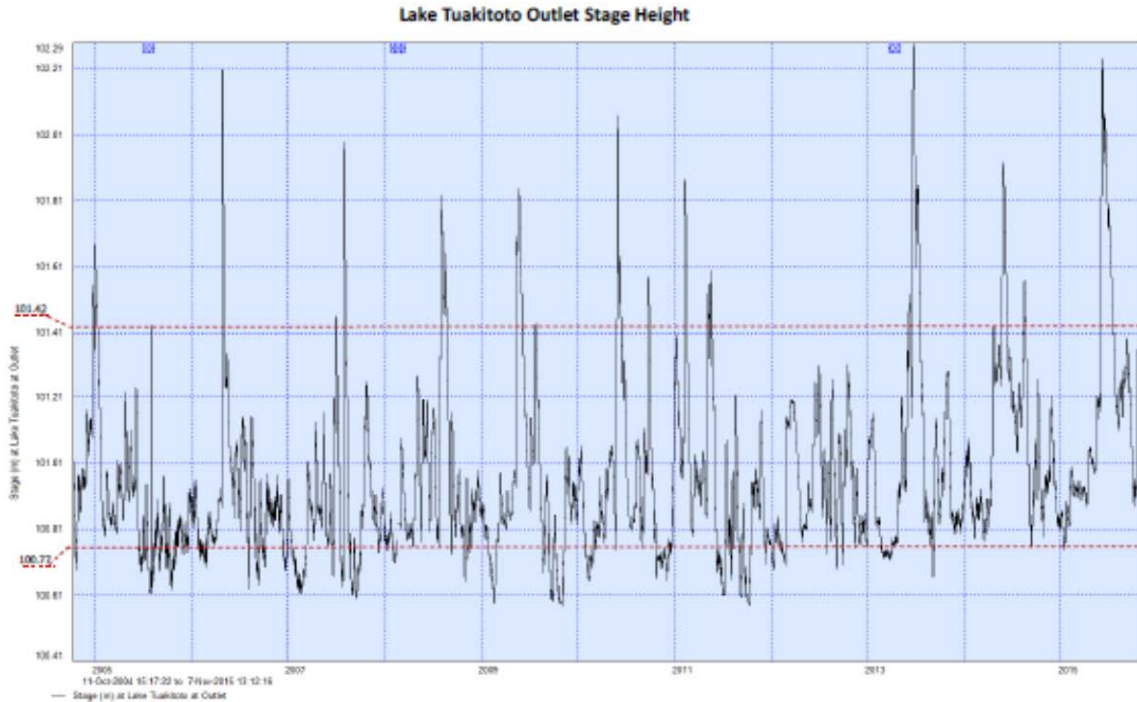
**3. Leith Flood Protection Scheme**

The Dundas Street to St David Street reach of the Leith Flood Protection Scheme is currently out to tender. Tenders for the construction work within this reach closed on 16 November. Tenders are being evaluated with the aim of a recommendation to award a contract prepared for Council's consideration on 9 December.

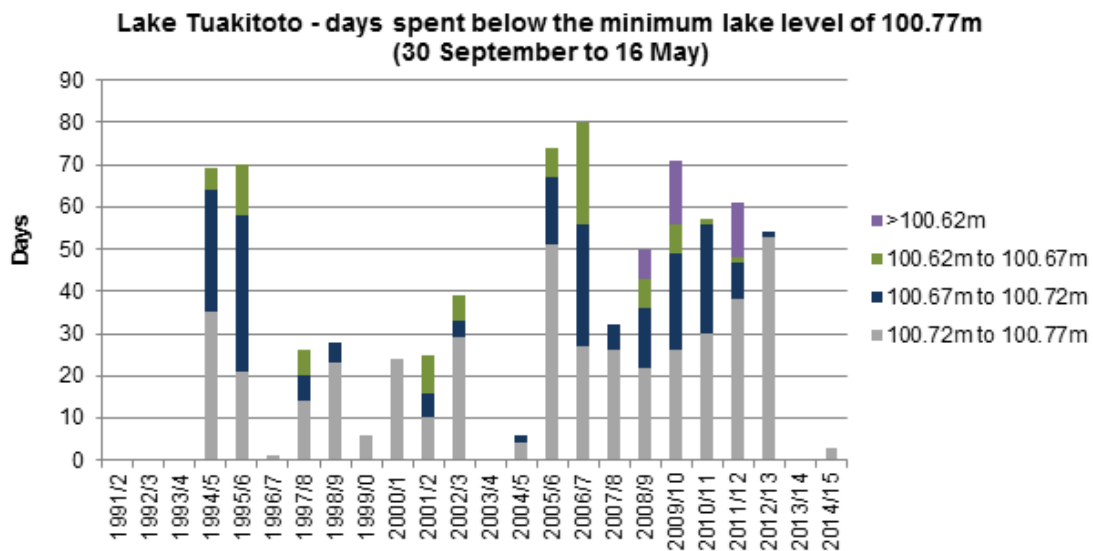
**4. Lake Tuakitoto**

Crs Shepherd and Woodhead, Mr Bodeker and I met with approximately 20 landholders at Kaitangata on 23 October to discuss land drainage around the margins of Lake Tuakitoto. The lake is listed in Schedule 9 of the Regional Plan Water as a regionally significant wetland. ORC's operation of the lake outlet sills was explained along with compliance with the minimum lake levels specified in the Regional Plan Water and in the resource consent for the sills (Figures 1 and 2).





**Figure 1 Level of Lake Tuakitoto at outlet sill, 2003 to present**



**Figure 2: Number of days each year (1991 to present) Lake Tuakitoto has been lower than 100.77 metres.**

It was agreed that ORC will take a more active approach to managing occasional high lake levels whilst still complying with the consent. Progress with replacement of the existing diversion gate at the north end of the lake (Robson Lagoon) was explained and it was agreed that landholders would be updated on ORC’s intentions before the end of the year.

**5. Recommendation**

That this report is noted.

Gavin Palmer  
**Director Engineering, Hazards and Science**

**OTAGO REGIONAL COUNCIL****Agenda for a meeting of the Finance and Corporate Committee  
to be held in the Council Chamber, 70 Stafford Street, Dunedin  
on Wednesday 25 November 2015 following the Technical Committee  
meeting**

**Membership:**

**Cr David Shepherd** (Chairperson)  
**Cr Gary Kelliher** (Deputy Chairperson)  
**Cr Graeme Bell**  
**Cr Doug Brown**  
**Cr Louise Croot MNZM**  
**Cr Michael Deaker**  
**Cr Gerrard Eckhoff**  
**Cr Trevor Kempton**  
**Cr Sam Neill**  
**Cr Gretchen Robertson**  
**Cr Bryan Scott**  
**Cr Stephen Woodhead**

**Apologies:**

**Leave of absence:**           **Cr Bryan Scott**

**In attendance:**

**Please note that there is an embargo on agenda items until 8.30 am on Monday 23 November.**

**CONFIRMATION OF AGENDA**

**PUBLIC FORUM**

**MINUTES**

Minutes of the meeting held on 14 October 2015, having been circulated, for adoption.

**Matters arising from minutes**

## PART A - PRESENTATION

### Otago Rescue Helicopter Trust – annual report

## PART B - ITEMS FOR NOTING

### Item 1

2015/1265 **Property Summary 2015.** DCS, 12/11/15

Providing an overview of Otago Regional Council property holdings.

## PART C – RECOMMENDATIONS

### Item 2

2015/1258 **Executive report.** DCS, 20/11/15

The report describes significant activities carried out by the Finance and Corporate sections since the last meeting of the Committee.

## PART D - EXCLUSION OF PUBLIC

That the public be excluded from the following part of the proceedings of the meeting.

The general subject of the matters to be discussed while the public is excluded, the reason for passing this resolution in relation to the matter, and the specific grounds under Section 48(1)(a) of the Local Government Information and Meetings Act 1987 for the passing of this resolution are as follows:

	General subjects to be considered	Reason under LGOIMA for passing this resolution	Grounds under S.48 for the passing of this resolution
Item 3	Minutes of the Audit and Risk Subcommittee meeting of 9 September 2015	To maintain the effective conduct of public affairs through the free and frank expression of opinions by or between or to members or officers or employees. S7(2)(f)(i)	S.48(1)(a)(i)

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act or Section 6 or Section 7 or Section 9 of the Official Information Act 1982 as the case may require, which would be prejudiced by the holding of the whole or the relevant part of the proceedings of the meeting in public are as shown above with respect to each item.

**OTAGO REGIONAL COUNCIL****Minutes of a meeting of the Finance and Corporate Committee held in  
the Council Chamber, 70 Stafford Street, Dunedin  
on Wednesday 14 October 2015 commencing at 1.00pm**

- Present:**
- Cr David Shepherd (Chairperson)
  - Cr Gary Kelliher (Deputy Chairperson)
  - Cr Graeme Bell
  - Cr Michael Deaker
  - Cr Gerrard Eckhoff
  - Cr Sam Neill
  - Cr Gretchen Robertson
  - Cr Bryan Scott
  - Cr Stephen Woodhead
- Apologies:**
- Cr Doug Brown  
The apology was accepted on the motion of Crs Woodhead and Kelliher.
- Leave of absence:**
- Cr Louise Croot MNZM
  - Cr Trevor Kempton
- In attendance:**
- Peter Bodeker
  - Gavin Palmer
  - Scott MacLean
  - Nick Donnelly
  - Fraser McRae
  - Caroline Rowe
  - Charlotte Stickings
  - Lauren McDonald
  - Gerard Collings (Item 3)

**CONFIRMATION OF AGENDA**

There were no changes to the agenda.

**MINUTES**

The minutes of the meeting held on 2 September 2015, having been circulated, were adopted on the motion of Crs Kelliher and Robertson.

## Matters arising from minutes

Item 2.9 noted that Nick Donnelly be appointed sole 'director', recommendation corrected.

## PART A - RECOMMENDATIONS

### Item 1

2015/1183 **Schedule of Meetings to September 2016.** DCS, 1/10/15

The report suggested the schedule of Ordinary Committee Meetings to September 2016 with local body elections to be held 8 October 2016.

It was noted that the schedule for next year followed the normal 6 week cycle with adjustments in September for the Annual Report and audit process.

Agreement was in place that ORC should participate in Waitangi Day celebrations by flying the flags of the regional rūnaka.

A request was made that the annual plan hearings be included in the schedule for next year. Noted this schedule provided dates for public Council and Committee meetings only. A more detailed calendar would be provided including annual plan hearings and workshop dates.

Cr Deaker moved  
Cr Robertson seconded

*That:*  
*The attached schedule of ordinary committee meetings to September 2016 be adopted.*

### **Motion carried**

Cr Robertson left the meeting 1.17pm noting a conflict of interest

### Item 2

2015/1181 **Councillor Plan change hearing remuneration.** DCS, 30/9/15

The report outlined the remuneration for Councillors acting as commissioners for plan change hearings as determined and approved through the remuneration authority.

Cr Woodhead moved  
Cr Neill seconded

*That:*  
*1. The report be received*

2. *The plan change hearing remuneration pool be used in the 2015/16 year for the Regional Policy Statement and Plan change 5A hearings as outlined above.*

**Motion carried**

Cr Robertson returned to the meeting 1.20pm

Item 3

2015/1185 **Passenger Transport Update.** DCS, 1/10/15

The report provided an update on various transport matters including: Noting delays outside Council's control, with the procurement of the replacement ticketing system, developments regarding the Crowns intent to bulk fund the Super Gold free off-peak travel scheme, progress on the design development of the new Dunedin bus hub and advising on the commencement of the Wakatipu Network review and business case process.

Mr Collings commented that NZTA were currently working through sensitive issues regarding the delays, a paper on procurement would be taken to the NZTA board at the end of October, noting they were committed to assisting in joint ticketing procurement. There are 9 other Councils involved in the process which is unique for New Zealand. Clear direction would be given to this Council at the November meeting and indication was made that Otago Regional Council would be the first Council to benefit from the new system which should happen in the next 18 months.

It was viewed positively that a combination of both staff and Councillors would be involved in the invited competition for the bus hub design. ORC Councillors volunteered for this review were Crs Deaker and Neill.

Delays in the ticketing system meant that the free transfer would not be in place on 1 January 2016, due to changes required to implement this on the current systems. The next changes required full implementation across the whole network.

Cr Deaker moved

Cr Robertson seconded

*That:*

1. *The report be received*
2. *That Council nominate two Councillors to participate in the Bus Hub design review, and*
3. *That staff be requested to invite NZTA representative, two DCC staff (one Transport and one Urban Design) and up to two DCC councillors to participate in the Bus Hub design review.*

**Motion carried**

Note: Councillors nominated to participate in the Bus Hub design review were Crs Deaker and Neill.

Item 4

2015/1174 **Executive report.** DCS, 2/10/15

The report described significant activities carried out by the Finance and Corporate sections since the last meeting of the Committee.

It was noted that an economic assessment process was underway, requests for proposal closed on 12 October and 3 in total were received.

Cr Kelliher stepped back from the table at 1.30pm prior to discussion of item.

Mr Donnelly confirmed it was not this Council's policy to remit rates. It was commented that if the valuations changed, ORC rates would be adjusted in accordance. Historically, irrigation schemes have not been valued. Irrigation New Zealand are currently working with LINZ, Quotable Value and the Office of the Valuer General to resolve this issue.

Cr Woodhead moved  
Cr Deaker seconded

*That:*

- 1. The report be received*
- 2. The payments and investments summarised in the table above and detailed in the tabled schedule, totalling \$2,970,817.4 be endorsed.*

**Motion carried**

Cr Kelliher returned to the table at 1.36pm.

**PART B – ITEMS FOR NOTING**

Item 5

2015/1170 **Regional Collaboration and Shared services.** DCS, 23/9/15

The report informed Council of the the work done with others both in Otago and wider as encouraged by central government.

Comment was made that it was good to see collaboration taking place, reducing costs where possible. It was also noted that a lot of day to day activities that take place go unseen and the report did not give reference to collaboratively developed software with other regional councils.

Cr Deaker moved  
Cr Kelliher seconded



*That:  
The report be received.*

**Motion carried**

The meeting closed at 1.41pm.

**Chairperson**

# **OTAGO RESCUE HELICOPTER TRUST**

## **PRESENTATION OF ANNUAL REPORT**

## REPORT

Document Id: A859016  
Report No: 2015/1265  
Prepared for: Finance and Corporate Committee  
Prepared by: Manager Support Services  
Date: 12 November 2015

**Subject: Property Summary 2015**

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### 1. Précis

At the formation of Council in 1989 Council inherited significant property from its predecessor organisations including investment, endowment, offices/depots, and operational and/or scheme related property.

This report provides an overview of the property holdings currently held by Council.

### 2. Background

At the formation of Council in 1989 through the Local Government Reorganisation Scheme Council inherited significant property holdings from the predecessor organisations including the Otago Harbour Board. The properties can be broadly described in the following categories;

- Investment,
- Endowment,
- Office/depot,
- Operational and/or Scheme related (including Lakes Waihola and Tuakitoto).

Since 1989 Council has made further property acquisitions for specific projects including;

- Custom House Quay (since passed to the Dunedin City Council with the exception of The Custom House)
- Pleasant River wetland
- Lindsay Creek properties (part and whole) for the Leith Lindsay Flood Protection Scheme
- Birch and Kitchener Streets for the proposed principal premises.

As at 30 June 2015 Council's property buildings and plant holdings represent a net book value of \$32.336m.

In addition to the properties owned, Council also has leases for Oamaru, Queenstown and Alexandra Offices and the Oil Spill response store in Dunedin.

### 3. Investment Property

Council's investment properties represent \$10.124m. Two major investment properties were transferred to Council from the Otago Harbour Board during the reorganisation, being Harbour Terrace and Union Street both of which are subject to renewable ground leases held by the Otago Polytechnic and the University of Otago (formerly Teachers College).

At the time of the reorganisation there was significant debate regarding not only who should own the newly formed Port Company (Port Otago) but also how the non-operational assets should be divested. As a result of those determinations these two properties were transferred to the Council. At the time of the reorganisation Council also assumed responsibility for Harbour Safety and Navigation for Otago Harbour.

Due to the nature of these ground leases they require very little administration which primarily revolves around rate recovery and rent reviews. For rent reviews Council engages independent valuers and follows the mechanical processes contained within the leases. The rent reviews are on a seven year cycle with Harbour Terrace due 1 April 2017 and Union Street scheduled for 2021.

Currently the annual rent from these two properties is \$545,000 plus GST per annum. The rental is offset against the general rate which represents 10.2% of the rate.

At the Council meeting held on 28 October Council sought advice on the options for transfer/sale of these properties to Chalmers Properties. Our solicitors advise that:

- There are no restrictions, either noted on the titles or in the Reorganisation Order, that fetter Council's ability to deal with the land.
- The land is not a strategic asset in Council's Long Term Plan. It can therefore be disposed of without amendment to the LTP.
- If the land is to be disposed of, then Council has an obligation to its ratepayers and residents to secure market value either in cash or by exchange.

In addition to the above leases Council also owns the Custom House which is on freehold title and the Monarch ticketing office which sits on Harbour Board endowment land under the control of Port Otago. Both of these are on standard fixed term leases with Council being responsible for those matters that a landlord would generally attend to.

#### **4. Endowment land**

Council has 35 endowment properties in Lower Clutha (20), Kuriwao (7), and West Taieri (8).

At this stage only the Kuriwao property is able to be freeholded through the Otago Regional Council (Kuriwao Endowment Lands) Act 1994.

20 of the endowment properties are subject to perpetual leases.

#### **5. Office/depots**

Council currently has ownership of the following offices and depots;

- Dunedin (currently under review)
- Taieri
- Balclutha
- Cromwell
- Wanaka
- Arrowtown (currently on market as surplus to requirements)

## **6. Operational/Scheme related**

Council holds a significant number of smaller properties that are associated to straight operational requirements and flood control and drainage schemes. A number of these properties provide supplementary income through grazing leases and short term grazing licences.

- Lower Clutha – 66 currently leased or licensed
- Lower Taieri – 11 licences
- West Taieri – 7 currently leased or licensed

Staff are currently reviewing these land holdings to confirm what land may be able to be disposed of, if any. The review is focused on those parcels of land where there are no operational assets directly associated e.g. pump stations, floodbanks and drains.

## **7. Recommendation**

That this report be received.

Nick Donnelly  
**Director Corporate Services**

**REPORT**

Document Id: A857340

Report Number: 2015/1258  
Prepared For: Finance and Corporate  
Prepared By: Director Corporate Services  
Date: 20 November 2015

Subject: **Executive Report - November 2015**

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**1. Economic Review Update**

Council has engaged Castalia, a Wellington based consultancy, to undertake an independent economic assessment of the level of public benefit generated from the flood and drainage schemes in the Taieri and Lower Clutha areas. As part of their assessment Castalia was requested to consult directly with affected ratepayers in those areas. Drop-in sessions were held in Balclutha and Outram on 11 November. These sessions allowed the public to engage with Castalia and directly provide them with their views on the benefits the schemes provide. The sessions were widely publicised and all ratepayers within the schemes were written to and invited to attend.

Two consultants from Castalia attended the drop in sessions. There were 10 ratepayers at the Balclutha session and 55 at Outram. An additional 30 responses had been received electronically prior to the public meetings. Castalia is due to present their report to Council in February 2016.

**2. Interpreters**

Council have entered into agreements to have interpretation services available for Te Reo Maori and NZ Sign Language. The services will be available as required including Council meetings and hearings. Key communications will be amended to reflect that these services are available and can be requested when making submissions to Council.

**3. Passenger Transport Update****3.1 Wakatipu Basin Network Review and Business Case Development**

Work has commenced on the Wakatipu Network Review and associated Business Case Development. Three stakeholder workshops have been undertaken in order to be able to complete the strategic business case and commence development of a programme case. As a result of the earlier workshops it was identified that there are some key gaps in our knowledge of the public transport market in the Wakatipu Basin. In order to increase the level of understanding between the local and visitor markets a community survey is being undertaken through late November – early December. The survey will target both residents and visitors and will be used to help form a network baseline going forward and to test the base assumptions being made in the business case and network review. It should also reinforce that this Council is actively seeking to identify options for a positive outcome for the Wakatipu public transport system and network.

The current programme targets having the final Business Case and any proposed network changes confirmed by the end of June 2016.

### 3.2 Dunedin Central City Bus Hub

The design competition is scheduled to close on 25 November. In accordance with the Council's decision NZTA and DCC have been invited to participate in the design review process which will occur late November – early December.

### 3.3 Supergold Card Reimbursement

LGNZ has been actively lobbying the Minister of Transport regarding the Crown's decision to bulk fund the reimbursement for the Supergold free off peak travel scheme. In the interim staff from this and other councils have been working with NZTA on possible funding allocation models should there be no change in the Crown's position and should councils continue to participate in the scheme. NZTA modelling on current usage and forecasts for this financial year based on the existing reimbursement method indicate a national short fall in the Crown's bulk fund allocation.

## 4. Account Payments

Schedules of payments made are referred to the Finance and Corporate Committee for endorsement. The financial commitments and payment authorisation are made in accordance with Council's financial delegations and internal control procedures.

<b>Payment Category</b>	<b>September 2015</b>	<b>October 2015</b>
Trade and general payments	\$4,329,307.25	\$2,319,398.09
Payroll	\$888,185.73	\$688,164.36
Investments	\$4,000,000.00	\$5,500,000.00
<b>Total</b>	<b>\$9,217,493.22</b>	<b>\$8,507,562.45</b>

## 5. Recommendation

- (1) That this report be received.
- (2) That the payments and investments summarised in the table above and detailed in the tabled schedule, totalling \$17,725,055.67, be endorsed.

Nick Donnelly  
**Director Corporate Services**

**OTAGO REGIONAL COUNCIL**

**Agenda for a meeting of the Policy Committee to be held in the  
Council Chamber, 70 Stafford Street, Dunedin on  
Wednesday 25 November 2015 following the Finance and Corporate  
Committee meeting**

**Membership:**

- Cr Gretchen Robertson (Chairperson)**
- Cr Michael Deaker (Deputy Chairperson)**
- Cr Graeme Bell**
- Cr Doug Brown**
- Cr Gerrard Eckhoff**
- Cr Gary Kelliher**
- Cr Trevor Kempton**
- Cr Sam Neill**
- Cr Bryan Scott**
- Cr David Shepherd**
- Cr Stephen Woodhead**

**Apologies:**

**Leave of absence:**           **Cr Bryan Scott**

**In attendance:**

**Please note that there is an embargo on agenda items until 8.30 am on Monday 23 November.**

**CONFIRMATION OF AGENDA****PUBLIC FORUM****MINUTES**

The minutes of the meeting held on 14 October 2015, having been circulated, for adoption.

**Matters arising from minutes**



**PART A - RECOMMENDATIONS**

## Item 1

2015/1279 **Local Government Leaders Climate Change Declaration.** DPPRP, 18/11/15

The report notes that Mayors and Chairs will continue to support NZ submission to the climate change deliberations in Paris in December 2015, and approval is sought for the ORC Chair to sign the Local Government Leaders Climate Change Declaration (circulated with the report).

**PART B - ITEMS FOR NOTING**

## Item 2

2015/1248 **Director's Report on Progress.** DPPRM, 13/11/15

The report gives an overview of significant activities undertaken by the Policy section since the last meeting of the Policy Committee.

**OTAGO REGIONAL COUNCIL****Minutes of a meeting of the Policy Committee held in the  
Council Chamber, 70 Stafford Street, Dunedin on  
Wednesday 14 October 2015 commencing at 2:41pm**

- Present:** Cr Gretchen Robertson (Chairperson)  
Cr Michael Deaker (Deputy Chairperson)  
Cr Graeme Bell  
Cr Gerrard Eckhoff  
Cr Gary Kelliher  
Cr Sam Neill  
Cr Bryan Scott  
Cr David Shepherd  
Cr Stephen Woodhead
- Apologies:** Cr Doug Brown  
The apology was accepted on the motion of Crs Shepherd  
and Woodhead
- Leave of absence:** Cr Trevor Kempton  
Cr Louise Croot MNZM
- In attendance:** Peter Bodeker  
Gavin Palmer  
Scott MacLean  
Nick Donnelly  
Fraser McRae  
Caroline Rowe  
Charlotte Stickings  
Lauren McDonald

**CONFIRMATION OF AGENDA**

There were no changes to the agenda.

**MINUTES**

The minutes of the meeting held on 2 September 2015, having been circulated, were adopted on the motion of Crs Neill and Woodhead

**Matters arising from minutes**

There were no matters arising from the minutes.

**ITEMS FOR NOTING**

## Item 1

2015/1168 **Director's Report on Progress.** DPPRM, 2/10/15

The report gave an overview of significant activities undertaken by the Policy section since the last meeting of the Policy Committee.

It was confirmed that Council was engaging with other regional councils to provide a regional response to the declarations made to the High Court by the Royal Forest and Bird Protection Society of NZ. LGNZ involvement was noted.

Noted that the RPS and PC5A: Lindis Minimum Flow processes had become closer in timing. Agreed the hearings and deliberations process should be continuous with RPS hearings commencing in November 2015 and PC5A in early 2016. Mr McRae confirmed the community and submitters would be advised as soon as possible.

Support was sought for further discussion on the TPPA resolution submitted through a public forum petition to Council at the 2 September 2015 meeting.

Cr Scott moved

Cr Deaker seconded

*That Otago Regional Council supports the Tran-Pacific Partnership resolution for local government consideration and that it lies on the table.*

**Motion lost**

Respect was noted for the public forum and the petition received, but the preference was to leave this with central government as this is where the responsibility sat.

Cr Shepherd moved

Cr Neill seconded

*That:*

*The report including appendix 1 be noted.*

**Motion carried**

The meeting closed at 3:12pm

*Chairperson*

**REPORT**

Document Id: A860340

Report Number: 2015/1279  
Prepared For: Policy Committee  
Prepared By: Director Policy, Planning and Resource Management  
Date: 18 November 2015

Subject: **Local Government Leaders Climate Change Declaration**

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**1. Précis**

Climate change creates opportunities and impacts for local government throughout New Zealand, and New Zealand is making submission to the climate change deliberations in Paris in December 2015. Sir Bob Harvey, who is attending those climate change deliberations, will also be provided with the Declaration for that forum. Mayors and Chairs will continue to support the New Zealand submission.

**2. Introduction**

National Council of LGNZ approved the Local Government Leaders Climate Change Declaration, as attached, and released it on 20 October 2015 at the EDS conference in Auckland.

While the declaration began as an initiative of metro mayors, it is being circulated to allow others the opportunity to have their signature on the declaration.

As noted in the declaration, local government is all too aware of challenges faced shoring up infrastructure and managing insurance costs, along with responding to future impacts. These are serious financial considerations for all councils and their communities.

**3. Discussion**

The declaration includes planning commitments to reduce greenhouse gases and support resilience within communities. The proposed Regional Policy Statement for Otago includes:

- making energy supplies secure and sustainable while reducing reliance on fossil fuels
- ensuring Otago communities are prepared for and able to adapt to the effects of climate change.

Regional and district plans are required by the RMA to give effect to a regional policy statement – *give effect to* means implement [*Environmental Defence Society Inc v The New Zealand King Salmon Co Ltd* [2014] NZSC 38].

Therefore, the intent of the declaration is consistent with the proposed Regional Policy Statement.

**4. Recommendation**

That ORC supports the Chair attaching his signature to the Local Government Leaders Climate Change Declaration.

Fraser McRae  
**Director Policy, Planning and Resource Management**

[.....] 2015

Honourable [.....]

Minister for [ .....

New Zealand Government

Dear Minister

**Re: Local Government Leaders Climate Change Declaration**

Climate change presents significant opportunities, challenges and risks to communities throughout the world and in New Zealand. Local and regional government undertakes a wide range of activities that will be impacted by climate change and provides infrastructure and services useful in reducing greenhouse gas emissions and enhancing resilience.

We have come together, as a group of Mayors representing local government from across New Zealand to:

1. Acknowledge the importance and urgent need to address climate change for the benefit of current and future generations;
2. Give our support to the New Zealand Government for developing and implementing in collaboration with councils, communities and businesses, an ambitious transition plan toward a low carbon and resilient New Zealand;
3. Encourage Government to be more ambitious with climate change mitigation measures;
4. Outline key commitments our councils will take in responding to the opportunities and risks posed by climate change; and
5. Recommend important guiding principles for responding to climate change.

We ask that the New Zealand Government make it a priority to develop and implement an ambitious transition plan for low carbon and resilient New Zealand. We stress the benefits of early action to moderate the costs of adaptation to our communities. We are all too aware of challenges we face shoring up infrastructure and managing insurance costs. These are serious financial considerations for Councils and their communities.

To underpin this plan, we ask that a holistic economic assessment is undertaken of New Zealand's vulnerability to the impacts of climate change and of the opportunities and benefits for responding. We believe that New Zealand has much at stake and much to gain by adopting strong leadership on climate change and ambitious emission reduction targets at the UNCOP meeting in Paris in December.

We know that New Zealanders are highly inventive, capable and passionate about the environment. New Zealanders are proud of our green landscapes, healthy environment and our unique kiwi identity and way of life. Central and Local Government working together with communities and

business can develop and implement ambitious strategies, based on sound science, to protect our national inheritance and security.

### **Council Commitments**

For our part we commit to:

1. Develop and implement ambitious action plans that reduce greenhouse gas emissions and support resilience within our own Councils and for our local communities. These plans will:
  - a. Promote walking, cycling, public transport and other low carbon transport options.
  - b. Work to improve the resource efficiency and health of homes, businesses and infrastructure in our district.
  - c. Support the use of renewable energy and uptake of electric vehicles.
2. Work with our communities to understand, prepare for, and respond to the physical impacts of climate change.
3. Work with Central Government to deliver on National emission reduction targets and support resilience in our communities.

We believe these actions will result in widespread and substantial benefits for our communities such as; creating new jobs and business opportunities, creating a more competitive and future-proof economy, more efficient delivery of Council services, improved public health, creating stronger more connected communities, supporting life-long learning, reducing air pollution and supporting local biodiversity. In short, it will help to make our communities great places to live, work, learn and visit for generations to come.

### **Guiding Principles**

The following principles provide guidance for decision making on climate change. These principles are based on established legal<sup>1</sup> and moral obligations placed on Government when considering the current and future social, economic and environmental well-being of the communities they represent.

#### **1. Precaution**

There is clear and compelling evidence for the need to act now on climate change and to adopt a precautionary approach because of the irreversible nature and scale of risks involved. Together with the global community, we must eliminate the possibility of planetary warming beyond two degrees from pre-industrial levels. This could potentially threaten life on Earth (Article 2 of the UNFCCC). Actions need to be based on sound scientific evidence and resourced to deliver the necessary advances. Acting now will reduce future risks and costs associated with climate change.

#### **2. Stewardship / Kaitiakitanga**

Each person and organisation has a duty of care to safeguard the life-supporting capacity of our environment on which we all depend and to care for each other. Broad-based climate policies

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<sup>1</sup> *These Guiding Principles are established within the: Treaty of Waitangi, Resource Management Act 1991, Local Government Act 2002, Civil Defence and Emergency Management Act 2002, Oslo Principles 2014, Principles of Fundamental Justice and Human Rights.*

should enable all organizations and individuals to do all they feasibly can to reduce emissions and enhance resilience. Policies should be flexible to allow for locally and culturally appropriate responses.

### **3. Equity / Justice**

It is a fundamental human right to inherit a habitable planet and live in a just society. The most vulnerable in our community are often disproportionately affected by change and natural hazards. Approaches need to consider those most affected and without a voice, including vulnerable members in our community, our Pacific neighbours and future generations.

### **4. Anticipation (thinking and acting long-term)**

Long-term thinking, policies and actions are needed to ensure the reasonably foreseeable needs of current and future generations are met. A clear and consistent pathway toward a low carbon and resilient future needs to provide certainty for successive governments, businesses and communities to enable transformative decisions and investments to be made over time.

### **5. Understanding**

Sound knowledge is the basis of informed decision making and participatory democracy. Using the best available information in education, community consultation, planning and decision making is vital. Growing understanding about the potential impacts of climate change, and the need for, and ways to respond, along with understanding the costs and benefits for acting will be crucial to gain community support for the transformational approaches needed.

### **6. Cooperation**

The nature and scale of climate change requires a global response and human solidarity. We have a shared responsibility and can not effectively respond alone. Building strong relationships between countries, across communities, organisations and scientific disciplines will be vital to share knowledge, drive innovation, and support social and economic progress in addressing climate change.

### **7. Resilience**

Some of the impacts of climate change are now unavoidable. Enhancing the resilience and readiness of communities and businesses is needed so they can thrive in the face changes. Protecting the safety of people and property is supported by sound planning and a good understanding of the risks and potential responses to avoid and mitigate risk.

Yours sincerely

Lawrence Yule



**THE FOLLOWING MAYORS SUPPORT THIS DECLARATION**

*Add signatories from Councils*

DRAFT

## REPORT

Document Id: A856034

Report Number: 2015/1248

Prepared For: Policy Committee

Prepared By: Director Policy, Planning and Resource Management

Date: 13 November 2015

Subject: **Director's Report on Progress**

### 1. Policy Responses

#### 1.1 National Policies, Strategies and Plans

The following were received over the six week period to 6 November:

Agency	Number	Details
Waitaki District Council	1	Proposed Urban Fire Prevention Bylaw

#### 1.2 Responses: Territorial Authority and Regional Authority Plan Changes and Resource Consent Applications

In the six weeks ending 13 November 2015, the following were received:

Agency	Number Received	Document
Queenstown Lakes District Council	5	Consent applications
Dunedin City Council	3	Consent applications

The following responses were made over the six week period:

Proposal	Response Type	Issues
Proposed Block Offer 2016 - Onshore/Off Shore Petroleum Exploration Permits – Ministry Business, Innovation and Employment	Feedback	ORC has again taken the opportunity to advocate that any exploration activities within Otago's territorial sea must be compliant with the Regional Plan: Coast.
Proposed Plan – Queenstown Lakes DC	Submission	Submitted on a number of issues, including biodiversity, natural hazards, urban and rural development and public transport. ORC shows support for the proposed plan where it gives effect to the Proposed RPS and requested changes where it does not.

Proposed Urban Fire Protection Bylaw (2015) – Wataki DC	Submission	Request changes so that fire permits will not be issued in situations where the discharge would not comply with the rules of the Regional Plan: Air. Clearer guidance is also requested to be included on fire permits as to what situations may lead to enforcement action from ORC due to a breach of the air plan.
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### 1.3 Appeal: Clutha District Council Proposed Plan Change 28 (Natural Hazards)

ORC is exploring a further mediation option and awaiting s274 party's response.

### 1.4 Declaration sought from High Court on livestock deposition of excreta

The Royal Forest and Bird Protection Society of New Zealand Incorporated (Royal Forest and Bird) have sought declarations from the High Court, regarding their appeal against Canterbury Regional Council's Proposed Land and Water Plan, regarding whether or not livestock excreta constitutes a discharge in terms of the Resource Management Act 1991.

On 12 November, Royal Forest and Bird lodged a notice of discontinuance with the High Court to end proceedings, effectively withdrawing their request for declaration. ORC has advised it has no issue as to costs.

## 2. ORC: Policy, Plans and Strategies

### 2.1 Appeals: Proposed Plan Change 3C (Waiwera catchment minimum flow)

Two appeals have been received on Proposed Plan Change 3C (Waiwera catchment minimum flow):

- PJ Neame, with respect to the proposed primary allocation minimum flow
- Otago Fish and Game Council, with respect to the proposed supplementary minimum flow.

Mediation through the Environment Court has been set for 1-2 December 2015.

### 2.2 Review of Regional Policy Statement

The Proposed Regional Policy Statement for Otago was publicly notified on Saturday 23 May 2015, with submissions closing on Friday 24 July 2015.

The Summary of Decisions Requested by submitters and Call for Further Submissions was publicly notified on Saturday 29 August 2015, with further submissions closing on Friday 11 September 2015.

The hearing commenced in Dunedin on Monday 9 November 2015, and will extend over three weeks. Hearings will be held in Dunedin, Alexandra, Queenstown and Oamaru.

### **2.3 Proposed Plan Change 5A (Lindis: integrated water management)**

This proposed plan change was notified on Saturday 8 August 2015, with submissions closing on Friday 4 September 2015. A total of 81 submissions were received. Six Further Submissions were received by the further submission closing day, Friday 9 October 2015.

The hearing is scheduled for early in February 2016.

## **6. Recommendation**

That this report is noted.

Fraser McRae  
**Director Policy Planning and Resource Management**