

## **OTAGO REGIONAL COUNCIL**

### **Agenda for a meeting of the Communications Committee to be held in the Council Chamber, 70 Stafford Street, Dunedin on Wednesday 14 June 2017, following the Policy Committee**

**Membership:**

**Cr Michael Deaker** (Chairperson)  
**Cr Carmen Hope** (Deputy Chairperson)  
**Cr Graeme Bell**  
**Cr Doug Brown**  
**Cr Trevor Kempton**  
**Cr Michael Laws**  
**Cr Sam Neill**  
**Cr Andrew Noone**  
**Cr Gretchen Robertson**  
**Cr Bryan Scott**  
**Cr Stephen Woodhead**

**Apologies:**

**In attendance:**

**Please note that there is an embargo on agenda items until 10:00am on Monday 12 June 2017**

**CONFIRMATION OF AGENDA**

**CONFLICT OF INTEREST**

**PUBLIC FORUM**

**MINUTES**

The minutes of the meeting held on 3 May 2017, having been circulated, for adoption.

**ACTIONS**

Status report on the resolutions of the Communications Committee.

Report No.	Meeting	Resolution	Status
2017/0664 Director's report	22/3/17	<i>That ORC construct a simple explanation of water issues and how they interact, for water quality and water quantity.</i>	CLOSED To be included in the next publication of ORC Waterlines due for release by 30 June 2017

## PART A – ITEMS FOR NOTING

### Item 1

2017/0814 **Stakeholder Engagement Report.** DSE, 26/05/2017

Reporting on the community, stakeholder and staff engagement activities carried out by Stakeholder Engagement directorate staff for the period 14 April to 26 May 2017

The report includes a list of upcoming events the Stakeholder Engagement directorate are involved in, as at 26 May 2017.

Appended to the report is the *Otago Regional Council's Water Quality Awareness Survey – May 2017*

## OTAGO REGIONAL COUNCIL

### Minutes of a meeting of the Communications Committee held in the Council Chamber, 70 Stafford Street, Dunedin on Wednesday 3 May 2017, commencing at 10:55am

**Membership:**

Cr Michael Deaker (Chairperson)  
 Cr Carmen Hope (Deputy Chairperson)  
 Cr Graeme Bell  
 Cr Doug Brown  
 Cr Trevor Kempton  
 Cr Michael Laws  
 Cr Sam Neill  
 Cr Andrew Noone  
 Cr Gretchen Robertson  
 Cr Bryan Scott  
 Cr Stephen Woodhead

**Apologies:** Nil

**In attendance:**

Nick Donnelly  
 Scott MacLean  
 Caroline Rowe  
 Fraser McRae  
 Suzanne Watt  
 Lauren McDonald (Committee Secretary)

#### CONFIRMATION OF AGENDA

No changes to the agenda.

#### CONFLICT OF INTEREST

No conflict of interest were advised.

#### PUBLIC FORUM

No public forum was held.

#### MINUTES

The minutes of the meeting held on 22 March 2017, having been circulated, were adopted on the motion of Crs Neill and Hope.

#### ACTIONS

Status report on the resolutions of the Communications Committee.

Report No.	Meeting	Resolution	Status
2016/1107 Director report	23/11/16	<i>That the report be noted and that a schedule of activities be provided and indicate where councillors have an open invitation to attend, and include the details of venue and time</i>	CLOSED

Notice of Motion	23/1/16	<ol style="list-style-type: none"> <li>1. That all Otago Regional Council controlled or generated public meetings, within the wards of elected member be advised to those members, as both a courtesy and to improve ORC's communication strategy.</li> <li>2. That, prior to announcement, all elected members be informed of any decisions or pronouncements by the Chairman, Deputy Chairman or Chief Executive, especially those elected members within the ward to which the announcements/decisions directly apply.</li> </ol>	CLOSED
2017/0664 Director's report	22/3/17	<p>That ORC construct a simple explanation of water issues and how they interact, for water quality and water quantity.</p> <p>To be included in the next publication of Waterlines</p>	OPEN

## PART A – ITEMS FOR NOTING

### Item 1

2017/0742 **Stakeholder Engagement Report.** DSE, 13/04/2017

The report provided an update on the community, stakeholder and staff engagement activities carried out by Stakeholder Engagement directorate staff for the period 4 March to 13 April 2017 and upcoming events.

Discussion included feedback on the Ballance Environmental Farm Awards evening, the Urban Water Quality Strategy Forum, and the Council's profile and identity with ratepayers.

It was suggested for key messages to be considered as part of the strategic planning session in July for governance and management to use in communications.

A request was made to investigate the clippings service used by Council to be extended beyond mainstream media, e.g. such as community newspapers.

Action: Mrs Rowe to investigate copyright issues and additional resourcing required to provide electronic copy of articles.

Mrs Rowe was acknowledged and thanked for her significant work as Stakeholder Engagement Director, and wished well for her new role outside of Council.

Moved Cr Deaker  
Seconded Cr Woodhead

*That this report is noted.*

**Motion carried**

The meeting was declared closed at 11:29am.

**Chairperson**

## REPORT

**Document ID:** A1006045  
**Report Number:** 2017/0814  
**Prepared For:** Communications Committee  
**Prepared By:** Stakeholder Engagement Directorate  
**Date:** 26 May 2017

**Subject:** **Communications Committee – Report June 2017**

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This report records stakeholder engagement activity between 14 April and 26 May 2017.

### **1. WATER QUALITY**

Engagement activities and events under the council's rural water quality programme (W3) have been undertaken during this period with a range of stakeholders. The specific objective for stakeholder engagement activity, as outlined in the 2016-17 Annual Plan, is to achieve 90 percent landholder awareness of the rules. This is measured using a stakeholder survey, which is attached to this report.

#### **1.1. Field days, workshops, and presentations**

##### **1.1.1. Industry-led activities**

###### **i. DairyNZ meeting – 19 April**

Liaison staff and DairyNZ policy staff met to discuss our mutual effectiveness and cooperation, and the Environmental Risk Assessment (ERA) programme. The outcome of the meeting was a renewed commitment to working together and supporting each other's initiatives.

###### **ii. Southern Wood Council Awards – 12 May**

Liaison staff attended the annual Southern Wood Council Awards with Cr Scott. As well as presentations being made to the award winners, 140 students received their NCEA forestry sector certificates.

Cr Scott presented Heavyweight Hire with the ORC-sponsored award for environmental management excellence. The company has demonstrated its ability to operate around the historic water races and other archaeological features protected by Heritage New Zealand, participated in the 'Paired Catchments' study area within Glendhu Forest over an extended period; and showed commitment to working within the parameters of the Otago Water Plan.

###### **iii. Waitahuna Planting Day – 16 May**

Liaison staff attended a planting day at the top of the Waitahuna catchment, initiated by the Department of Conservation and Landcare Trust with support from Contact Energy, Sinclair Wetlands, and Lawrence Area School. In the morning two classrooms (years 3-6) from the school discussed water quality and river health, doing riparian planting, and watched an electric fishing demonstration by DoC which brought in eels and lamprey.



**Planting action with Lawrence Area School students and parents, Waitahuna.**

The afternoon session featured talks about the catchment project, water quality and water plan rules and the Clutha Development Trust water quality project they are running. This session had an open invitation to the public. While turnout was low, those who came planted the remaining plants (600 in total) and took the opportunity to meet others with similar interests and share ideas around environmental initiatives and education opportunities.



**ORC staff members Rebecca Begg (far left) and Nicole Foote carrying out riparian planting with DoC, at the Waitahuna planting day. Photo: Craig Simpson**

**iv. South Otago Dairy Working Group – 18 May**

This group met for the final meeting of this dairy season at the Clutha Development Trust office in Balclutha. Liaison and environmental monitoring staff attended to provide feedback on the year's dairy inspections, including compliance with the Water Plan. Mooving Day (June 1) messages were also discussed along with self-reporting of incidents, a summary of the water quality project from Clutha Development Trust and a summary of farms who have taken up the offer of free dairy effluent WoFs (Warrant of Fitness) from DairyNZ.

**v. Beef and Lamb LEP2 workshop – 18 May**

Eight landowners and land managers attended this LEP2 workshop in Clinton. Liaison staff were present to answer questions on the Water Plan. This workshop built on the farm plans started in the LEP1 process. The emphasis was on nutrient budgeting and managing to soil types, and establishing a three-year response plan. Questions mainly focused on the OVERSEER requirements in the Water Plan, and around waterway management and sampling.

**vi. Beef and Lamb LEP1 workshop – 23 May, Cromwell**

Twelve landowners or land managers attended this workshop. Liaison staff presented on the Water Plan and outlined recommended approaches for meeting water quality standards and rules. The discussion was on water quality testing, minimising the risk of sediment from greenfeed crops getting into waterways, and the stock access to water rule.

**1.1.2. Community-led activity**

**i. Citizen science field trip – 3 May**

Liaison specialists attended a day organised by Landcare Trust looking at three citizen science projects on the Otago Peninsula. This was an extension of a forum held in October 2016. The day included observing the Tomahawk lagoon project, the Otago Peninsula Biodiversity group, and the Marine Meter Squared (MM<sup>2</sup>) project run by the Otago University Marine Studies Centre. This was a great opportunity to be updated on biodiversity projects being undertaken in Dunedin City. It also provided a forum for discussion about the projects.



**Attendees listen to project manager Sarah Irvine speak about methods for eliminating possums.**

- ii. North Otago Sustainable Land Management Society (NOSLaM) – 4 May**  
The North Otago Sustainable Land Management Society (NOSLaM) project is up and running and two pod group meetings have been held.

On 4 May liaison staff attended the first meeting of the Waiareka pod group and presented on ORC's plans and policies, as well as the current state of knowledge of water quality in the Waiareka. Around 30 local farmers attended and one sent us the following:

*"I'm writing to thank you for your help in our opening Waiareka Pod group meeting of NOSLaM. I think you will agree it was a great turn out and showed the level of interest and support NOSLaM has in our catchment. I would like to thank you for your part, I thought it was excellent. The way you managed to back up Lyndon's reason for starting our group with the ORC highlighting the Waiareka place of high interest was a great link.*

*It was great to see why our catchment is so important and exactly what effect it is having. Better than rolling out the laws and schedules. I think the group you were talking to may have been unaware of their effects and certainly will have a greater sense of responsibility for listening to what you had to say."*



Further pod group meetings for other areas in the Kakanui catchment are planned over the next few months. Here's a link to a report on the event: <https://www.odt.co.nz/business/farming/farmer-groups-set-out-improve-water-quality>

### **1.1.3. Council-led activity**

#### **i. Water quality survey – April**

Versus Research, on behalf of ORC, conducted a telephone survey of 300 rural Otago residents between 3-28 April to measure understanding of the Water Plan rules, and action people are taking to comply with them. Results are summarised in the attached paper with a copy of the report.

#### **ii. Urban water quality strategic workshop – 26 and 27 April**

This workshop was held with approximately 60 stakeholders from throughout the region. It focussed on:

- objectives of discharge and water quality management
- guiding principles in developing Otago's overall discharge management framework
- what a proposed framework to achieve integrated management and the management of cumulative effects could look like.

Since the workshop, staff have been developing the strategy document. At time of writing, the report was still in preparation.



**Urban Water Quality Strategic workshop at Dunedin Art Gallery**

**vii. Farmer feedback for website development – 27 April**

As part of the redevelopment of the ORC website, two farmers agreed to meet our web team to discuss how they used our online resources, what they find intuitive and what is difficult to navigate, and what would make it better for them. Their feedback will help shape the new platform's design.

**iii. Ballance Farm Environment Award supreme winner field day – 19 May**

On 19 May our liaison staff were involved in the field day at Stoneburn, hosted by Simon and Kirstin Engelbrecht, who were the supreme winners of the Ballance Farm Environment Awards. This was a great opportunity to highlight the good practices that the Engelbrechts employ in their farming operation and how they link these to the Water Plan rules. Despite the forecast of adverse weather, 70 people attended.



**Attendees at the Engelbrechts' field day**

**iv. Farm visits**

In response to enquiries, liaison staff have visited six farms to talk about the water quality rules.

**1.2. Media and promotion for rural water programmes**

**1.2.1. Irrigation NZ Magazine**

Communications staff have submitted articles for the next issue of IrrigationNZ News, which is due out mid-June. Articles include a case study of a farmer embracing irrigation technology, providing an update on the minimum flow setting process, giving feedback on the water consent (deemed permit) forum held in late March, outlining what North Otago farmers are doing to achieve good water quality, and reminding irrigators of off-season maintenance they should be doing.

**1.2.2. Waterlines**

The winter edition of Waterlines newsletter will be distributed in late June and includes write-ups about: an estuary study, a wetland restoration project, 2016/17 dairy inspection results, North Otago farmers working together to improve water quality, tips for winter grazing, a day in the life of an environmental officer (lake testing), a case study about a farmer using technology to help with irrigation, a profile of Fish and Game, and information about deemed permit transitions.

We'll also include a diagram showing the linkages between all the different activities ORC undertakes on behalf of our communities.

### 1.2.3. ‘Good Water in Otago – ORC’ Facebook page

There are currently 609 ‘likes’, and we post approximately twice a week. Total reach from 20 April to 17 May was 5558, which is a 36% decrease on the last reporting period.

### 1.2.4. On-Stream

The sixth issue was emailed to 270 subscribers on 19 May. It included a feature on “Mooving Day”, the announcement of the winner of the Southern Wood Council forestry awards, and updates from the four liaison specialists.

## 2. WATER QUANTITY

We have led several engagement activities and events under the council’s Water and Deemed Permit renewal project (W4) with a range of stakeholders in the last month. The objective for this activity is to support permit holders to form groups to manage water availability at a local level.

### 2.1. Water and deemed permit renewal project

#### i. Water user group meetings

The following meetings with priority groups have been held or are scheduled:

<b>Meetings held</b>	
Lowburn – Keogh catchment	3 May
Strath Taieri	4 May
Statutory bodies and Federated Farmers	9 May

<b>Upcoming meetings</b>	
Crown Terrace	30 May
Coal Creek (Teviot)	30 May
Upper Manorburn	Early June
Lower Manuherikia	Mid June
Planning consultants	Mid June

#### ii. Fish and flow information

The need for good fish and flow data to accompany resource consent applications is a key element promoted at the recent water forum and in presentations to water user groups. This information enables discussions with statutory organisations, who are affected parties to consent applications. Deemed permit holders and consultants are using the fish and flow portal, which has highlighted some uncertainty about whether this data is sufficient for discussions with affected parties,

To address this, Liaison and Science staff recently met representatives of the affected parties group, comprising iwi, DoC, Fish and Game, and Federated Farmers, to agree on an approach for assessing what additional data may be required and where in Otago this affects people.

Once the approach is determined, and the work completed, maps based on the Fish and Flow portal will be annotated to show where the additional fish data is

required. These maps will then be made available to the public – we are aiming to have them complete by the end of this month.

## **2.2. Media and promotion for water quantity programmes**

### **2.2.1. Insight documentary – 22 April**

Radio NZ broadcast a half-hour documentary called “Pumped Dry Central Otago Farmers’ Fight for Water” on its weekly investigative show *Insight* on Sunday 22 April. The show, produced by local reporter Ian Telfer, highlighted the Deemed Permits renewal programme, and the demands on Central Otago water supplies. It included the views of permit holders, affected parties, and ORC in the lead-in to the end of mining rights, and showed the issue is of local and national interest.

### **2.2.2. Waterlines**

The winter edition of the Waterlines newsletter will be distributed in late June and includes information on the deemed permits programme, and coverage of the recent Expiring Deemed Permit forum in Alexandra.

## **3. ENVIROSCHOOLS**

As set out in the Annual Plan 2016-17, ORC provides the regional coordination of the Enviroschools programme in Otago.

### **i. Teacher workshop**

Twenty-five teachers from Dunedin and Clutha District Council attended a one-day workshop exploring the principles and practices that underpin Enviroschools. The students at Musselburgh School, which hosted the workshop, talked about the sustainability projects they are involved in. Teachers left the workshop re-invigorated with new ideas and lots of energy.

### **ii. Skink and gecko monitoring in Central Otago**

St. Gerard’s Primary, Clyde Primary and Goldfields Primary schools are part of a pilot project to monitor skinks and geckos in their area. The project is managed by Enviroschools with help from Landcare Research herpetologist Grant Norbury and is partially funded with seed funding from Curious Minds. The students are currently learning about habitat and monitoring procedures. The schools will be sharing this data with each other.



**Grant Norbury explaining how to set up a pitfall trap with Clyde Primary Enviro-group, and teacher Alistair Banks.**

**iii. Empowerment Fund**

Enviroschools was able to offer schools seven \$300 grants for sustainability projects in their schools. We received 19 applications from across Otago. Grants were given for projects ranging from worm farms and compost tumblers, to irrigation systems and a chilly bin so a school can sell produce from the garden at a road-side stall to generate income for the garden and habitat restoration.

**iv. Climate change**

Several schools have a focus on climate change this term. Musselburgh Primary School has been using the *South Dunedin – A changing environment* resources developed by ORC. The teachers say they have found this resource fantastic for helping students understand the situation they live in in South Dunedin

**v. Otago Facilitators meeting – 15 May**

The Otago Enviroschools facilitators had their termly meeting at our Dunedin office. This was an opportunity to share ideas and work on a region-wide approach to Enviroschools.

#### **4. GENERAL PUBLIC AWARENESS ACTIVITY**

As set out in the 2016/17 annual plan, we are committed to promoting community knowledge and awareness of the council's activities, and encouraging community participation in both decision-making processes and projects that promote sustainable use of resources. The following outlines a range of activity – both general and project-specific – that has been undertaken to support this target.

##### **4.1. General media**

Three media releases were distributed during the reporting period. ORC featured in 113 print media articles, and nine broadcast media stories. The broadcast media stories were mainly on deemed permits, and setting minimum flows.

##### **4.2. Websites**

###### **i. [www.orc.govt.nz](http://www.orc.govt.nz)**

There have been 44,227 visits to the ORC website during this period, down 1.23% on the same time last year

###### **ii. [www.lawa.org.nz](http://www.lawa.org.nz)**

There have been 585 visits to the Otago section of the LAWA website, down 2.66% on the same time last year.

###### **iii. [www.otagocdem.govt.nz](http://www.otagocdem.govt.nz)**

There have been 1,355 visits to the Otago CDEM website, up 268% on the same time last year.

##### **4.3. Social media**

We had 2058 followers on our ORC Facebook account at the end of this reporting period. The reach during February was 48,109 people for the Otago Regional Council Facebook page. An Otago CDEM Facebook account has recently been set up, with 207 followers at time of writing.

##### **4.4. Annual Plan**

The Annual Plan consultation period spanned 3 April-12 May and generated 825 submissions. The communications and awareness building activities included region-wide distribution of the consultation document with community weeklies, media releases, social media, print advertising and nine community info sessions across the region. Activity concluded with a Facebook Q+A session. Though active participation was low for this session, the discussion had a total Facebook reach of 1,223. Details of public hearings have been publicised via public notices, media release and Facebook as well as direct contact with submitters wishing to be heard.

##### **4.5. Corporate Services Directorate**

###### **i. **Wakatipu public transport network changes****

Clear communication and strong engagement have been identified as critical success factors for the launch and operation of the changes to the bus service in the Wakatipu region, and planning for this is underway.

The launch is also an opportunity to improve and extend community understanding of ORC's role in providing public transport services.

**ii. Dunedin public transport changes**

Communication plans are being developed for the changes in the Dunedin service scheduled for later this year, including the establishment of the bus hub.

**iii. 'Connecting Concord'**

The 'Connecting Concord' public consultation on the Regional Passenger Transport Plan variation as it relates to the Concord/Green Island service closed on 28 April, with 93 respondents received. Hearings were held on 25 May.

**iv. City Rise/Canongate**

The survey of residents in City Rise was mailed out in the first week of May, aimed at scoping the potential level of uptake if the bus service in this area were to be reinstated. The survey closed on 25 May and garnered 91 responses

**4.6. Science, Hazards and Engineering**

**i. River management strategy meetings – 26 and 27 April**

Public meetings were held for the Shag River/Waihemo and Waianakarua Rivers to present the draft river management strategies. A hui with iwi is set for 13 June.

**4.7. Environmental Operations**

**i. Pollution guidebook**

A guidebook to promote 'Only drain rain' and give information for households and businesses is being developed. It will outline common urban activities (including industrial) that can pollute waterways if they enable contaminants to go into stormwater drains. This will be used Otago-wide.

**4.8. Biosecurity**

**i. Wallaby meetings – 15 and 16 May**

Meetings to discuss wallabies – what to look out for and what to do if they are seen – were held in Ranfurly and Tarras on 15 and 16 May. There was a good turnout from landowners who were interested in learning more with approximately 30 and 15 respectively.

ORC staff from environmental monitoring and stakeholder engagement were involved. Staff from ECan and Maniototo Pest Company attended, demonstrating the coordinated effort to manage this pest.

The new wallaby guidebook is on the ORC website at <http://www.orc.govt.nz/Information-and-Services/Pest-Control/Animal-pests/Wallabies/> Feedback from the guidebooks has been positive.

Liaison staff are continuing to promote ORC's wallaby biosecurity response at appropriate opportunities and asking for members of the public to report sightings.



**ORC staff inform the public about the pest animal wallabies**

**ii. UrbanNature Expo – Woodhaugh Gardens, Sunday 23 April**

Stakeholder engagement and environmental monitoring staff had a stall at the expo, which coincided with the Town Belt Traverse walk. We promoted the management of pest plants around Dunedin, with a focus on Old Man's Beard. Around 850 people attended the expo, which was part of the Wild Dunedin Festival. ORC was a gold sponsor for this festival, and thus had a display presence at the festival hub, including the Love the Leith video. The Leith river walk trail was also promoted as a part of the festival line-up.



**Members of the public discuss pest plants with environmental monitoring officer Kirk Robertson.**

**iii. Otago University Science Communications students project**

Two students from Otago University are working with stakeholder engagement staff to develop a communications plan on rabbits. The objective of the plan is to educate peri-rural audiences about their rabbit control responsibilities. The students gave an oral presentation to their class on 31 May, which stakeholder engagement staff attended.

## **5. RECOMMENDATION**

It is recommended that this report is noted.

Michele Poole  
**Acting Director Stakeholder Engagement**

**Annex: Stakeholder Engagement Events Calendar (as at 26 May 2017)**  
**Annex: Water Quality Awareness Survey**

## Stakeholder Engagement Event Calendar

### June

- 8 Waitahuna Planting Day – Rutherglen Road
- TBC Upper Manorburn – Deemed Permit meeting
- 26 Arrow minimum flow consultation – Arrowtown Bowling Club
- 27 Arrow Minimum flow consultation – Queenstown Events Centre, Frankton
- TBC Stakeholder workshop – Dunedin
- TBC Lower Manorburn – Deemed Permit meeting
- TBC Planning consultants – Deemed Permit meeting
- 28 Beef and Lamb – Winter event; 11 Nith Street, Heriot Community Centre

### July

- 21 Urban Water Quality Strategy workshop – Cellar Door, Alexandra 8:30-5:00 pm.  
RSVP's needed.

### August

- TBC Cardrona minimum flow consultation

**OTAGO REGIONAL COUNCIL**

**WATER QUALITY AWARENESS  
SURVEY**

**MAY 2017**

**PREPARED BY VERSUS RESEARCH**

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# SUMMARY OF FINDINGS

Plan Change 6A regulates the quality of water in Otago's rivers, lakes, and wetlands. These regulations place the responsibility on land users to ensure their property complies with the specified water standards.

In support of Plan Change 6A, Otago Regional Council provided information to stakeholders about the plan change and what this entails for land users. In order to determine how well this information has been received, Otago Regional Council commissioned Versus Research to complete a survey amongst sheep and beef farmers and dairy farmers to investigate:

- knowledge of the rules;
- information required to better understand the rules;
- understanding of their responsibilities;
- changes already made to their property, and;
- compliance with specific aspects of the plan.

A telephone survey of n=300 farmers (n=184 sheep and beef farmers and n=116 dairy farmers) from across Otago region was completed between the 29<sup>th</sup> of March and 28<sup>th</sup> of April 2017. In previous years, the sample has been split evenly between sheep and beef farmers and dairy farmers, however this year it was particularly difficult to reach dairy farmers via telephone. As a result fewer dairy farmers were interviewed in 2017, however to ensure this year's results are comparable to previous years' results weights were applied to this year's data. A summary of the key results of the survey are provided below.

Overall, understanding has remained on a par with previous years' results, with 52% of farmers indicating they have a good (39%) or excellent (13%) understanding of their responsibilities to ensure their property complies with the water quality rules. Dairy farmers are slightly more aware of their responsibilities than sheep and beef farmers.

In terms of information needed to better understand their responsibilities, 14% of farmers mention they need more information generally, this is a significant increase from last year's results (cf. 2016, 7%). Notably, there has been a significant decrease in farmers mentioning they need factsheets/ pamphlets (4% cf. 2016, 8%), on farm visits (3% cf. 2016, 8%), and a reminder of the rules (2% cf. 2016, 8%) to better understand their responsibilities. Printed hard-copy (49%) continues to be the preferred form to receive this information, followed by email (34%).

Nine percent of farmers indicate they know exactly what they need to do to ensure their property is compliant. A further 60% mention they have a good idea of what they need to do, a significant increase from last year's results (cf. 2016, 49%). Notably, there has also been a decrease in farmers mentioning they are not sure what they need to do (4% cf. 2016, 10%).

When asked about changes they have made to their property, 11% of farmers mention they have made all of the changes to their property. A further 38% have made most of the changes and 35% have made some of the changes, on a par with results from 2016. Notably, there has been a significant decrease in don't know responses this year (2% cf. 2016, 5%).

This year, farmers were asked what actions they have taken to comply with the water quality rules, 58% of farmers mention they have undertaken fencing. At a lower level, farmers mention changing fertiliser use (14%), changing effluent systems (13%), and water testing (12%).

This year farmers were also asked specific questions regarding their compliance with aspects of the plan change. Forty-four percent of farmers have been collecting information needed to run OVERSEER, a further 31% indicate they have been testing the water discharge coming off their property, and 39% are part of a water quality catchment group. These actions are higher amongst dairy farmers.

# BACKGROUND AND METHOD

# BACKGROUND AND METHOD

Otago Regional Council has introduced rules in the Otago Water Plan (Plan Change 6A) which regulates water quality in Otago's rivers, lakes, and wetlands. A critical part of this change involved placing the responsibility of ensuring water quality standards are met on land users. As such, it is crucial for land users to understand Otago Regional Council's expectations surrounding the rules, and what is required of them to meet water quality standards.

Otago Regional Council has planned a range of communication and engagement activities to disseminate information to stakeholders about the water quality rules and their responsibilities. With this, Versus Research has been commissioned by Otago Regional Council to investigate land users' understanding of the new regulations, and how they are meeting these regulations. In 2016 and 2017 Council chose to focus on sheep and beef farmers and dairy farmers, while in 2015 all land users were interviewed. This year's survey specifically focusses on the following:

- knowledge of the rules;
- information required to better understand the rules;
- understanding of their responsibilities;
- changes already made to their property, and;
- compliance with specific aspects of the plan.

It should be noted that results from 2015 have been re-proportioned to only include results from sheep and beef farmers and dairy farmers. This ensures that results from 2015 are comparable with 2016 and 2017 results.

The work utilised a quantitative survey conducted via Computer Assisted Telephone Interviewing. The survey was 5 minutes in duration with fieldwork completed between the 29<sup>th</sup> of March and 28<sup>th</sup> of April 2017, between 10a.m. to 8.30p.m.

## METHOD

Rural telephone numbers from within Otago region were supplied by 99 Corporation for this interviewing, with a final sample of n=300 Otago sheep and beef farmers and dairy farmers achieved.

In 2016 the sample was split evenly between sheep and beef farmers and dairy farmers. However, with the decreasing use of landlines, dairy farmers were particularly difficult to contact this year; as a result additional surveys from sheep and beef farmers were collected to reach a total of n=300 interviews. To ensure the results are comparable with previous years' results, weights were applied to the 2017 data.

## MARGIN OF ERROR

Margin of error (MOE) is a statistic used to express the amount of random sampling error present in a survey's results. The MOE is particularly relevant when analysing a subset of the data as smaller sample sizes incur a greater MOE. The final sample size for this study is n=300, this gives a maximum margin of error of +/-5.66% at the 95% confidence interval. This means that if the observed result on the total farming sample of n=300 farmers is 50% (point of maximum margin of error), then there is a 95% probability that the true answer falls between 44.34% and 55.66%. The table below outlines the MOE for each industry sub-group.

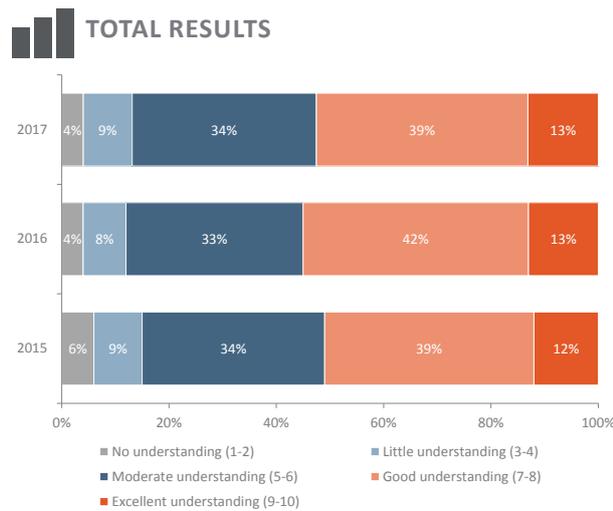
	Total number	MOE
Total sample	n=300	+/- 5.66%
Sheep and beef	n=184	+/- 7.22%
Dairy	n=116	+/- 9.1%

# DETAILED RESULTS

# REPORTING OF RESULTS

Total results show results from all farmers and, where applicable, include comparisons to previous years.

Significance testing has been applied to these results. A significant difference means that the results show an actual change and that this is not due to chance. This testing compares this year's results with 2016's results. Green indicates a significant increase, while yellow indicates a significant decrease.



This year, over half (52%) of farmers indicate they have a good (39%) or excellent (13%) understanding of their responsibilities for ensuring their property complies with the new water quality rules. A further 34% of farmers indicate they have a moderate understanding of their responsibilities and 13% mentioned they have little (9%) or no understanding (4%) of their responsibilities. This year's results are on a par with results from previous years.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
No understanding (1-2)	3%	6%	15%	1%	0%	0%
Little understanding (3-4)	10%	6%	7%	11%	20%	0%
Moderate understanding (5-6)	31%	27%	38%	37%	20%	18%
Good understanding (7-8)	43%	49%	33%	36%	40%	64%
Excellent understanding (9-10)	13%	13%	7%	15%	20%	18%

Results are also shown by the area farmers work in. It should be noted that results from Queenstown Lakes and from farmers who work in multiple districts are indicative, as the sample sizes are very small, as shown in the labelled base.

Significance testing has also been applied to these results. This testing compares the area result to the total. Green indicates the result is significantly higher than the total, while yellow indicates the result is significantly lower.

Results for each industry (sheep and beef farming and dairy farming) are shown overleaf from the total level results. Where applicable, results have been compared to previous years.

Significance testing has also been applied to these results. This testing compares this year's results, to results from 2016. Green indicates this year's result is significantly higher than 2016's result, while yellow indicates this year's result is significantly lower than 2016's result.

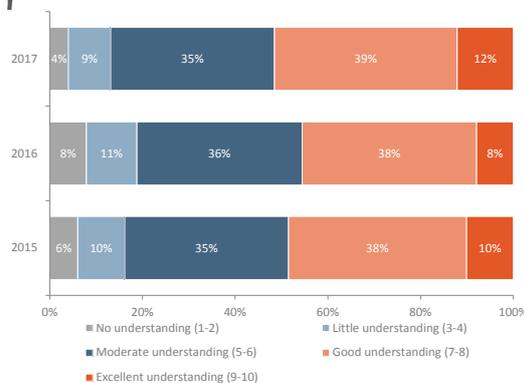


## INDUSTRY DIFFERENCES

Fifty-one percent of sheep and beef farmers indicate they have a good (39%) or excellent (12%) understanding of their responsibilities, although not statistically significant the combined good and excellent result is 5% above results from last year. Fifty-five percent of dairy farmers mention they have a good (40%) or excellent (15%) understanding of their responsibilities. This year's combined good and excellent result is 9% below results from 2016, although this is not statistically significant.

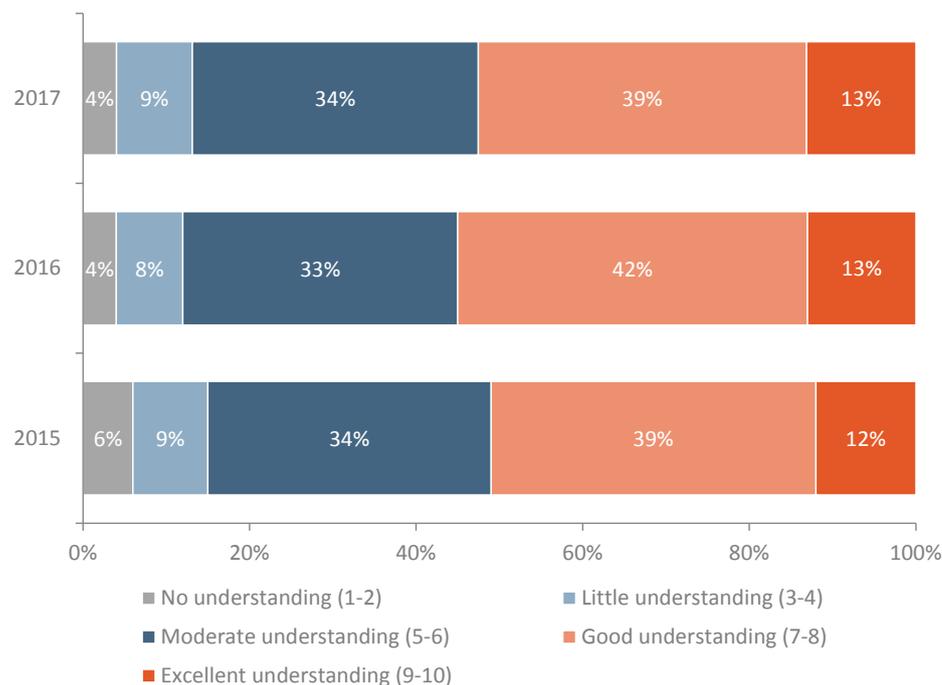


### SHEEP AND BEEF FARMERS



# UNDERSTANDING OF RESPONSIBILITIES

## TOTAL RESULTS



This year, over half (52%) of farmers indicate they have a good (39%) or excellent (13%) understanding of their responsibilities for ensuring their property complies with the water quality rules. A further 34% of farmers indicate they have a moderate understanding of their responsibilities and 13% mentioned they have little (9%) or no understanding (4%) of their responsibilities. This year's results are on a par with results from previous years.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
No understanding (1-2)	3%	6%	15%	1%	0%	0%
Little understanding (3-4)	10%	6%	7%	11%	20%	0%
Moderate understanding (5-6)	31%	27%	38%	37%	20%	18%
Good understanding (7-8)	43%	49%	33%	36%	40%	64%
Excellent understanding (9-10)	13%	13%	7%	15%	20%	18%

# UNDERSTANDING OF RESPONSIBILITIES

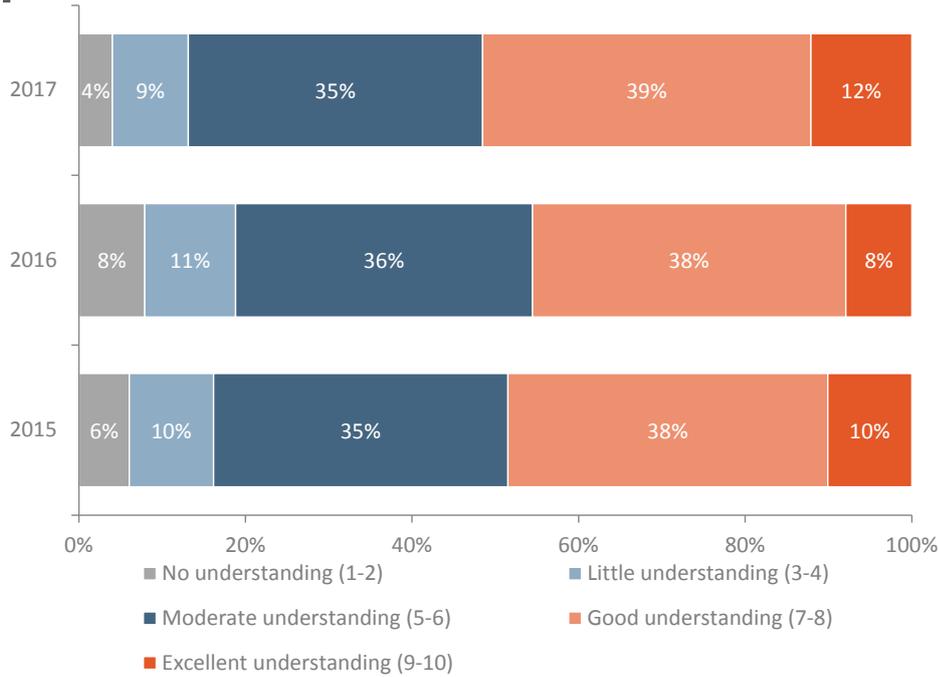


## INDUSTRY DIFFERENCES

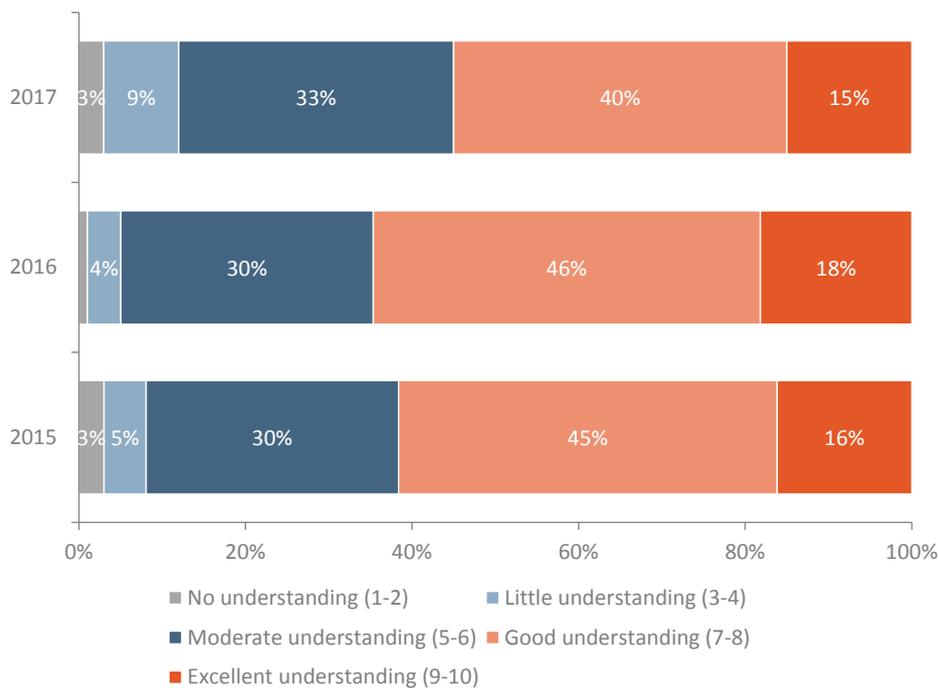
Fifty-one percent of sheep and beef farmers indicate they have a good (39%) or excellent (12%) understanding of their responsibilities, although not statistically significant the combined good and excellent result is 5% above results from last year. Fifty-five percent of dairy farmers mention they have a good (40%) or excellent (15%) understanding of their responsibilities. This year's combined good and excellent result is 9% below results from 2016, although this is not statistically significant.



### SHEEP AND BEEF FARMERS



### DAIRY FARMERS

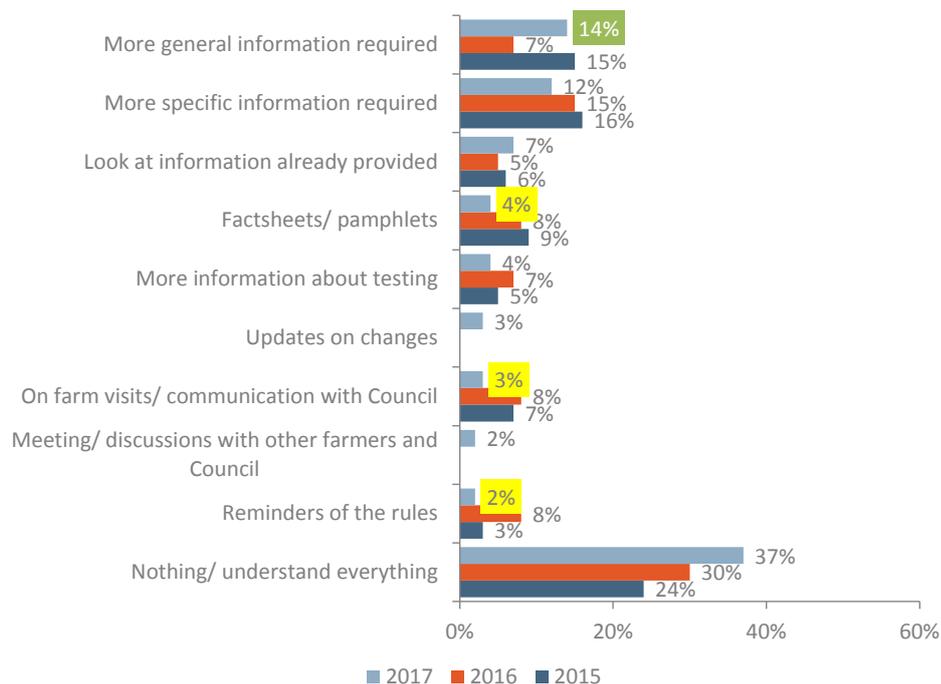


Base: Sheep and beef 2015 n=286; 2016 n=133; 2017 n=184. Dairy 2015 n=92; 2016 n=141; 2017 n=184.

# INFORMATION REQUIRED

## TOTAL RESULTS

This year, significantly more farmers mention they require more information generally to understand their responsibilities for compliance (14% cf. 2016, 7%). A further 12% also mention they require more specific information about how to make their property compliant. Of note, this year significantly fewer farmers mention they require factsheets (4% cf. 2016, 8%), on farm visits (3% cf. 2016, 8%), and reminders of the rules (2% cf. 2016, 8%). Although not statistically significant, 37% of farmers mention they do not need any more information to understand their responsibilities (a 13% increase from 2015). New this year, 3% of farmers mention they require an update on the changes to the plan and 2% would like meetings or discussions between Council and farmers.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
More general information required	13%	14%	18%	14%	0%	0%
More specific information required	12%	9%	5%	15%	0%	18%
Look at information already provided	5%	5%	6%	9%	0%	0%
Factsheets/ pamphlets	3%	4%	3%	5%	0%	0%
More information about testing	3%	4%	3%	5%	20%	0%
Updates on changes	0%	2%	6%	3%	20%	18%
On farm visits/ communication with Council	0%	4%	2%	4%	0%	28%
Meetings/ discussions with other farmers and ORC	6%	0%	2%	1%	0%	0%
Reminders of the rules	0%	4%	0%	3%	0%	0%
Nothing / understand everything	44%	49%	33%	32%	40%	36%

# INFORMATION REQUIRED

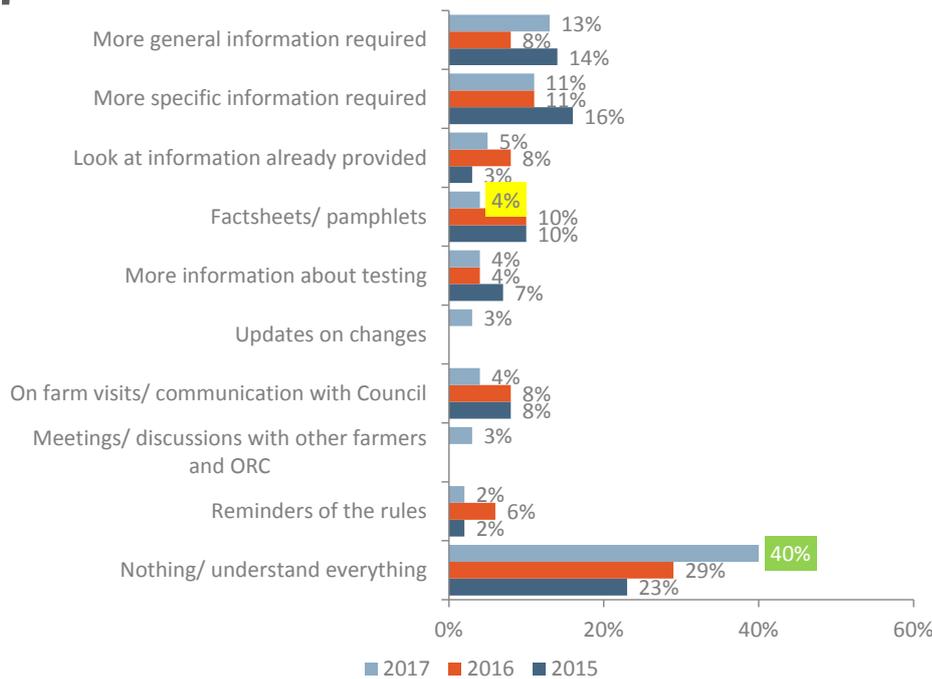


## INDUSTRY DIFFERENCES

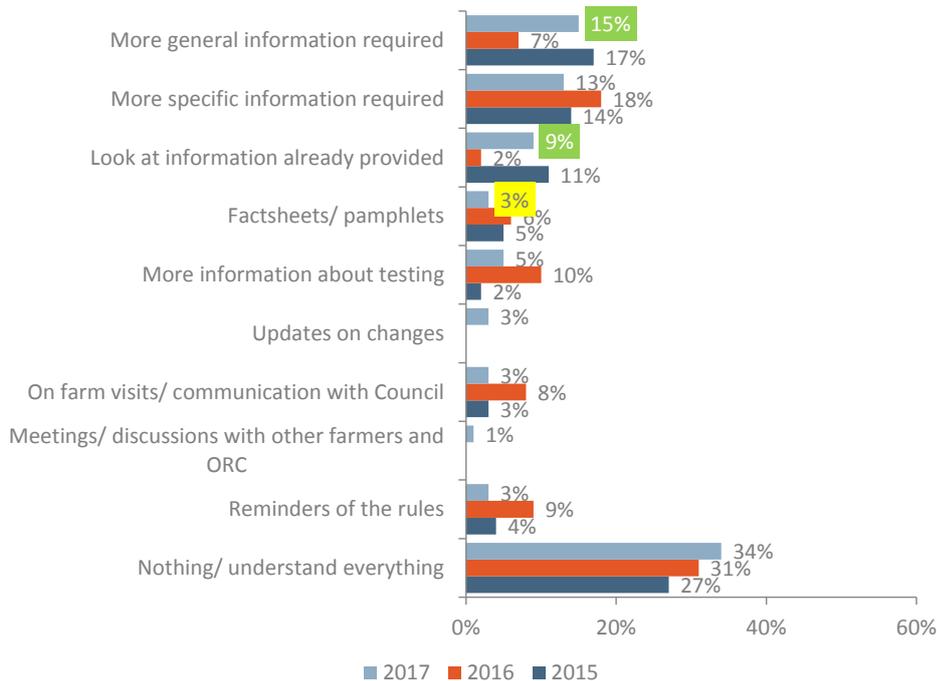
Notably, 40% of sheep and beef farmers mention they do not require any more information to understand their responsibilities, a significant increase from last year's results (cf. 2016, 29%). This year sheep and beef farmers are less likely to mention they need factsheets (4% cf. 2016, 10%) to better understand their responsibilities. Interestingly, this year dairy farmers are more likely to mention they need more information generally (15% cf. 2016, 7%) and need to look at the information already provided to them (9% cf. 2016, 2%), but are less likely to mention they need a reminder of the rules (3% cf. 2016, 9%). A further 13% of dairy farmers also mention they require more specific information and 34% that they do not need any more information.



### SHEEP AND BEEF FARMERS



### DAIRY FARMERS

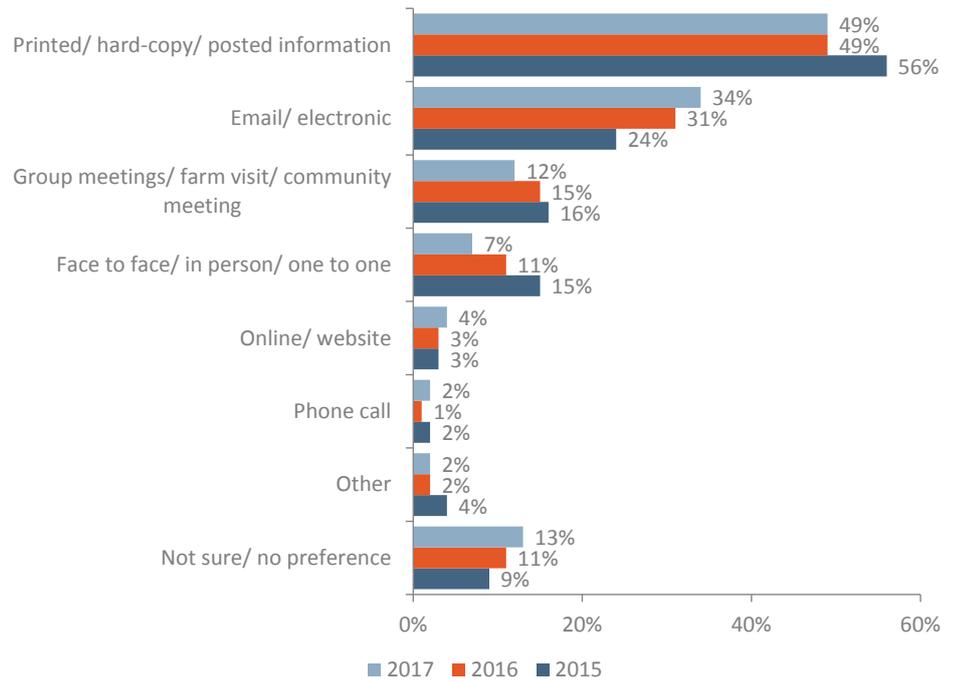


Base: Sheep and beef 2015 n=286; 2016 n=133; 2017 n=184. Dairy 2015 n=92; 2016 n=141; 2017 n=184.

# PREFERENCE TO RECEIVE INFORMATION ABOUT RULES



Similar to previous years' results, half (49%) of farmers would prefer to receive information to better understand their responsibilities for compliance in printed hard-copy. Notably, preference for this information to be delivered through email or electronically has increased 10% since 2015 to 34%.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
Printed/hard-copy/posted information	45%	50%	55%	50%	40%	28%
Email/electronic	25%	30%	35%	40%	20%	46%
Group meeting/ farm visit/community meeting	14%	6%	13%	14%	0%	18%
Face to face/in person/one on one	2%	11%	9%	8%	20%	0%
Online/website	1%	7%	4%	4%	0%	0%
Phone call	3%	4%	0%	1%	0%	0%
Other	1%	0%	0%	3%	0%	0%
Not sure/no preference	24%	12%	11%	9%	20%	36%

# PREFERENCE TO RECEIVE INFORMATION ABOUT RULES

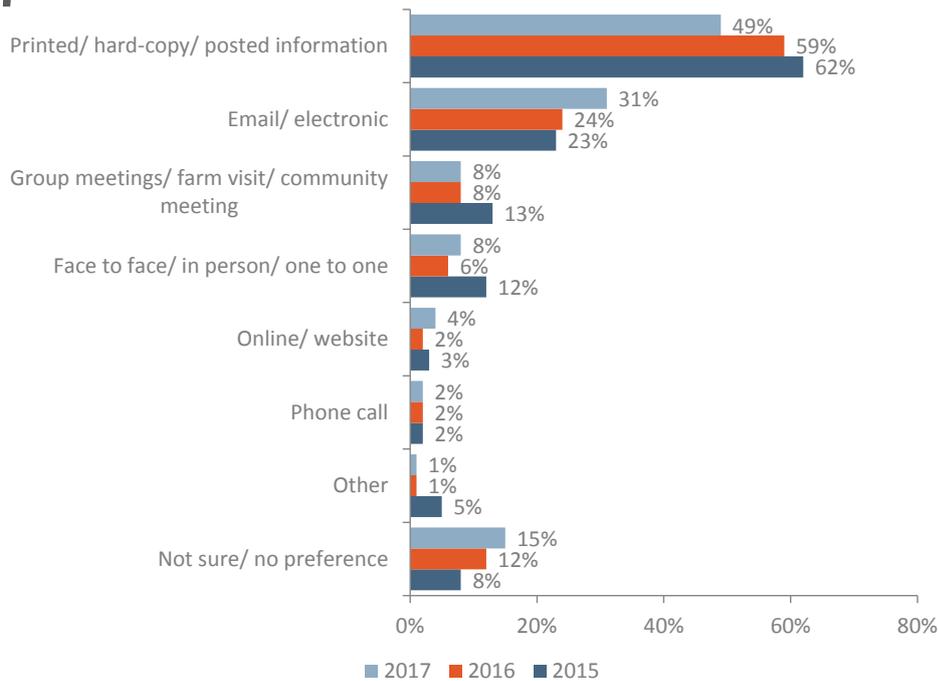


## INDUSTRY DIFFERENCES

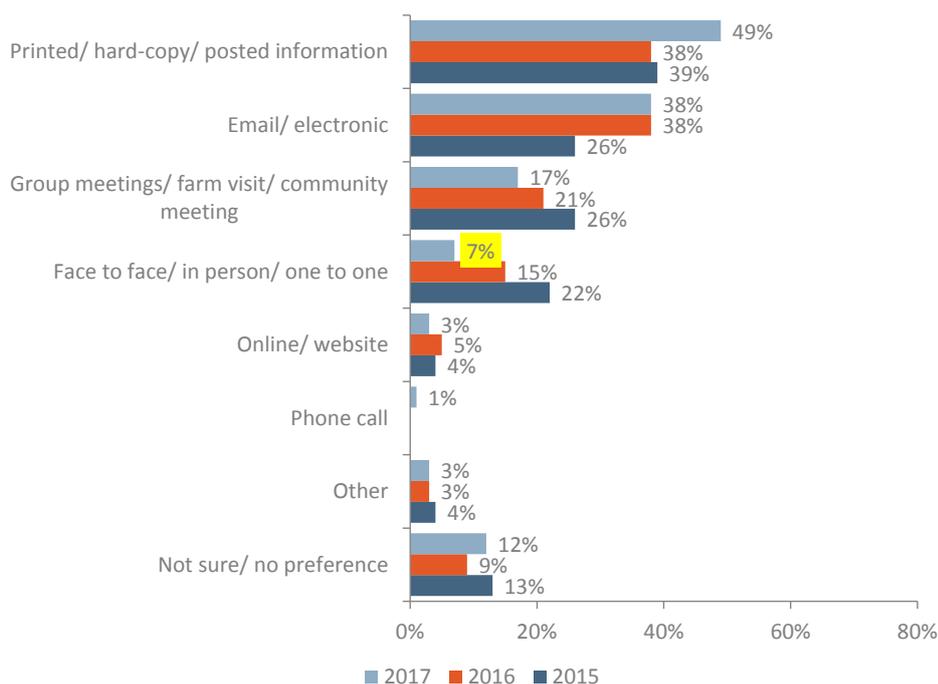
Amongst sheep and beef farmers, 49% indicate they would prefer to receive information on their responsibilities for compliance through printed hard-copy and 31% through email or electronically. Similarly, 49% of dairy farmers would prefer to receive this information in printed hard-copy and 38% through email. Notably, this year significantly fewer dairy farmers mention they would prefer to receive this communication face to face or in person (7% cf. 2016, 15%).



### SHEEP AND BEEF FARMERS



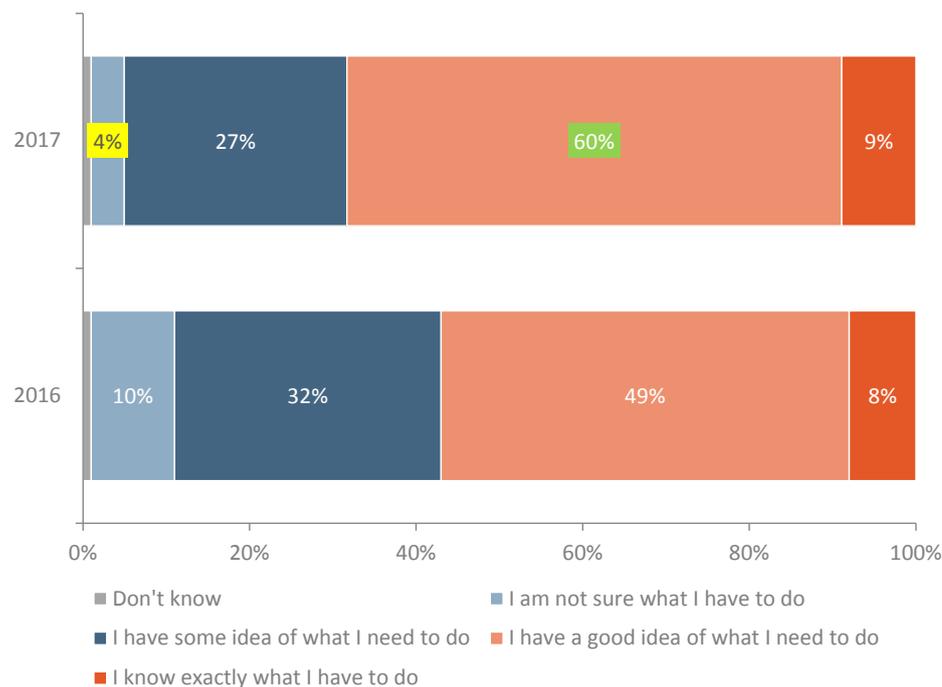
### DAIRY FARMERS



Base: Sheep and beef 2015 n=286; 2016 n=133; 2017 n=184. Dairy 2015 n=92; 2016 n=141; 2017 n=184.

# UNDERSTANDING OF CHANGES NEEDED

## TOTAL RESULTS



Nine percent of farmers indicate they know exactly what they need to do to make their property compliant. A further 60% of farmers have a good idea of what they need to do, a significant increase from 2016's result (cf. 2016, 49%). Twenty-seven percent of farmers have some idea, and 4% are not sure what they need to be to be compliant, a significant decrease from 2016's results (cf. 2016, 10%).



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
I know exactly what I have to do	10%	6%	12%	8%	20%	0%
I have a good idea of what I need to do	57%	66%	50%	60%	80%	100%
I have some idea of what I need to do	27%	20%	32%	29%	0%	0%
I am not sure what I have to do	5%	7%	6%	3%	0%	0%
Don't know	1%	2%	0%	0%	0%	0%

# UNDERSTANDING OF CHANGES NEEDED

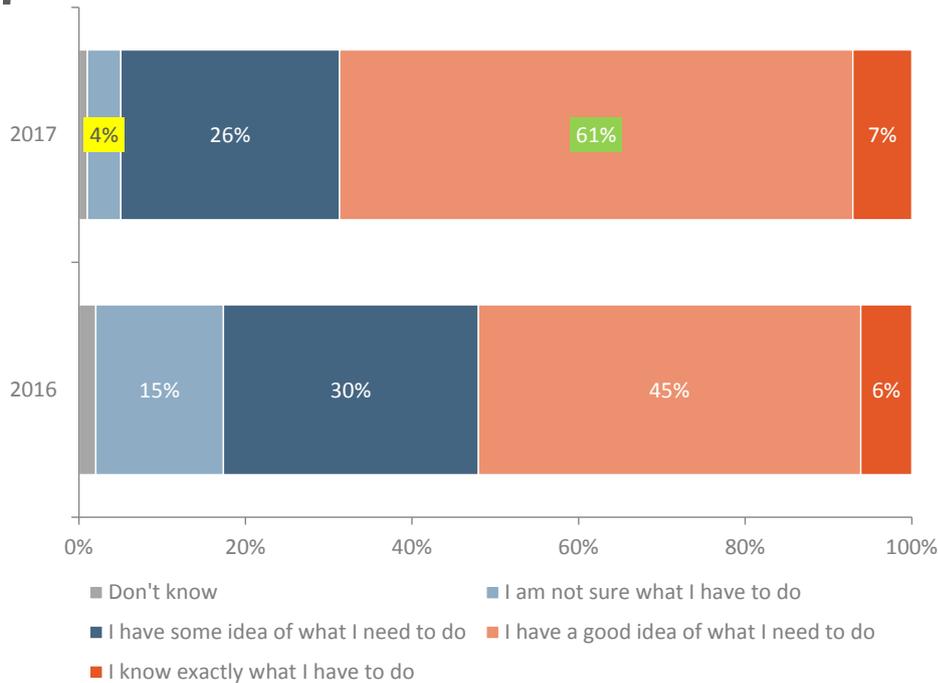


## INDUSTRY DIFFERENCES

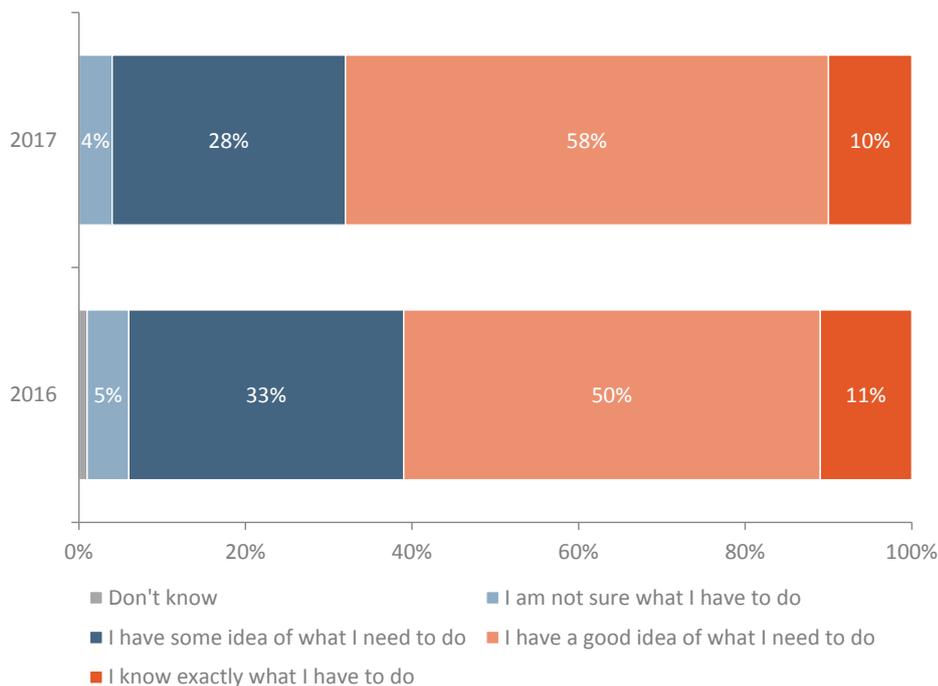
Amongst sheep and beef farmers, 7% know exactly what they have to do to make their property compliant while a further 61% have a good idea of what they need to do, a significant increase from last year's result (cf. 2016, 45%). Notably, only 4% of beef and sheep farmers are not sure what they need to do, a significant decrease from 2016's result (cf. 2016, 15%). Similar to last year, 10% of dairy farmers know exactly what they need to do to be compliant. A further 58% indicate they have a good idea of what they need to do and 28% have some idea.



### SHEEP AND BEEF FARMERS



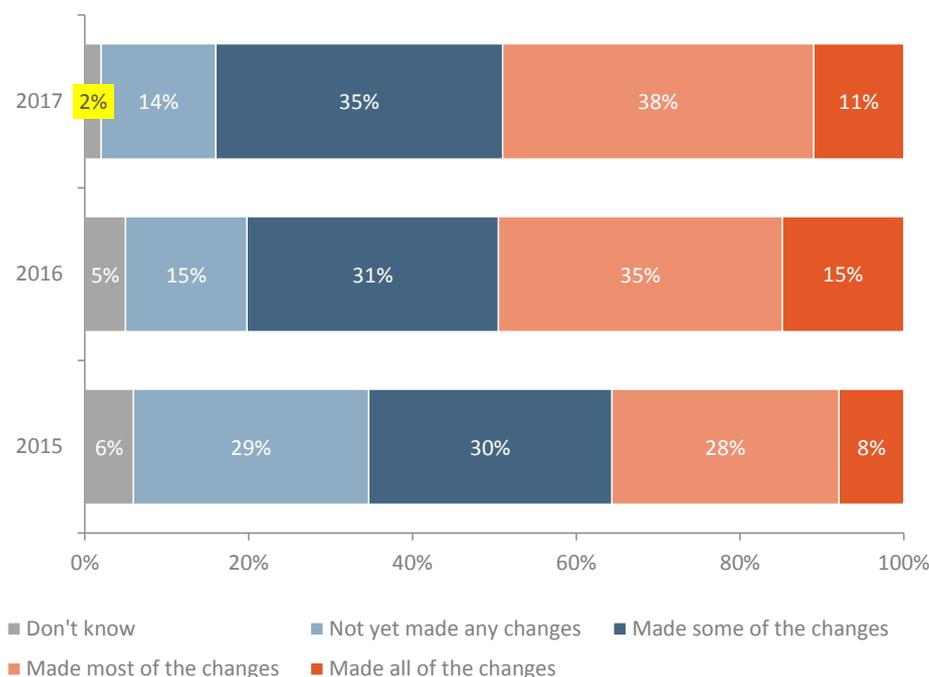
### DAIRY FARMERS



Base: Sheep and beef 2016 n=133; 2017 n=184. Dairy 2016 n=141; 2017 n=184.

# CHANGES ALREADY MADE

## TOTAL RESULTS



Overall, 11% of farmers indicate they have made all of the changes they need to make to their property to ensure it is compliant, this is a small decrease from last year's result. A further 38% of farmers indicate they have made most of the changes to their property, notably this is 10% above results from 2015. Thirty-five percent of farmers have made some of the changes to their property and 14% indicate they have not yet made any changes to their property, a 15% decrease from 2015's results.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
I have made all the changes I need to make to the property	13%	9%	15%	9%	40%	0%
I have made most of the changes I need to make to my property	36%	24%	53%	39%	20%	64%
I have made some of the changes I need to make to my property	33%	45%	18%	40%	0%	18%
I have not yet made any changes to the property	17%	19%	13%	11%	40%	18%
Don't know	1%	4%	2%	1%	0%	0%

# CHANGES ALREADY MADE

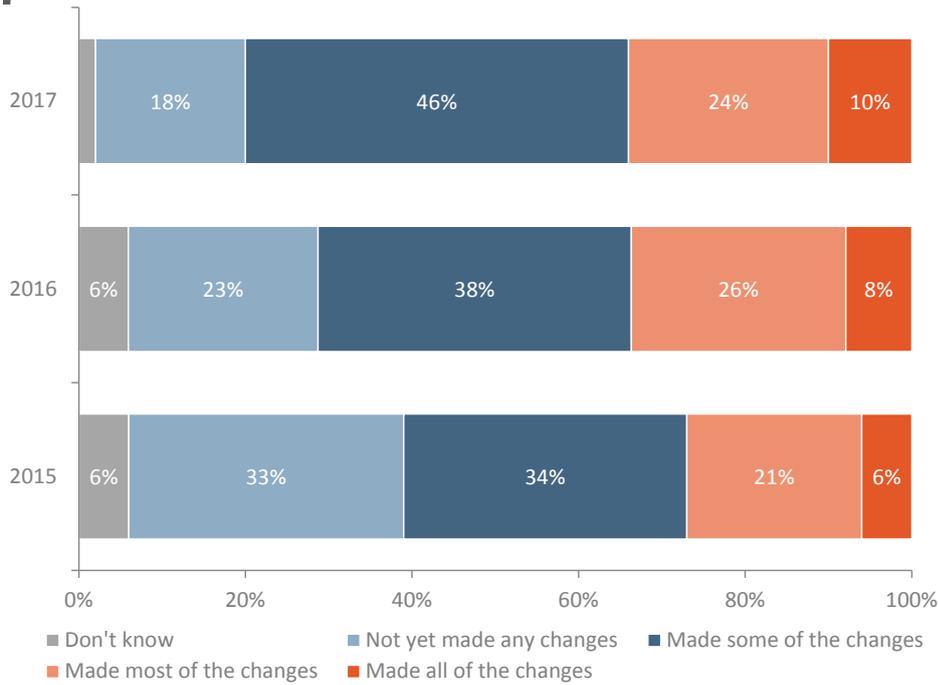


## INDUSTRY DIFFERENCES

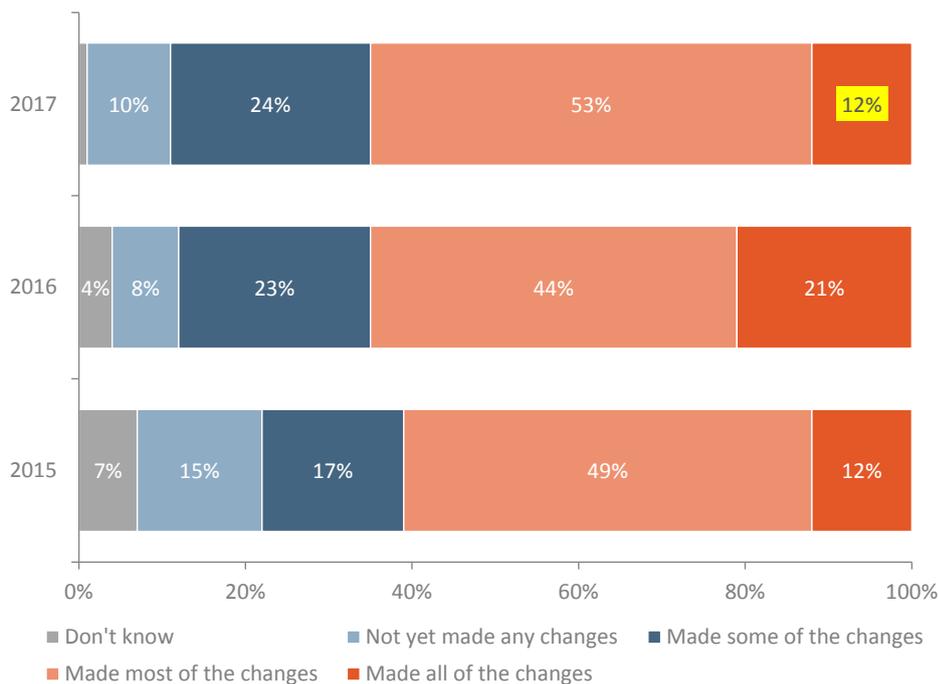
Ten percent of sheep and beef farmers indicate they have made all of the changes they need to make to their property, this has steadily increased from 6% in 2015. A further 24% of farmers have made most of the changes and 46% have made some of the changes. Notably this year, significantly fewer dairy farmers indicate they have made all of the changes to their property (12% cf. 2016, 21%). A further 53% of dairy farmers mention they have made most of the changes and 24% that they have made some of the changes.



### SHEEP AND BEEF FARMERS



### DAIRY FARMERS



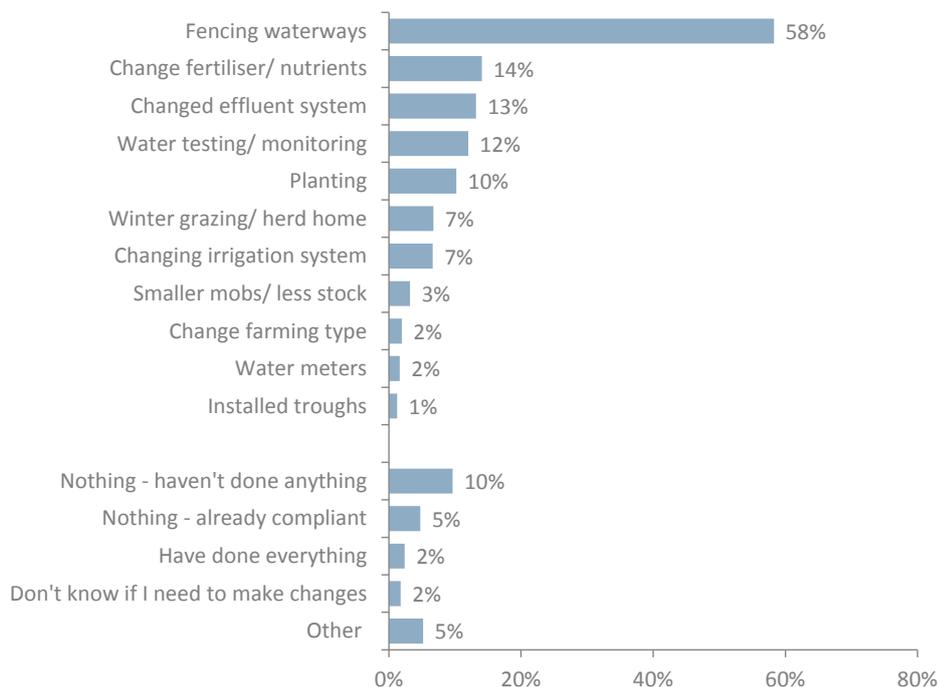
Base: Sheep and beef 2015 n=286; 2016 n=133; 2017 n=184. Dairy 2015 n=92; 2016 n=141; 2017 n=184.

# ACTIONS TAKEN

## TOTAL RESULTS

This year, farmers were asked what actions they have taken since Plan Change 6A was implemented in 2014, over half (58%) of farmers mention they have undertaken fencing. At a lower level, 14% mention they have changed how they use fertiliser, 13% have altered their effluent system, and 12% have completed water testing. On average, farmers mention 1.3 actions they have taken to ensure their property is compliant.

Within the 2015 survey, a similar question was asked of famers. Indicative results show similar numbers of farmers undertaking fencing, changing their irrigation system, and planting.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
Fencing waterways	52%	40%	56%	66%	60%	82%
Change fertiliser/ nutrients	20%	10%	7%	15%	0%	28%
Changed effluent system	6%	3%	15%	19%	0%	18%
Water testing/ monitoring	1%	7%	12%	18%	0%	18%
Planting	8%	2%	14%	13%	0%	0%
Winter grazing/ herd home	1%	0%	3%	13%	0%	0%
Changing irrigation system	5%	12%	0%	7%	0%	18%
Smaller mobs/ less stock	5%	2%	2%	4%	0%	0%
Change farming type	3%	2%	0%	2%	0%	0%
Water meters	1%	6%	2%	0%	0%	18%
Installed troughs	0%	2%	0%	2%	0%	0%
Nothing - haven't done anything	10%	19%	5%	7%	40%	18%
Nothing - already compliant	6%	2%	13%	3%	0%	0%
Have done everything	7%	4%	3%	0%	0%	0%
Don't know if I need to make changes	5%	2%	2%	1%	0%	0%
Other	2%	12%	8%	4%	0%	0%

# ACTIONS TAKEN

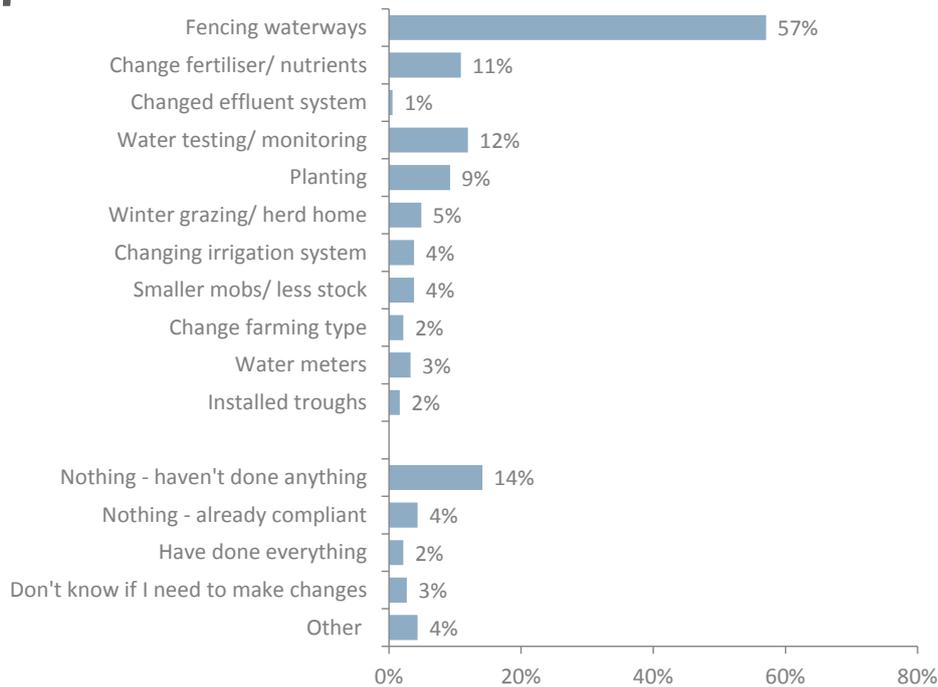


## INDUSTRY DIFFERENCES

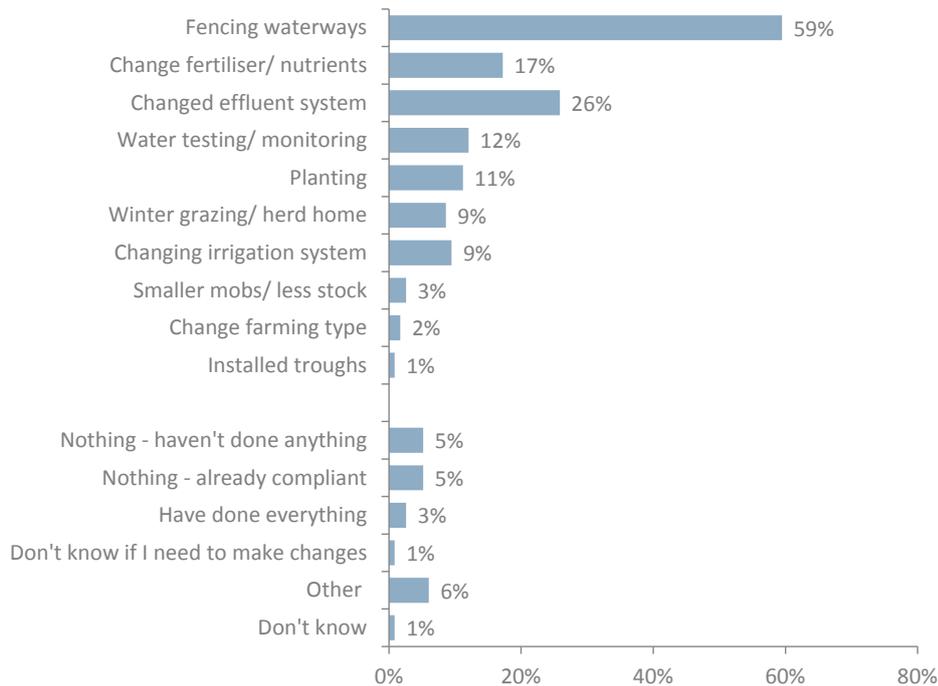
Fifty-seven percent of sheep and beef farmers mention they have undertaken fencing since the water quality rules were introduced in 2014. Following this 12% have completed water testing, 11% have changed how they use fertiliser, and 9% have undertaken planting. On average, sheep and beef farmers mention they have undertaken 1.1 actions since Plan Change 6A was introduced in 2014. Fifty-nine percent of dairy farmers have undertaken fencing, 26% have changed their effluent system, and 17% have changed how they use fertiliser. Notably, only 5% (each) of dairy farmers mention they have not done anything or that they have already completed everything. On average, dairy farmers mention they have undertaken 1.6 actions since the water quality rules were introduced.



### SHEEP AND BEEF FARMERS



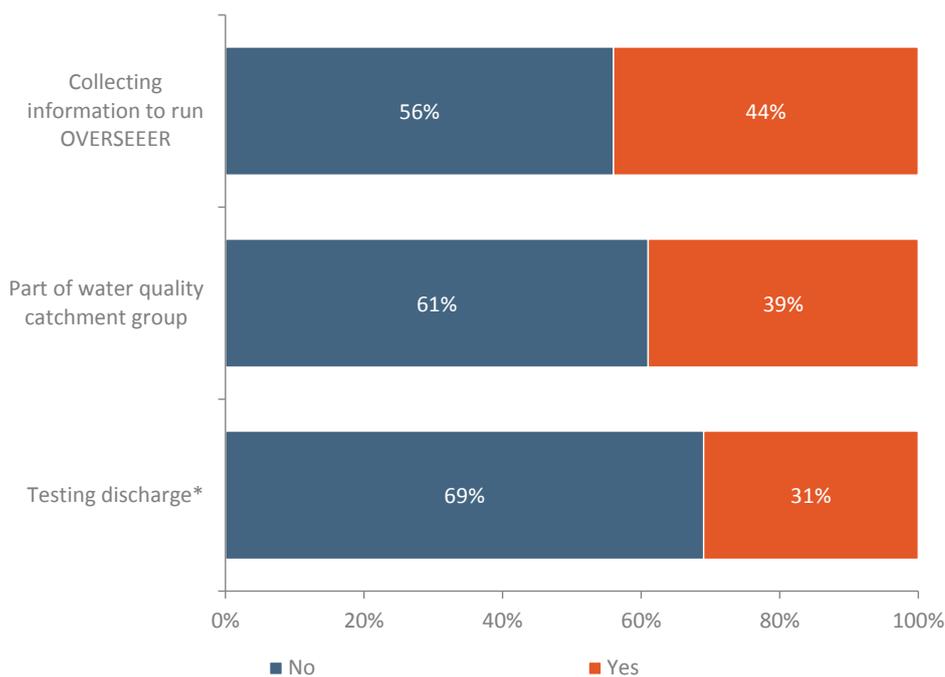
### DAIRY FARMERS



Base: Sheep and beef 2017 n=184. Dairy 2017 n=184.

# COMPLIANCE

## TOTAL RESULTS



This year, farmers were also asked specific questions regarding their compliance with aspects of the plan. Forty-four percent of farmers indicate they have been collecting information needed to run OVERSEER. A further 39% of farmers mention they are part of a water quality catchment group and 31% mention they have been testing the water discharge coming off their property.

\*It should be noted that properties that do not have non-point sources feeding into a waterway do not need to conduct water testing. Also, due to the wet summer of 2016/17 flows may have been too high for testing, as water sampling only needs to be conducted when the representative flow site is at or below median flow.



## AREA DIFFERENCES

	Waitaki	Central Otago	Dunedin	Clutha	Queenstown Lakes	Work in multiple districts
Base size	64	51	40	135	5	5
Collecting information to run OVERSEER	53%	21%	30%	50%	40%	64%
Part of water quality catchment group	29%	33%	7%	54%	20%	82%
Testing discharge	13%	6%	11%	53%	40%	36%

# COMPLIANCE

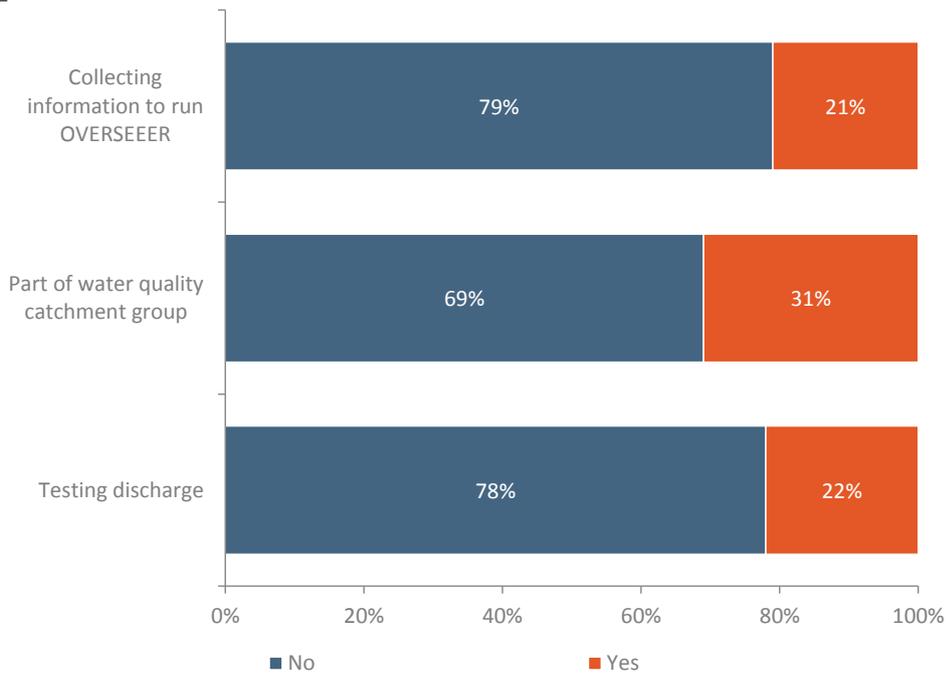


## INDUSTRY DIFFERENCES

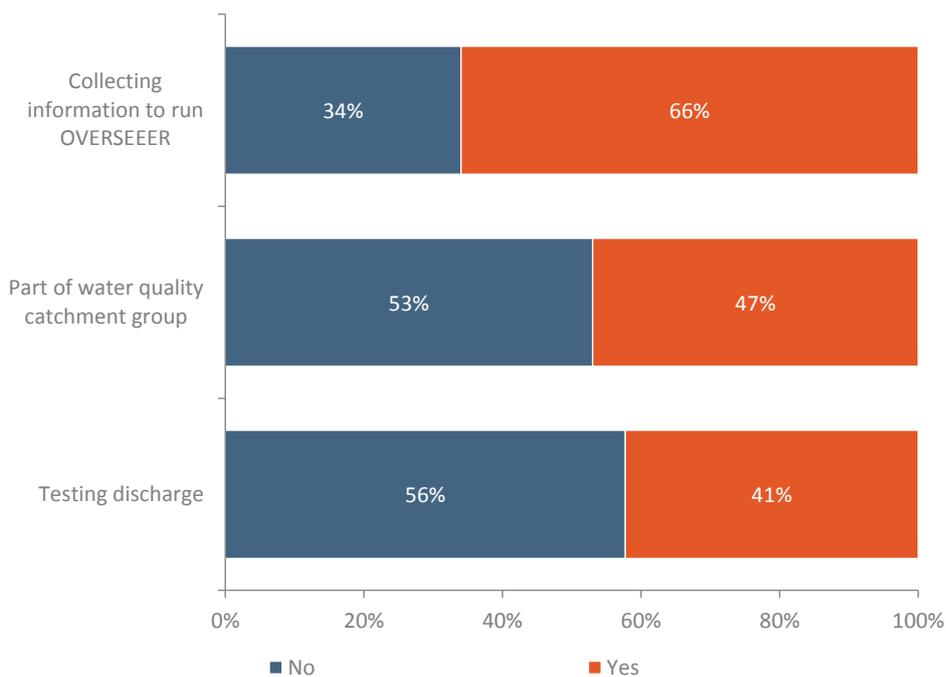
Less than a quarter (21%) of sheep and beef farmers have been collecting information needed to run OVERSEER, while 66% of dairy farmers have been collecting this information. Thirty-one percent of sheep and beef farmers and 47% of dairy farmers mention they are part of a water quality catchment group. Twenty-two percent of sheep and beef farmers and 41% of dairy farmers indicate they have been testing the water discharge coming off their property.



### SHEEP AND BEEF FARMERS



### DAIRY FARMERS



Base: Sheep and beef 2017 n=184. Dairy 2017 n=184.

# SUMMARY OF FINDINGS

# AREA SUMMARY

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The following summaries outline differences between areas within Otago region. Farmers from Queenstown-Lakes and those who work in multiple districts have not been included in these summaries as the base size of these area are too small to profile.

## WAITAKI

Waitaki farmers make up 21% of the total sample; 55% of Waitaki farmers are sheep and beef farmers.

Overall, 56% of Waitaki farmers have a good (43%) or excellent (13%) understanding of their responsibilities for ensuring their property complies with the new water quality rules, this is on a par with the total result. Waitaki farmers mention they need more information generally (13%) as well as specific information about their property (12%) to better understand the water quality rules. They are also more likely to mention they would like to have meetings or discussions with other farmers or ORC (6% cf. total, 2%) to better understand their responsibilities.

Ten percent of Waitaki farmers mention they know exactly what they need to do to comply with the water quality rules, with a further 57% mentioning they have a good idea of what they need to do. Thirteen percent of Waitaki farmers mention they have made all of the changes they need to make to their property, a further 36% mention they have made most of the changes, and 33% have made some of the changes; these results are on a par with the total results.

Over half (52%) of Waitaki farmers have undertaken fencing on their property. Notably, Waitaki farmers are significantly more likely to mention they have done everything that needs to be done on their property (7% cf. total, 2%). Waitaki farmers are less likely to mention that they have undertaken water testing (1% cf. total, 12%) or changed their winter grazing (1% cf. total, 7%). Not surprisingly, these farmers are less likely to mention they have been testing the water discharge off their property (13% cf. total, 31%), while 29% mention they are part of a water quality catchment group, and 53% have been collecting the information they need to run OVERSEER.

## CENTRAL OTAGO

Central Otago farmers make up 15% of the total sample, with the majority of these farmers indicating they are sheep and beef farmers (85%).

Sixty-two percent of Central Otago farmers mention they have a good (49%) or excellent (13%) understanding of their responsibilities to ensure their property complies with the water quality rules, this is 9% higher than the total result. Interestingly, almost half (49%) of these

farmers mention they do not need any more information about the water quality rules, although not statistically significant this is 12% above the total result. Any information that they do receive about the water quality rules should be sent in printed hard-copy.

Six percent of these farmers indicate they know exactly what they need to do to ensure their property complies, with a further 66% of these farmers mentioning they have a good idea of what they need to do. Amongst these farmers, 9% indicate they have made all of the changes they need to make to their property, however they are less likely to mention they have made most of the changes to their property (24% cf. total, 38%), and although not statistically significant, appear more likely to mention they have made some of the change to their property (45%).

In terms of actions taken, Central Otago farmers are more likely to mention they have not made any changes to their property (19% cf. total, 10%), while a further 6% mention they have installed water meters (6% cf. total, 2%). Notably, these farmers are less likely to mention they have undertaken fencing (40% cf. total, 58%) or planting (2% cf. total, 10%). Central Otago farmers are less likely to have been testing the water discharge from their property (6% cf. total, 31%) and to have been collecting information needed to run OVERSEER (21% cf. total, 44%). A further 33% of Central Otago farmers mention they are a part of a water quality catchment group.

## DUNEDIN

Farmers from Dunedin make up 14% of the total sample, with over half (61%) indicating they are dairy farmers.

Overall, 40% of Dunedin farmers indicate they have a good (33%) or excellent (7%) understanding of their responsibilities to ensure their property complies with the water quality rules. Notably, these farmers are more likely to mention they have no understanding of their responsibilities (15% cf. total, 4%). In terms of information needed to understand their responsibilities, 18% of Dunedin farmers mention they need more information generally.

Twelve percent of Dunedin farmers mention they know exactly what they need to do to ensure their property complies, with a further 50% indicating they have a good idea, although not statistically significant, this is 10% below the total result. Interestingly, 15% of Dunedin farmers mention they have made all of the changes needed to their property, and 53% have made most of the changes (cf. total, 38%).

## AREA SUMMARY

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These farmers are also more likely to mention that they have not made any changes to their property since the water quality rules were introduced because they were already compliant (13% cf. total, 5%). Dunedin farmers are less likely to indicate they have been testing the water discharge off their property (11% cf. total, 31%) and to be part of the water quality catchment group (7% cf. total, 39%). A further 30% of these farmers mention they have been collecting the information needed to run OVERSEER.

### CLUTHA

Farmers from Clutha make up 48% of the total sample, with 62% of these farmers indicating they are dairy farmers.

Overall, 51% of Clutha farmers mention they have a good (36%) or excellent (15%) understanding of their responsibilities to ensure their property complies with the water quality rules. Notably, these farmers are less likely to mention they have no understanding of their responsibilities (1% cf. total, 4%). Thirty-two percent of Clutha farmers mention they do not need any more information to better understand their responsibilities, while a further 15% mention they require more specific information from Council.

On a par with the total results, 8% of these farmers know exactly what they need to do to make their property compliant, while a further 60% have a good idea of what they need to do. Nine percent of these farmers mention they have made all the changes to their property, with a further 39% indicating they have made most of the changes.

Clutha farmers are more likely to mention they have undertaken fencing (66% cf. total, 58%), changed effluent systems (19% cf. total, 13%), completed water testing (18% cf. total, 12%), and altered winter grazing (13% cf. total, 7%). Clutha farmers appear more compliant than farmers from other areas; these farmers are more likely to have been testing the water discharge coming off their property (53% cf. total, 31%), collecting information needed to run OVERSEER (50% cf. total, 44%), and/or to be part of a water quality catchment group (54% cf. total, 39%).

# CONCLUSIONS AND POINTS TO CONSIDER

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## SUMMARY OF FINDINGS

Overall, understanding amongst farmers of their responsibilities to ensure their property complies with the water quality rules has remained on a par with results from previous years. Dairy farmers continue to have a slightly better understanding of their responsibilities than sheep and beef farmers. The information required for farmers to better understand their responsibilities continues to revolve around more general information as well as specific information about each farmer's property. Notably, compared to last year's results, significantly more sheep and beef farmers mention they do not need any more information to understand their responsibilities. The preference to receive information about the plan change continues to fall under printed hard-copy format.

In terms of understanding, two thirds of farmers indicate they have a good idea or know exactly what they need to do to be compliant; an increase from last year's results. Half of farmers indicate they have made most or all of the changes they need to make to ensure their property is compliant. A higher proportion of dairy farmers mention they have made most or all of the changes to their property than sheep and beef farmers.

This year, farmers were asked what actions they had taken since the water quality rules were implemented in 2014. On average, farmers have undertaken 1.3 actions since the water quality rules were introduced. Fencing is the primary action taken, while at a lower level farmers mention they have changed their fertiliser use, changed their effluent system, and/or completed water testing. In terms of specific compliance, collecting information about OVERSEER has the highest uptake, followed by being part of a water quality catchment group and testing the water discharge off their property.

## POINTS TO CONSIDER

### Access to information

Understanding of the water quality rules has remained consistent over the past three years, with farmers still indicating they need general information about how to ensure their property is compliant. This year, there was also mention of confusion around the rules changing, and an uncertainty around what farmers needed to do to be compliant. Ensuring farmers have access to easy to follow, up-to-date guidelines could help to improve farmers' understanding of their responsibilities under the plan change.

*"It'll be down to the actual physical rules and regulations; it's quite complex and everything seems to be too technical for me. I'd prefer to receive it in simpler terms, so we're able to understand what they want us to achieve."*

### Actions taken

Indicatively, this year's results regarding actions farmers have taken since the water quality rules were introduced in 2014 can be compared to results from the 2015 survey, when a similar question was asked. These results show minimal changes in the actions farmers are taking to comply with the water quality rules, however the tasks farmers are primarily completing (fencing, planting, and changing effluent systems) require a large amount of time to complete. The 2017 results show a higher proportion of dairy farmers have completed most of the changes they need to; any further research could focus on investigating why a higher proportion of sheep and beef farmers indicate they have only completed some of the changes.

# SAMPLE PROFILE

The table below outlines the sample achieved across the project.

Location of farm		Percent of sample
Waitaki		21%
Central Otago		15%
Queenstown Lakes		1%
Dunedin		14%
Clutha		48%
Work in multiple districts		1%
Sector		
Sheep and beef		50%
Dairy		50%
Number of staff		
5 or fewer		89%
6-10		9%
11+		2%
Gender		
Male		83%
Female		17%

