

# Compliance Monitoring Report 2015-16



environment  
**SOUTHLAND**  
REGIONAL COUNCIL

Te Taiao Tonga



## **Environmental Compliance Monitoring Report**

**2015/16**

**Report by –  
Environment Southland  
Compliance Division**

**Environment Southland Publication No 2016/7**



## Foreword

The 2015/16 Compliance Monitoring Report contains a summary of compliance for each of Southland's major catchments.

This summary identifies the spread of dairy discharge consents throughout every catchment, where the industry areas are centred and the location of whitebait stands. Each catchment's compliance with discharge consents and overall industry compliance is noted. The summary is also an opportunity to highlight some key facts and introduce the compliance officer for each catchment.

It's again been a year of pleasing results with industry, incidents and the dairy sector.

For the fourth year in a row there has been a reduction in significant non-compliance on effluent discharge consents. The rate of significant non-compliance is now at just 1.7%, down from 4.5% last year. This result is simply outstanding and is a reflection of the hard work invested by the dairy sector and the compliance team.

The national body of regional council compliance managers (CESIG) recently developed a Regional Sector Compliance Framework. A major driver in the framework is the adoption of the 4E's (Enable, Encourage, Educate and Enforce). Although our compliance team have been practicing this for the past few years, they have also developed the 'shed talk' programme to assist with the education, enabling and encouraging of farm staff.

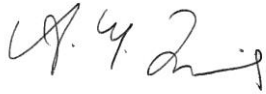
Shed talks are an opportunity to go through the requirements of an effluent discharge consent together with consent holders, managers and other farm staff in a setting they are comfortable in – their shed. The aim of a shed talk is to provide a better understanding of the conditions set out in the consent, what to expect from an inspection, and to point out spots on the farm where there is a higher risk of effluent reaching waterways.

The technical team have also been meeting regularly with industry consent holders to encourage, enable and educate them to comply with their consents.

The compliance team have contact with an estimated 1,500 Southlanders per year, making them one of the busiest teams at Environment Southland.

Incidents have increased slightly on last year, with more complaints about smoke from chimneys and outdoor fires causing a nuisance, and are expected to continue to increase as we reach some of the initial phase out periods for home fires and outdoor burning. The compliance team has continued with an education-first approach to the implementation of the new Regional Air Plan rules. All in all it will mean a busy period ahead as the organisation strives to meet the Government's legislative requirements and our own communities' goals for water and air quality.

The Council would like to take the opportunity thank compliance manager Simon Mapp and his team for their dedication and commitment in carrying out their role in a fair and equitable manner. They are appreciated and respected by clients and ratepayers.



A M Timms  
**Chairman**  
Environment Southland



NMG Cook  
**Chairman**  
Regulatory Committee

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## Introduction

Environment Southland’s Compliance Monitoring Report has been designed to provide an overview of compliance activities from across Southland during the 2015/16 year. It does not cover all of the activities of the division in detail.

Activities with similar parameters, particularly enforcement, incidents, dairy discharge consents and whitebait stands, have been combined to give a broad overview, rather than reporting on individual conditions or circumstances.

In this report, the dairy industry is reported as a collective as the consent conditions for each farm are similar and compliance with these can be easily compared. Dairy inspections result in each farm receiving a grade which ranges from 1: Fully compliant through to 10: Significant non-compliance.

Other industries reported here are either the only one of their type in Southland, or significant differences exist between them that would make comparison of their consent conditions too difficult.

Major industrial consents, or those of special interest to Southland, have been identified and are included in the report. Industrial consents are often very complex. This is largely due to the nature of the activity and volume of contaminants that an industry uses or discharges. The industries reported here often have their own environment assessment teams, or use third party contractors to complete the requirements of their consent.

For each of the major industry reports, a table has been included to assess how well the company has kept Environment Southland informed of monitoring results and how they respond to issues. A second table provides an overall assessment of performance against their consent conditions.

Both tables provide a rating in the form of a traffic light system and a comparison between the 2014/15 and 2015/16 year (see below).

### Key

Site or consent holders name			
Description of noteworthy event	13/14	14/15	15/16
	Background denotes overall results for year shown in box		

Year

## Grading

<b>Good to excellent:</b> Consent holder has excellent communication with Environment Southland; they have contingency measures in place; reports supplied on time and compliant; minor to no exceedances with no environmental impact.	
<b>Moderate to technical issues:</b> Consent holder reports late; has minor exceedances over period of time; moderate exceedances with minor impact on the environment.	
<b>Significant non-compliance:</b> Consent holder has exceedances with measurable impact on the environment; reports not supplied; negligent or intentional non-compliance.	

Also considered in the gradings are the completeness and quality of the results, evidence of contingency planning, prompt notification of events, completion of full and thorough investigations, maintenance of good communications with Environment Southland, proactive in addressing or highlighting potential issues and evidence of environmental ethics.

This report is separated into three main parts, Inspection and Audit Activities, Incident Response, and Enforcement.

Since the first Compliance Monitoring report in 1998, the format and detail of the report has changed. If there is an area you would like to see more detail on or something you would like added to the report next year, please let us know.



# **Part A**

## **Inspection and Audit Activities**



## 1.0 Agricultural Audits

There is a continuing downward trend in all facets of non-compliance within the dairy sector, most pleasingly in the serious non-compliance category.

### 1.1 Dairy Inspection Overview

The compliance team undertakes inspections of dairy farms to ensure that there is compliance with the conditions of discharge consents. Discharge consents allow farms to irrigate dairy shed effluent to land.

Dairy shed effluent is created from the milking shed and platform on clean down and is a combination of water and effluent. As such it is an excellent natural liquid fertiliser. It contains nitrogen, phosphorus, potassium, magnesium, sulphur and trace elements essential for grass growth. Normally a farm would have to pay for these nutrients to be applied to pasture.

However, pasture can only use so much effluent at a time. It's important for the person in charge of the system to match the irrigation depth to the capability of the pasture to utilise the nutrients. Over-application of effluent can result in:

- killing pasture – especially where effluent has ‘ponded’ on top of the soil;
- pollution of groundwater – by seeping too deep into the soil;
- pollution of nearby streams and rivers – where it runs off paddocks into waterways;
- ineffective use of nutrients - by seeping past the root zone before the plant can utilise it.

There are five outcomes following an inspection that determine a dairy farm's performance against the conditions of their consent.

1. Score of 1 means the farm is *Full compliance* – complies with all conditions of its consent;
2. Score of 2 means the farm has *Minor non-compliance* – has not complied with ‘administrative’ conditions of its consent;
3. Score of 5 means the farm has some *Marginal non-compliance* – there is evidence that an incident is likely, or has happened, but the environmental effect does not warrant any more action than advice and education;
4. Score of 7 means that the farm has some *Non-compliance* – e.g. more than the consented number of cows;
5. Score of 10 means the farm has *Significant non-compliance* – requires re-inspection and may lead to an investigation and punitive measures being taken.

### 1.1.1 Discharge Consent Inspections

During 2015/16, 821 dairy shed effluent discharge consent inspections were completed. Of these, 608 were fully compliant, 171 were graded 2 or 5, four farms were found to have non-compliance with cow numbers and 23 were graded 10 for significant non-compliance.

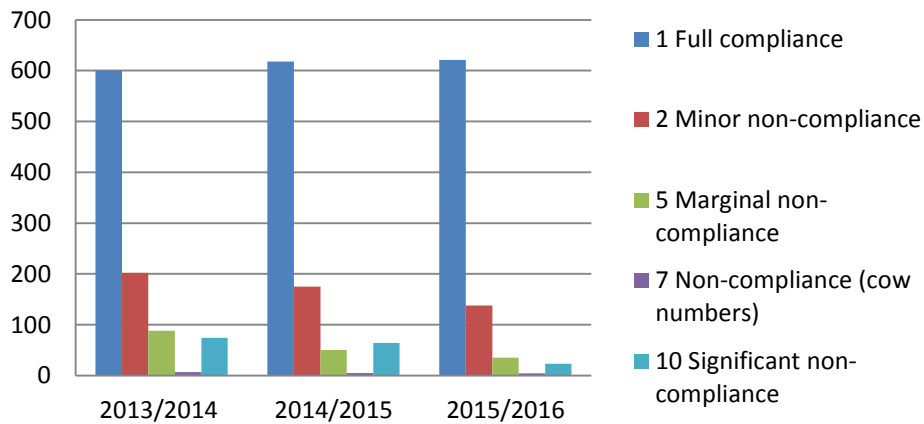


Figure 1 - Comparison of discharge consent inspections over the last three years.

If an inspection results in a grade of 10 (significant non-compliance), a re-inspection is conducted. Thirty re-inspections were completed for the year.

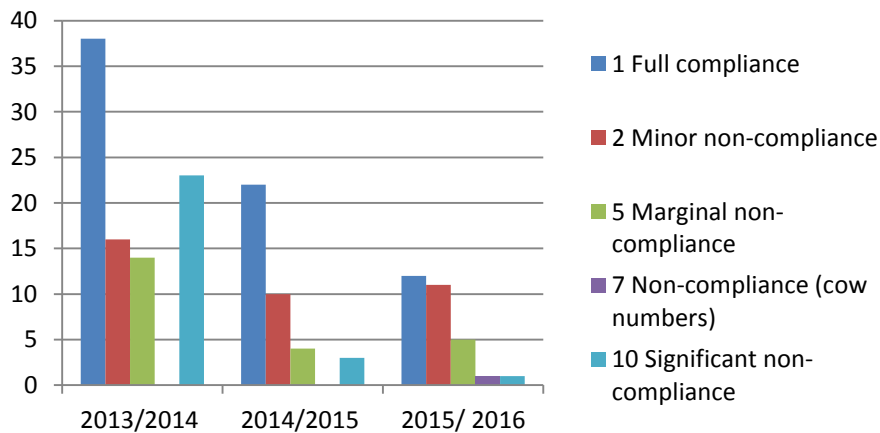


Figure 2 - Comparison of discharge consent re-inspections over three years.

### 1.1.2 Aerial Inspections

In 2015/16 Environment Southland staff completed 564 aerial inspections of dairy shed effluent discharge consents. Of these, 560 were fully compliant and four required further investigation. Staff can only assess full compliance from the air; any possible non-compliance noted from the aerial inspections is then followed up with an on-farm inspection.

*Please note, on-farm inspections have been included in the discharge consent inspections (see 1.1.1).*

### 1.1.3 Wintering Pad Inspections

Wintering stock on-crop is a common activity in Southland; however holding stock on purpose-built wintering pads can, in some circumstances, provide a favourable alternative to paddock-based wintering.

A total of 58 wintering pad inspections were undertaken during the 2016 season, with 36 wintering pads found to be fully compliant. There were 19 properties found to have technical or marginal non-compliance and three properties that had significant non-compliance with their discharge consent.

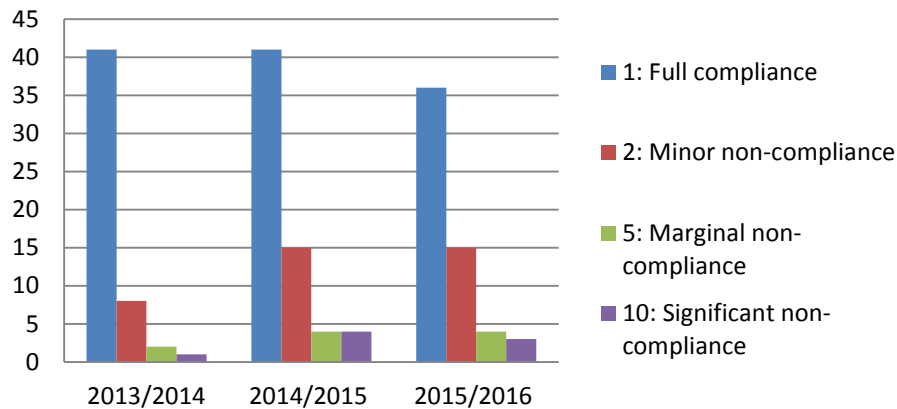


Figure 3 – Comparison of dairy wintering pad inspection results over three years.

## 1.2 Groundwater Quality Sampling for Dairy

Water in our aquifers is recharged (topped up) by water filtering through from the ground above. Water carrying contaminants can impact on the aquifer water quality, which can subsequently impact on the suitability of the water supply for certain uses.



Groundwater sampling is a tool used to monitor compliance with dairy effluent discharge consents. The purpose is to look for measureable changes over time in the groundwater quality in the areas where effluent is applied.

Water samples are collected from shallow bores near the effluent disposal field and are then analysed for nitrate and *E.coli* levels. The results from a three to five-year period can give a reasonable indication of the effects effluent application is having on groundwater. If deterioration is noted, further investigation will be required to confirm that the change is associated with dairy effluent irrigation.

By April 2016, there were 235 discharge consents where the effects of dairy effluent discharge on groundwater are required to be monitored. This sampling typically occurs twice a year, in November and April.

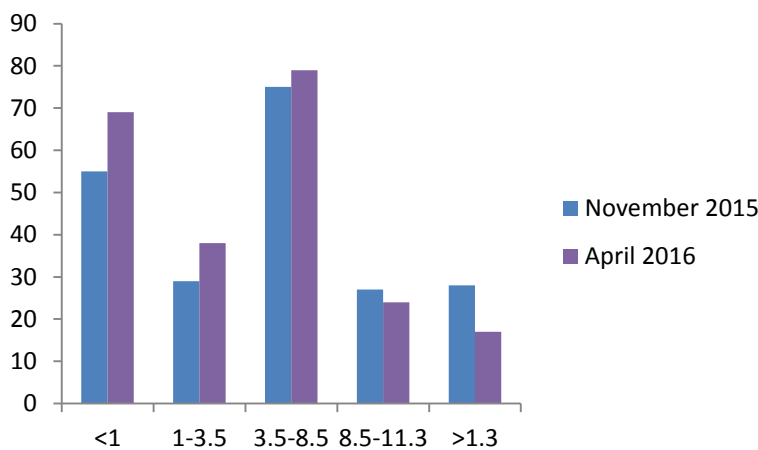


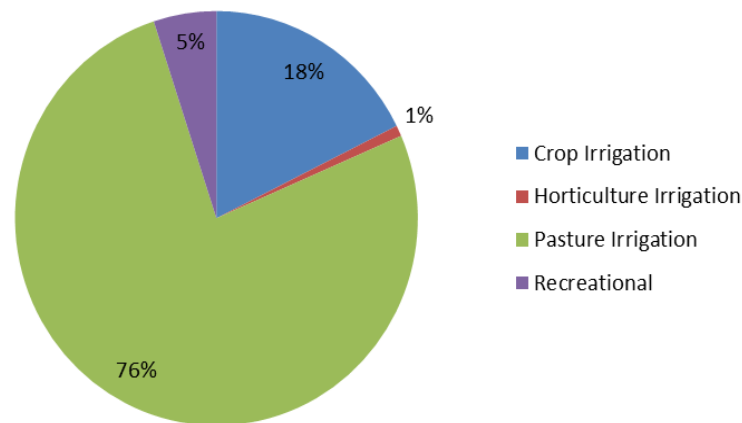
Figure 4 - Dairy groundwater monitoring nitrate results for November 2015 and April 2016 (measured as g/m³).

### 1.3 Irrigation Water Consents

During the 2015/16 irrigation season there were 119 current irrigation consents. Of these, 96 were for abstractions from groundwater, and 23 were for abstractions from surface water.

Each consent holder has a daily abstraction limit, and is required to submit records of the volume of water taken each day to show compliance with their consent conditions. Consent holders must also contact Environment Southland with their intention to commence irrigation, or report a nil return if there has been no irrigation for the season.

Irrigation in Southland is predominantly to encourage pasture growth, with 91 of the irrigation consents identified as being for pasture irrigation, 21 for crop irrigation, one for horticulture, and six for recreational use.



**Figure 5 - Irrigation use in Southland.**

### **Water Metering Regulations**

The information provided by consent holders is used by Environment Southland’s scientists to model groundwater resources in Southland. Modelling is done to provide an estimate of how much water is available for all users, without impacting on the water available for the environment as a whole. Full and accurate data is required to confirm the accuracy of the model.

Data provided by consent holders is required to be sent to the Ministry for the Environment, and is also used during the review, renewal and granting of new consents.

Environment Southland has been working closely with Irrigation New Zealand to improve our understanding of the meters and systems used to abstract water. Environment Southland has also worked with Otago Regional Council and Environment Canterbury to help with the application of the regulations and in an endeavour to apply a level of consistency with neighbouring regional councils. It is expected that this work will improve the quality of the data produced by all meters used by consent holders. A list of preferred service providers has been developed and the names are available for consent holders.

All consented irrigation takes require the use of meters which comply with the NES. These meters have to be verified at five-yearly intervals by an approved supplier. If a mechanical meter is in place, more frequent verification will be required. By November 2016 all takes greater than 5 litres/sec require their meters to have been verified and data to be recorded daily in an electronic format.

There are 112 current consents that have been issued for the purpose of pasture and/or crop irrigation and of these 106 are greater than 5 litres/second. Of the 106, 12 were non compliant, eight have not reported their water take and four have exceedences over their daily allocation. Of those that were compliant, eight consents were not operational yet but will be in the 2016-17 season; nine consents were current but not exercised with no infrastructure yet and six reported a nil take for the 2015/16 season.

## 2.0 Industrial Audits – Major Industries

### 2.1 Meat Industry

#### 2.1.1 Alliance Group Limited

Alliance Group Limited operates three meat processing plants in Southland, at Lorneville, Makarewa and Mataura.

#### What do we look at?

The consents issued for the Alliance Group’s plants permit the discharge of treated wastewater into water and onto land. Alliance also holds resource consents for discharges to air, as well as land use and water abstraction.

Compliance was assessed against the current resource consents.

<b>Lorneville</b>	<p><b>Consents</b></p> <p>Alliance Group Limited holds 13 resource consents for the purpose of meat processing at its Lorneville plant.</p> <p>They include:</p> <ul style="list-style-type: none"> <li>• to discharge wastewater to the Makarewa River;</li> <li>• to take surface water from the Makarewa and Oreti River;</li> <li>• to discharge sludge to land;</li> <li>• to discharge contaminants to air;</li> <li>• to discharge stormwater into an open drain.</li> </ul>
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Complaints and self-reported incidents			
No complaints relating to discharges from the Lorneville Plant were confirmed during the 2015/16 period.	13/14	14/15	15/16

Consent performance			
The quality of the effluent from meat processing at the Alliance Group’s Lorneville plant met all consent requirements for the 2015/16 period.	13/14	14/15	15/16

**Makarewa**

**Consents**

Alliance Group Limited holds seven resource consents for the purpose of meat processing at its Makarewa plant.

They include:

- to discharge wastewater to the Makarewa River;
- to take groundwater from a bore;
- to take surface water from the Makarewa River;
- to discharge waste water and effluent to land;
- to discharge contaminants to air;
- to discharge stormwater to the Makarewa River.

<b>Complaints and self-reported incidents</b>			
There were no complaints relating to the Makarewa Plant for the reporting period.	13/14	14/15	15/16

<b>Consent performance</b>			
The consent to discharge treated wastewater to the Makarewa River from the Makarewa Plant has not been exercised this season. Alliance Makarewa has been fully compliant with its consent requirements over the 2015/16 reporting period.	13/14	14/15	15/16

**Mataura**

**Consents – Mataura**

Alliance Group Limited holds nine resource consents for the purpose of meat processing at its Mataura plant.

They include:

- to discharge contaminants to the air;
- to discharge wastewater to the Mataura River;
- to discharge stormwater to the Mataura River;
- to discharge cooling water to the Mataura River;
- to discharge sludge to land on selected properties;
- to divert water.

<b>Complaints and self-reported incidents</b>			
No complaints relating to discharges from the Mataura Plant were confirmed during the 2015/16 period.	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>

<b>Consent Performance</b>			
<p>Alliance Group’s Mataura plant reported the quality of treated effluent being discharged from the meat processing plant. The effluent was generally of a good quality and did not exceed consented limits during this monitoring period.</p> <p>During the winter period, Alliance Mataura was granted permission to transport wastewater to the Alliance Lorneville plant meat works waste water ponds. This was to enable Alliance Mataura to cease the spreading of sludge to land while the soil conditions were unsuitable for irrigation.</p> <p>Particulate matter concentrations (PM<sub>10</sub>) were measured for the purpose of the ambient air monitoring report. The 24-hour average concentrations of PM<sub>10</sub> measured over the monitoring period were well below the National Environmental Standard for Air Quality.</p>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>

## 2.1.2 Blue Sky Meats (NZ) Limited

### Consents

Blue Sky Meats (NZ) Limited holds four resource consents for the purpose of meat processing at its Morton Mains plant. Three of these are consents to discharge.

They are:

- to discharge contaminants to the ground through the operation of offal pits;
- to discharge wastewater to land via a spray irrigator;
- to discharge contaminants to air.

Blue Sky Meats Limited operates a meat processing plant at Morton Mains, near Woodlands.

### What do we look at?

The three consents Blue Sky Meats holds to discharge contaminants to the environment.

Compliance is assessed against the current resource consents.

Complaints and self-reported incidents			
No complaints relating to discharges from the Blue Sky Meats Plant were confirmed during the 2015/16 period.	13/14	14/15	15/16

Consent performance			
Blue Sky Meats completed the monitoring in accordance with its consent requirements, but exceeded water quality limits on several occasions. Sampling indicated a contaminant may have entered a waterway. Blue Sky Meats has since put measures in place to ensure better control over irrigation activities. This has included closer monitoring of irrigation events and disposing of effluent off-site.	13/14	14/15	15/16
Blue Sky Meats has also made an amendment to its air discharge consent to incorporate the meat works effluent pond that is to be constructed as required under the Enforcement Order that was issued against it in 2015.			

### 2.1.3 South Pacific Meats Limited

#### Consents

South Pacific Meats Limited holds three resource consents for the purpose of meat processing at its Awarua plant.

They are:

- to discharge stormwater containing contaminants into the New River estuary;
- to discharge contaminants to air from the rendering plant, wastewater treatment plant, boiler and associated processes;
- to discharge meat works effluent sludge to land.

South Pacific Meats Limited operates a meat processing plant at Awarua, approximately 10 km south of Invercargill.

#### What do we look at?

South Pacific Meats has three consents to discharge. Compliance is assessed against these resource consents.

#### Complaints and self-reported incidents

No complaints relating to discharges from the South Pacific Meats Plant were confirmed during the 2015/16 period.	13/14	14/15	15/16
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#### Consent performance

The South Pacific Meats plant was fully compliant with all of its consent conditions for the 2015/16 reporting period.	13/14	14/15	15/16
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## 2.1.4 Prime Range Meats Limited

### Consents

Prime Range Meats Limited holds one resource consent for the purpose of meat processing at its Invercargill plant.

The consent is:

- to discharge contaminants to air from a meatworks and rendering plant, including a wastewater treatment system.

It also held an expired resource consent and operated under Rights of Continuance under s124 of the Resource Management Act 1991 until September 2015.

The consent was:

- to discharge up to 1500 m<sup>3</sup>/day of treated wastewater to the Waikiwi Stream, approximately 500 metres downstream of the West Plains Road Bridge.

The application to renew the expired consent was withdrawn as Prime Range Meats had connected its wastewater discharge to the Invercargill City Council sewage system.

Prime Range Meats Limited is a meat processing plant on the banks of the Waikiwi Stream in Invercargill.

### What do we look at?

Prime Range Meats operated under the two consents related to discharge during this reporting period. Compliance is assessed against these resource consents.

Complaints and self-reported incidents			
There were no complaints for the 2015/16 season.	13/14	14/15	15/16
Consent performance			
Prime Range Meats Limited was fully compliant with all conditions set out in its resource consent for the discharge of contaminants to water and air.	13/14	14/15	15/16



## 2.2 Dairy Industry

### 2.2.1 Fonterra Co-operative Group Limited

#### Consents

Fonterra Co-operative Group Limited holds 11 resource consents related to dairy processing at its Edendale Plant.

They include:

- to discharge wastewater to land;
- to take groundwater from bores;
- to discharge wastewater and stormwater to water;
- to discharge contaminants to air;
- to discharge sludge to land.

Fonterra Co-operative Group Limited operates a dairy processing facility in the Edendale township.

#### What do we look at?

Fonterra has 11 consents to take and discharge. Compliance is assessed against these.

#### Complaints and self-reported incidents

Environment Southland recorded two self-reported incidents relating to the Edendale plant.

Issues related to one accidental discharge of Nitric acid. The discharge was contained and resulted in no discharge of contaminants to water. One incident of discharge to air occurred due to a failure of the system. Fonterra has addressed and resolved these issues with corrective actions implemented in a timely manner.

Complaints and self-reported incidents			
Environment Southland recorded two self-reported incidents relating to the Edendale plant. No adverse environmental effects were observed from either incident.	13/14	14/15	15/16

#### Consent performance summary

Fonterra has three consents to discharge waste activated sludge and whey onto farm pasture in Riversdale, Wyndham and Edendale. Regular monitoring is undertaken to assess compliance with the consent requirements for loading. A

high level of compliance was achieved, with no issues being reported within the period.

There was one issue arising from the monitoring of the air discharge consent due to a combustion system failure leading to a breach of conditions relating to steam production.

Consents are also held to discharge treated wastewater, under certain conditions, as well as stormwater and cooling water to the Mataura River

Regular monitoring is undertaken to assess compliance with this consent. A moderate level of compliance was achieved with six issues reported. Breaches were considered 'technical issues', and beyond the company's control, i.e. equipment failure and algae blooms.

- the total phosphorus concentration limit for stormwater discharges to the river was exceeded once with a minor breach noted on 2 December 2015;
- the Total Suspended Solids concentration limit for stormwater discharges to the river was exceeded on one occasion. The cause was investigated and was due to algae becoming dislodged from the clarifier walls due to high winds;
- pH measurements in the Mataura River, both up and down stream, were non-compliant with the specified 6-9 pH range on four occasions for the season. This was not linked to the Fonterra discharge.

<b>Consent performance</b>			
Fonterra has consent to discharge onto farm pasture in Riversdale, Wyndham and Edendale. A high level of compliance was achieved with no issues reported.			
One air discharge issue was noted for the period resulting from equipment failure.	13/14	14/15	15/16
Several technical breaches were recorded for the period relating to stormwater discharges.			

## 2.2.2 Open Country Dairy (NZ) Limited

### Consents

Open Country Dairy holds two resource consents related to dairy processing at its Awarua Plant. They are:

- to discharge condensate to a farm drain;
- to discharge contaminants to the air from the milk processing plant and boiler.

Open Country Dairy (NZ) Limited operates a milk processing plant at Awarua, approximately 10 km south of Invercargill.

It has two consents to discharge, both of which are in the process of being varied.

### What do we look at?

Compliance is assessed against the current resource consents.

### Complaints and self-reported incidents

Two phone calls were received on different days reporting a smoke discharge from the Open Country boiler. The presence of the smoke was confirmed but not assessed as a breach of consent. At the time of the incident the company was arranging for repairs to be made.

Complaints and self-reported incidents			
One incident was confirmed. Impact was assessed as minor	12/13	13/14	14/15

Consent performance			
Open Country Dairy was fully compliant with all consent conditions.	13/14	14/15	15/16

## 2.3 Energy Industry

### 2.3.1 Pioneer Generation Limited

#### Consents

Pioneer Generation Limited holds 18 resource consents for its Monowai Station.

These include:

- to take surface water;
- to use, maintain and alter an existing earth dam;
- to discharge water to water;
- to discharge contaminants to land;
- to dam and divert.

The power generation station at Monowai, owned by Pioneer Generation Limited, is a community owned electricity provider and wholesaler. The station was owned by Trust Power until 2003, when it was sold to Pioneer, which is owned by the Alexandra based charitable trust, The Central Lakes Trust. The company operates 13 power stations in Central Otago and Southland.

#### What do we look at?

Pioneer Generation Limited has 18 consents to operate its power generation scheme. The consents are for the ongoing operation and maintenance of the Monowai Power Station. They control the take, use and discharge of water for power generation, while maintaining minimum flows in all of the existing waterways. Compliance is assessed against these consents.

Complaints and self-reported incidents			
No incidents or complaints were received for the reporting period.	13/14	14/15	15/16

Consent performance			
Pioneer has achieved compliance with the Operating Guidelines for the management of Lake Monowai.	13/14	14/15	15/16
The consented guideline flow regime was complied with on all but two days over the reporting period. The exceedances were due to heavy rainfall.			
One minor breach has been noted for late submission of reporting requirements.			
Compliance was achieved with all other consented monitoring and reporting requirements for the reporting period.			

## 2.3.2 Meridian Energy Limited

### Consents

Meridian Energy Limited holds 35 resource consents related to the operation of Manapouri Power Scheme.

They include:

- to dam and divert the waters for hydro-electric power generation;
- to take and use water for hydro-electric production, and for domestic supplies;
- to discharge treated sewage to land;
- to discharge stormwater to land;
- to carry out bed disturbance;
- to discharge contaminants to air;
- to discharge water and contaminants to the coastal marine area;
- to occupy Lake Manapouri and coastal marine area with wharves.

Meridian Energy Limited operates the largest hydroelectric power station in New Zealand at West Arm, Lake Manapouri within the Fiordland National Park. Electricity is generated using water stored in Lakes Te Anau and Manapouri. The stored water from the lakes is controlled using structures at the outlet of Lake Te Anau and the Lower Waiau River. The water used to generate electricity is discharged through two tunnels to Deep Cove, Doubtful Sound. The compliance performance during the 2015/16 year was assessed against the current resource consents.

### What do we look at?

Meridian Energy Limited has 35 consents to operate its power generation scheme. Compliance is assessed against these consents.

Complaints and self-reported incidents			
No environmental incidents or complaints were received by Environment Southland for this reporting period	13/14	14/15	15/16

### Consent performance summary

Compliance was achieved with consented limits and was also achieved with consented monitoring and reporting requirements.

Consent performance			
Compliance was achieved with consent requirements. No issues arose in the 2015/2016 year.	13/14	14/15	15/16



**Manapouri Power Station.**

## 2.4 Manufacturing Industry

### 2.4.1 New Zealand Aluminium Smelters Limited

#### Consents

NZ Aluminium Smelters Limited holds six discharge consents that require inspecting.

They include:

- discharge contaminants to land, including circumstances where they may enter coastal water;
- discharge treated sewage to land;
- discharge treated effluent into Foveaux Strait;
- discharge contaminants to air from the aluminium smelter and related activities;
- discharge Haysoms dross to the on-site landfill.

The New Zealand Aluminium Smelters Limited (NZAS) is located on the Tiwai Peninsula at Awarua, and produces some of the purest aluminium in the world.

#### What do we look at?

NZAS has six consents to discharge. Compliance during 2015/16 was assessed against these resource consents.

#### Complaints and self-reported incidents

Environment Southland received three self-reported incidents from NZAS during the 2015/16 year. The first of these related to smoke emissions due to blockage of heavy fuel oil burners. The second complaint was initially received by NZAS from a member of the public, and related to dust emission from its landfill site due to excessive winds. The third incident related to alumina dust discharge during ship offloading. Actions taken by NZAS were appropriate and timely.

13/14

14/15

15/16

<b>Consent performance</b>			
<p>NZAS remained fully compliant with consent limits during the reporting period.</p> <p>Environment Southland granted an amendment to air discharge sampling in December 2014 to reduce sampling sites and test parameters. Granting of the amendment was based on exemplary compliance with all measured parameters.</p>			
	<b>13/14</b>	<b>15/15</b>	<b>15/16</b>



**Aerial view of New Zealand Aluminium Smelter.**



## 2.4.2 Dongwha Patinna New Zealand Limited

### Consents

Dongwha Patinna New Zealand Limited holds 10 resource consents relating to the manufacture of MDF. Five of these are discharge consents.

They include:

- to discharge contaminants to the air from fibreboard processing, including the treatment of wastewater;
- to discharge effluent and treatment pond seepage to land;
- to discharge untreated stormwater and treated wastewater to water;
- to discharge stormwater to land;
- to discharge from a tile drain to a watercourse.

Dongwha Patinna New Zealand Limited is a mixed density fibreboard (MDF) manufacturing plant, located south of the Mataura township.

### What do we look at?

The five consents that Dongwha hold, to discharge of contaminants to the environment. Compliance is assessed against these.

Complaints and self-reported incidents			
No complaints were received by Environment Southland for the period.	13/14	14/15	15/16

Consent performance			
Dongwha Patinna New Zealand Limited was compliant with all consent conditions set out in its resource consents during the 2015/16 reporting period. To date, Dongwha has not exercised the consent that allows the discharge of treated wastewater to the Mataura River and has not indicated any intent to do so. Instead, all wastewater has been irrigated to land. Emission testing conducted in 2016 determined both formaldehyde and total filterable particulate matter levels remained significantly lower than consented limits.	13/14	14/15	15/16



Dongwha site office.

## 2.5 Fertiliser Industry

### 2.5.1 Ballance Agri-Nutrients Limited

#### Consents

Ballance Agri-Nutrients Limited holds three resource consents for its fertiliser manufacturing plant at Awarua. They are:

- to discharge treated and untreated stormwater from a fertiliser manufacturing, storage and dispatch facility;
- to take groundwater from bores;
- to discharge contaminants to air.

Ballance Agri-Nutrients Limited operates a fertiliser manufacturing facility at Awarua, about 10 km south of Invercargill.

#### What do we look at?

Ballance Agri-Nutrients Limited holds three consents. Compliance is assessed against the current resource consents.

#### Complaints and self-reported incidents

No complaints were received from the public relating to the consents or operations at the Awarua site.	13/14	14/15	15/16
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#### Consent performance

Ballance Agri-Nutrients has been fully compliant with all consent conditions.	13/14	14/15	15/16
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## 2.5.2 Ravensdown Fertiliser Co-operative Limited

### Consents

Ravensdown Fertiliser Co-operative Limited holds two resource consents for the purpose of operating a limestone quarry at its Dipton site. They are:

- to discharge treated stormwater to water;
- to discharge contaminants to air from the Dipton lime works.

The company holds one resource consent for its Balfour site, which is:

- to discharge stormwater from a limestone quarry at Balfour.

Ravensdown Fertiliser Co-operative Limited operates two limestone quarries in Southland, one at Dipton and the other at Balfour.

### What do we look at?

Ravensdown operates two sites and holds three consents to discharge. Compliance is assessed against the current resource consents.

<b>Complaints and self-reported incidents</b>			
No complaints were received from the public relating to the consents or operations at the limestone quarries over the 2015/16 period.	13/14	14/15	15/16

<b>Consent performance</b>			
The Ravensdown sites at Dipton and Balfour met all the requirements set out in its consents.	13/14	14/15	15/16

## 2.6 Mining Industry

### 2.6.1 Solid Energy New Zealand Limited

Solid Energy New Zealand Limited operates three mines in Southland at Ohai and Waimumu (New Vale, Goodwin). The Mataura briquette plant is no longer operational.

#### What do we look at?

The consents issued for Solid Energy's mines allow the discharge of treated mine water and stormwater. Solid Energy also holds consents for the discharge of contaminants to air and ash to land.

Compliance was assessed against the current resource consents.

<div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: 0 auto;"> <p><b>Ohai Mine Site</b></p> </div>	<p><b>Consents</b></p> <p>Solid Energy New Zealand Limited holds nine consents for mining activities at the Ohai site. They include:</p> <ul style="list-style-type: none"> <li>• to discharge contaminants to air from mining, screening and stockpiling of coal;</li> <li>• to discharge treated mine water and stormwater to Morley Stream.</li> </ul>
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#### Complaints and self-reported incidents

One self-reported incident was received regarding the Ohai Mine relating to discharge of water from an old mine shaft. This incident was not consent related. Daily and weekly monitoring was employed by Solid Energy to determine impacts to Morley Stream. Results show the discharge was having no impact on the waterway.

Complaints and self-reported incidents			
No self-reported incidents or complaints from members of the public were received regarding the Ohai mine for the reporting period.	13/14	14/15	15/16

Consent performance summary			
Ohai mine has met all obligations of its resource consents for the reporting period.	12/13	13/14	14/15

**Goodwin  
and  
New Vale  
Mine Sites**

**Consents**

Solid Energy New Zealand Limited holds four consents for mining activity at the Goodwin and New Vale mine sites. They include:

- to discharge ash to land from the operation of a lignite mine into both mine sites;
- to discharge contaminants to the air from the mining, crushing, screening and stockpiling of lignite.

Applications to renew expired consents are currently being processed.

Solid Energy New Zealand Ltd operates two mines within the Waimumu area, one in New Vale and one in Goodwin.

<b>Complaints and self-reported incidents</b>			
New Vale mine received one complaint regarding dust emissions from the site. The complaint was confirmed and the company has since made changes to reduce the discharge of dust from this site.	13/14	14/15	15/16

**Consent performance summary**

One confirmed incident led to a breach of consent requirements at the New Vale site.

<b>Consent performance</b>			
Goodwin mine has met all the requirements set out in its resource consents. New Vale Mine was non-compliant with a condition set in its discharge consent.	13/14	14/15	15/16



**New Vale mining operations.**

**Mataura Sites**

**Consents**

Solid Energy holds 10 consents in the Mataura area. Six are associated with the briquette plant, one with the abstraction of surface water for mine operations and three with the dewatering of the disused mine pit. They include:

- to discharge contaminants to the air including boiler emissions;
- to take surface water from the Mataura mine pit;
- to discharge water and boiler blow-down water to a former mine pit.

The Mataura briquette plant ceased operations at the end of September 2013, however Solid Energy remains committed to following its environmental monitoring programme and continues to supply results to Environment Southland as required by its consents.

<b>Complaints and self-reported incidents</b>			
There were no complaints or self-reported incidents for the 2015/16 reporting period.	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>

<b>Consent performance</b>			
Solid Energy is committed to continuing testing requirements of its resource consents despite the briquette plant being non-operational. Sample results show no impacts on waterways from historic activities. No issues were observed for the 2015/16 reporting period.	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>

## 2.6.2 Takitimu Coal Limited

### Consents

Takitimu Coal Limited holds 13 consents for mining activities at the Company Road and Coal Dale sites at Nightcaps.

They include:

- to discharge coal ash from industrial operations, mixed with overburden, to land;
- to discharge treated site water to the Wairio Stream;
- to discharge contaminants to air.

Takitimu Coal Limited operates two mines at Nightcaps – Company Road and Coal Dale. The Coal Dale site has only recently commenced operations and has yet to exercise its water discharge consents.

### What do we look at?

The consents issued for Takitimu Coal's mines allow the discharge of treated site water into the nearby Wairio Stream. The mines also hold consents for the discharge of contaminants to air and ash to land.

Compliance was assessed against current resource consents.

Complaints and self-reported incidents			
No self-reported incidents or public complaints were received for the 2015/16 reporting period.	13/14	14/15	15/16

Consent performance			
Takitimu Coal Ltd was compliant with all consents for discharges to land, air and water. One minor issue relating to flow meter data collection was noted during the period and is currently being addressed. There were no adverse effects on the surrounding environment relating to this issue.	13/14	14/15	15/16



## 2.7 Sawmill Industry

There are four sawmill companies in Southland that hold resource consents for discharge purposes. They are at Otautau, Winton, Ryal Bush and Tuatapere. Their compliance performance during 2015/16 was assessed against their current resource consents.

### What do we look at?

Environment Southland audits water sampling results for levels of timber treatment metals which can be toxic to aquatic life in high concentrations.

### 2.7.1 Craigpine Timber Limited

Consents
<p>Craigpine Timber Limited holds two discharge consents that require inspection. They are:</p> <ul style="list-style-type: none"> <li>to discharge contaminants to the air from timber processing activities;</li> <li>to discharge timber yard stormwater and condensate to water.</li> </ul>

Craigpine Timber Limited operates a sawmilling plant at Winton.

### What do we look at?

Craigpine Timber Limited has two consents to discharge to water and air. Compliance is assessed against these resource consents.

Complaints and self-reported incidents	13/14	14/15	15/16
<p>One complaint was received from a member of the public regarding a discoloured discharge to the Winton Stream. Further investigation found that the discharge contained a high level of <i>E.coli</i>. A thorough investigation of the yard was completed and the likely sources identified. These are currently being eliminated through treatment, with more permanent solutions being investigated.</p>	13/14	14/15	15/16

Consent performance	13/14	14/15	15/16
<p>Compliance with consent conditions was achieved for the reporting period. Craigpine Timber Limited has made, and is planning more, process changes in order to help achieve a higher quality stormwater discharge. Samples taken during the 2015/16 monitoring period did not show significant differences for the testing parameters taken from the upstream and downstream locations in Marshall Creek and the Winton Stream. The required boiler emissions report for the 2014/15 reporting period showed full compliance. The consent requires the next report in the 2016/17 reporting period.</p>	13/14	14/15	15/16

## 2.7.2 Findlater Sawmilling

### Consents

Findlater Sawmilling holds one discharge consent that requires inspection. The consent is to:

- discharge treated stormwater and wastewater to a wetland from a sawmilling operation.

The Findlater Sawmilling Limited operates a sawmilling plant at Ryal Bush.

### What do we look at?

Findlater Sawmilling Limited has one consent related to discharge. Compliance is assessed against this resource consent.

Complaints and self-reported incidents			
No complaints or self-reported incidents were received regarding the Findlater Sawmilling facility in the period.	13/14	14/15	15/16

Consent performance			
Findlater Sawmilling was compliant with its consent for the 2015/16 reporting period.	13/14	14/15	15/16

## 2.7.3 Lindsay & Dixon Limited

### Consents

Lindsay & Dixon Limited holds one discharge consent for two activities that requires inspection.

This consent is:

- to discharge settling pond sludge to land from a sawmilling and timber processing site; and
- to discharge stormwater to water.

Lindsay & Dixon Limited operate a sawmilling plant at Tuatapere.

### What we look at

Lindsay & Dixon Limited holds one consent related to discharge. Compliance is assessed against conditions in this consent.

### Complaints and self-reported incidents

No incidents or complaints have been received for the 2015/16 period.	13/14	14/15	15/16
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### Consent performance

Water monitoring results were fully compliant with consent conditions. The drain sediment samples showed arsenic and copper concentrations that exceeded the ANZECC and consent limits. The arsenic and copper are believed to be due to historic activities on the site.	13/14	14/15	15/16
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## 3.0 Sewage Treatment Systems

### 3.1 Invercargill City Council

#### Consents

The Invercargill City Council holds eight discharge consents that require monitoring. They include consents to:

- discharge treated wastewater to an estuary;
- discharge treated wastewater to coastal water;
- discharge contaminants to land;
- discharge biosolids to land;
- discharge stormwater and wastewater to land.

The Invercargill City Council (ICC) holds resource consents for discharging treated sewage at three locations: Clifton, Omaui and Bluff. The Council also discharges biosolids (dried sludges from the sewerage system), waste, leachate and filter backwash to land at Invercargill, Bluff and Branhholme. The compliance performance during 2015/16 was assessed against current resource consents.

#### What do we look at?

As part of the consent requirements for the ICC, the quantity of effluent being discharged and the quality of the effluent and its receiving waters are assessed.

#### Complaints and self-reported incidents

No complaints relating to discharges from the sewage treatment systems were confirmed during the 2015/16 period.

#### Consent performance

Bluff Wastewater			
Routine monitoring was completed for the 2015/16 year. All results received were fully compliant with the conditions in this consent.	13/14	14/15	15/16

Invercargill Wastewater			
Routine monitoring was completed for the 2015/16 year. All results received were fully compliant with the conditions in this consent.	13/14	14/15	15/16

Omaui Wastewater			
No issues arose during the 2014/15 year. An inspection was conducted this year with the discharge being fully compliant with the conditions in this consent.	13/14	14/15	15/16

<b>Station Road, Clifton biosolids to land</b>			
The 2015/16 annual report was received on time. This report contained two incidents of non-compliance, however both of these were assessed to have only a minor impact on the environment. A new consent for this activity was granted in November 2015.	13/14	14/15	15/16

<b>Branxholme filter backwash to land</b>			
Routine monitoring was completed for the 2015/16 year. All results received were fully compliant with the conditions in this consent.	13/14	14/15	15/16

### *Stormwater*

#### **Complaints and self-reported incidents**

A total of seven incidents that were associated with the stormwater discharge consents were investigated. Five incidents were received from the public and two were received from an Environment Southland staff member. All seven of the incidents related to the discharge of hydrocarbons to the stormwater. These incidents were investigated by Environment Southland in conjunction with the Invercargill City Council. The Invercargill City Council took appropriate actions to manage the discharge from its reticulated stormwater system.

#### **Consent performance summary**

The Invercargill City Council has five consents authorising the discharge of stormwater to open drains and waterways. These were granted in 2011 for five years. The conditions focus on the gathering of data, monitoring of trends and the identification of sources of contaminants into the reticulated storm water system. These consents are due for renewal in December 2016.

## 3.2 Southland District Council

### Consents

The Southland District Council holds 19 discharge consents, including consents to:

- discharge processed wastewater to land;
- discharge processed wastewater to water;
- discharge processed wastewater to coastal water.

The Southland District Council (SDC) holds resource consents for the purpose of treating and discharging sewage at 18 locations within the Southland region. The compliance performance during 2015/16 was assessed against current resource consents.

### What do we look at?

The quantity of water being discharged and quality of the effluent and receiving waters are assessed.

### Complaints and self-reported incidents

One self-reported incident of a blocked sewer was reported to Environment Southland. This was investigated and appropriate action taken. Otherwise no complaints relating to consented discharges were confirmed.

### Consent performance summary

<b>Balfour</b>			
One exceedance of the TSS consented limits on one sampling occasion was reported. Compliance was achieved for the monitoring requirements and all other limits specified by this consent.	13/14	14/15	15/16

<b>Browns</b>			
Full compliance was achieved with the effluent quality and impact on the receiving environment. However there was one breach of the monthly discharge flow limit and logs were not kept in regard to when the discharge changed between land and water application.	13/14	14/15	15/16

<b>Edendale/Wyndham</b>			
Full compliance was achieved with the effluent quality and impact on the receiving environment. Compliance with both the consented average daily flow and maximum flow limits was achieved.	13/14	14/15	15/16

<b>Gorge Road</b>			
There were no breaches of consented limits for the reporting period. Compliance was achieved with all consented limits and monitoring requirements.	13/14	14/15	15/16
<b>Lumsden</b>			
Compliance was achieved with consented effluent quality and reporting requirements for the 2015/16 period. However, there were 26 breaches of the discharge flow limits.	13/14	14/15	15/16
<b>Manapouri</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the 2015/16 period. Compliance was also achieved with consented flow limits.	13/14	14/15	15/16
<b>Monowai</b>			
The consented discharge faecal coliform and cBOD <sub>5</sub> criteria were exceeded on one monitoring occasion for the 2015/16 reporting period. Compliance was achieved with all other consented limits and monitoring requirements.	13/14	14/15	15/16
<b>Nightcaps</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the oxidation pond discharge for the 2015/16 reporting period. However, there were 11 breaches of the discharge flow limits.	13/14	14/15	15/16
<b>Ohai</b>			
Compliance was achieved with all discharge consent limits and monitoring requirements. However there have been 25 breaches of the daily water abstraction limit.	13/14	14/15	15/16
<b>Otautau</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the 2015/16 period. However on one occasion there was discharge direct to an aquifer via bore.	13/14	14/15	15/16
<b>Riversdale</b>			
The DO concentration in the receiving waters fell outside the consent limit on one occasion and the ammoniacal nitrogen concentration in the receiving waters also exceeded the consent limit on one separate occasion for the 2015/16 reporting period. Compliance was achieved with the remaining consented limits and monitoring requirements. There have been a total of 55 breaches of discharge flow limits.	13/14	14/15	15/16

<b>Riverton Rocks</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the 2015/16 period. Compliance was also achieved with consented flow limits.	13/14	14/15	15/16

<b>Riverton Township</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the 2015/16 period. However, the consented daily discharge limit was breached 19 times.	13/14	14/15	15/16

<b>Stewart Island</b>			
The DIN limit was exceeded on two occasions. The <i>E.coli</i> limit was also exceeded on one occasion however that was attributed to torrential rain and flooding. Compliance was achieved with the remaining consented limits and monitoring requirements for the 2015/16 reporting period.	13/14	14/15	15/16

<b>Te Anau</b>			
Compliance was achieved with consented limits and monitoring requirements for the 2015/16 reporting period. However, the consented monthly discharge limit was breached five times.	13/14	14/15	15/16

<b>Tokonui</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the 2015/16 period. However, the maximum daily wastewater flow limit was exceeded on 20 occasions.	13/14	14/15	15/16

<b>Tuatapere</b>			
Compliance was achieved with consented effluent quality limits and reporting requirements for the 2015/16 period. Compliance was also achieved with consented flow limits	13/14	14/15	15/16

<b>Winton Sewage</b>			
The ammoniacal nitrogen concentration in the receiving waters exceeded the consent limit on one sampling occasion for the 2015/16 reporting period. Compliance was achieved with the remaining consented limits and monitoring requirements. Compliance was also achieved with consented flow limits.	13/14	14/15	15/16

### ***Stormwater***

#### **Complaints and self-reported incidents**

One incident of a stormwater discharge was reported to Environment Southland. This related to diesel being poured into a stormwater drain. This was confirmed and steps taken to remove the diesel and minimise the discharge.



## **Consent performance summary**

The Southland District Council is currently applying for consents to discharge stormwater from a number of small townships around Southland.

### 3.3 Gore District Council

#### Consents

The Gore District Council holds three resource consents for discharging treated sewage. They include consents to:

- discharge processed wastewater to water;
- discharge contaminants to air.

The Gore District Council holds resource consents for discharging treated sewage. The compliance performance during 2015/16 was assessed against the current resource consents.

#### What do we look at?

As part of the consent requirements for Gore District Council, the quantity of water being discharged and the quality of the effluent and receiving waters are assessed.

#### Complaints and self-reported incidents

No self-reported incidents were received regarding the community sewerage systems within the Gore District.

#### Consent performance summary

##### *Gore*

Issues were noted relating to sampling procedures and late reporting. Gore District Council has addressed the issues in a timely and acceptable manner.

<b>Gore</b>			
Minor issue relating to rolling percentile for <i>E.coli</i> seen during the period (4 out of 5 samples trended). However, sampling for specific dates show <i>E.coli</i> below consent requirement. <i>E.coli</i> rolling average returned to acceptable levels April 2016.	13/14	14/15	15/16

##### *Mataura*

Issues were noted during the 2015/16 period relating to incorrect sampling. While no discernible impacts were noted on the receiving environments. Gore District Council had not addressed the issue in a timely and acceptable manner. It is, however, accepted that in the last six months procedures have been developed and improvements made.

<b>Mataura</b>			
Several reminders were issued to address concerns with the monitoring of the consent, however, on three consecutive occasions these concerns were not addressed in a timely manner.	13/14	14/15	15/16

### **Waikaka**

Information provided for the 2015/2016 period showed all measured parameters remained within consent limits.

<b>Waikaka</b>			
All consent requirements were met for the period.	13/14	14/15	15/16

### **Stormwater**

Gore District Council holds three consents to discharge stormwater. These consents cover the Gore, Mataura and Pukerau/Waikaka townships.

### **Complaints and self-reported incidents**

No self-reported incidents or complaints were received regarding the community stormwater system at Gore.

### **Consent performance summary**

There are currently 30 active sample collection sites requiring monitoring. Samples were able to be collected from 25, with five being unable to be sampled for the period due to inaccessibility and/or dry drains during inspection.

There is consistent maintenance of the stormwater network that occurs regularly. This includes drain, pump, and sump checks and cleaning as required.

The Council is currently investigating the introduction of a bylaw to manage connections to the stormwater system.

Exceedances of the *E.coli* consent limits were reported at four sites in the Gore (Norton Street) and Pukerau townships (Coal Pit Bridge Road) over the 2015/16 period. Investigations are actively conducted and improvement works are occurring within problem areas to help reduce contamination and improve the discharge quality.

## 4.0 Quarrying

### 4.1 Gravel Extraction

The Resource Management Act 1991 and/or a rule in a Council plan require that a resource consent is required to disturb the bed of a river.

Environment Southland currently has 140 land use consents to extract gravel from Southland rivers. During the 2015/16 financial year Environment Southland granted 14 new consents/consent renewals to extract up to a total of 916,400 m<sup>3</sup> gravel. Of these 14 consents, seven are yet to be exercised.

Environment Southland issues courtesy letters to each consent holder when applications are granted to advise them of their responsibilities for complying with consent condition requirements.

The number of applications received to extract gravel has been reducing over the last few years, with the majority of applicants being industrial. It appears they are establishing long-term sites, rather than creating individual sites for each contract.

Environment Southland continues with the monitoring programme of the gravel resources and there were no major channel-forming river events in the last financial year.



Clearing/replanting of willows and gravel extraction on the Whitestone River in Te Anau.

## 5.0 Landfills

### 5.1 S J Timpany Cleanfill

#### Consents

S J Timpany holds two resource consents, however only the second consent requires inspection. They are:

- to discharge cleanfill to land;
- to discharge solid waste to land.

S J Timpany operates a cleanfill and a limited-scope landfill accepting solid waste from the demolition of housing and commercial buildings, asbestos and some contaminated soils at its Otatara site. The site also has a holding pad which allows for sample testing of contaminated soils and encapsulation of contaminants prior to discharge.

#### What do we look at?

S J Timpany has two consents to discharge. Compliance is assessed against the current resource consent for discharge of solid waste to land with groundwater sampling conducted to assess potential contamination.

#### Complaints and self-reported incidents

One self-reported incident was received regarding S J Timpany Cleanfill.	13/14	14/15	15/16
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#### Consent performance

S J Timpany was non-compliant with one condition set out in its discharge consents. Enforcement actions were taken.	13/14	14/15	15/16
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**Holding pad for retaining contaminated soils for sampling and encapsulation of contaminants.**

## 5.2 AB Lime Landfill

### Consents

AB Lime Limited holds six resource consents. They are:

- to discharge solid waste onto or into land;
- to discharge contaminants to air from a landfill;
- to discharge stormwater to a tributary of the Lochiel Stream;
- to take ground and surface water for landfill operations.

AB Lime operates an agricultural fertiliser and lime business and a Class A landfill business about 4 km east of the Winton township.

### What do we look at?

AB Lime Limited has six consents to operate their landfill. Compliance is assessed against current resource consents.

### Complaints and self-reported incidents

AB Lime received one odour complaint relating to the operation of the landfill. The presence of an odour was confirmed by AB Lime at the time. A new deodorising unit is working well and planting around the current working cell bund has been actioned.

Complaints and self-reported incidents			
One confirmed odour complaint was received by AB Lime.	13/14	14/15	15/16

### Consent performance summary

Peer review was conducted in March 2016 with no major issues identified.

Consent performance			
AB Lime was compliant with all standards set out in its resource consents for discharges to land, air and water, with minor issues noted relating to timeliness of reporting.	13/14	14/15	15/16



**Compactor in action.**

## 6.0 Coastal Marine Area

### 6.1 South Port and New Zealand Aluminium Smelter Limited's Coastal Plan Agreements

Southland's port facilities operate out of Bluff and are divided into two separate operations:

- the import and export operations based in Bluff township, managed by South Port;
- the import and export operations based on the Tiwai Peninsula, servicing and managed by New Zealand Aluminium Smelter Limited (NZAS).

Activities on these sites are managed by means of individual agreements. The agreements describe a series of systems which each party has agreed to, ensuring the management of port activities are compliant with the Resource Management Act 1991.

Any issues are addressed at an annual meeting.

At meetings:

- on-site incidents and remedial action taken are tabled and discussed;
- maintenance programmes for the coming 12 months are discussed;
- monitoring conducted over the previous 12 months is tabled;
- procedural issues that may have arisen out of the agreement over the previous 12 months are discussed.

#### Incidents reported

##### *South Port*

Four incidents were reported that may have been linked to activities at the port.

- a minor oil film on the water within Bluff Harbour. The source was not traced and the film dispersed quickly;
- palm kernel was blown onto a neighbouring resident's property during the unloading of a vessel. The unloading operation ceased around the time the call was logged;
- a member of the public was concerned about shipping activity. No issues were identified;
- reclamation of land in the area of the Island Harbour. This was investigated, no issues could be confirmed.

##### *NZAS Wharf*

Environment Southland received three incidents relating to the Tiwai Peninsula area. These have been reported earlier in this report. One of the incident reports was associated with the NZAS wharf.



## 6.2 Whitebait Stands

Environment Southland is responsible for whitebait stands under the Regional Coastal Plan, and undertakes an annual inspection of these each year. Huts associated with the stands are controlled by the Southland District Council, while the Department of Conservation controls the fishing of whitebait.

The Coastal Plan has set the maximum number of whitebait stands allowed in Southland at those that were occupied at 15 February 1997. Any new whitebait stands are prohibited.

In 2014/15 Environment Southland began removing illegal stands that had been identified from the previous year's inspections. During the inspections, additional illegal stands were located and notification was left attached to these stands for the owners to contact Environment Southland.

Whitebait stands were inspected for compliance with common conditions such as each stand displaying a unique number, being a certain length and in good repair. Inspections are completed midseason, which allows owners additional time for repairs. As in previous years there was a high level of compliance with these consents.

Although most of the whitebait stands in Southland are permanent structures, stands in Fiordland have to be removed each season. These whitebait stands were also inspected at the end of the season to ensure the conditions were being met.

## 6.3 Coastal Surface Water Activities in Fiordland

Coastal permits are required for undertaking commercial activities on waterways in Fiordland.

Environment Southland is responsible for ensuring compliance with conditions of coastal permits issued under the Resource Management Act 1991 and rules in the Regional Coastal Plan for Southland. This is achieved largely by monitoring activity logs submitted by consent holders. There has been a high level of compliance with this requirement during the 2015/16 year.

In 2016, two patrols were conducted to provide a physical, ‘on the water’ presence in Fiordland, and also to provide an opportunity for face-to-face interactions with consent holders, recreational users and commercial users of the marine environment. A patrol in February was conducted in Chalky and Paterson’s inlet, and a patrol in the lower Fiordland area, from Doubtful Sound south was conducted in April, with the Ministry of Fisheries, Ministry for Primary Industries and the Department of Conservation.

During the February patrol, 52 consents were inspected. 26 were found to be fully compliant while 26 had minor issues of non-compliance (e.g. not displaying the structure identification). Consent holders have been given time to address the issues identified.

During the April patrol, three coastal structures were inspected, and staff spoke to the owners of two non-commercial private vessels, 12 commercial vessels, and two commercial fishing vessels. Staff gave advice and education and noted no non-compliance during this visit.

Future patrols are being considered, which may include the Milford Sound area.



Inspection of a vessel in Luncheon Cove, Fiordland, during the April patrol.

## 7.0 Crown Agencies

### 7.1 Department of Conservation

#### Consents

The Department of Conservation holds resource consents for the following purposes:

- coastal - 13
- discharge - 35
- land use - 17
- water - 17

The Department of Conservation (DOC) holds 82 current resource consents, however the majority of these consents have either not been exercised during 2015/16, or do not have inspection conditions attached to them.

The main consents exercised were for discharge along the Milford, Kepler and Routeburn tracks. These consents relate to the disposal of sewage and wastewater from the huts along the tracks.

#### What do we look at?

On the Milford, Kepler and Routeburn tracks the Department of Conservation has 10 discharge consents. Compliance is assessed against these consents.

#### Complaints and self-reported incidents

Complaints and self-reported incidents			
No complaints or self-reported incidents were received regarding the Milford, Kepler or Routeburn tracks.	13/14	14/15	15/16

#### Consent performance summary

Consent performance			
No issues arose during the 2015/16 year at any of the following locations:			
<ul style="list-style-type: none"> <li>• Clinton Hut</li> <li>• Mintaro Hut</li> <li>• Dumpling Hut</li> <li>• Sandfly Point</li> <li>• Luxmore Hut</li> <li>• Iris Burn Hut</li> <li>• Moturau Hut</li> <li>• McKenzie Hut</li> <li>• Howden Hut</li> <li>• Pit or containment toilets</li> </ul>	13/14	14/15	15/16



**Luxmore Hut.**



# **Part B**

## **Incident Response**



## 8.0 Incidents

Compliance officers respond to reports of pollution that come in via our 24-hour pollution hotline (0800 76 88 45).

This year there was a slight increase to 668 incidents reported to Environment Southland compared to 617 incidents in 2014/15.

The costs involved in attending and investigating an incident are charged where an offending party can be identified. Unfortunately the removal of litter, rubbish and dead stock from waterways has little chance of being linked to its owner.

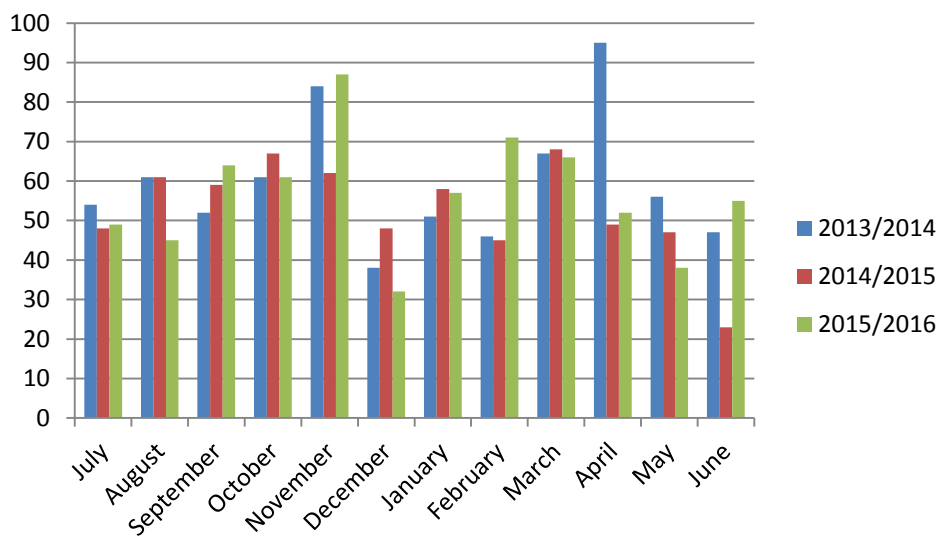
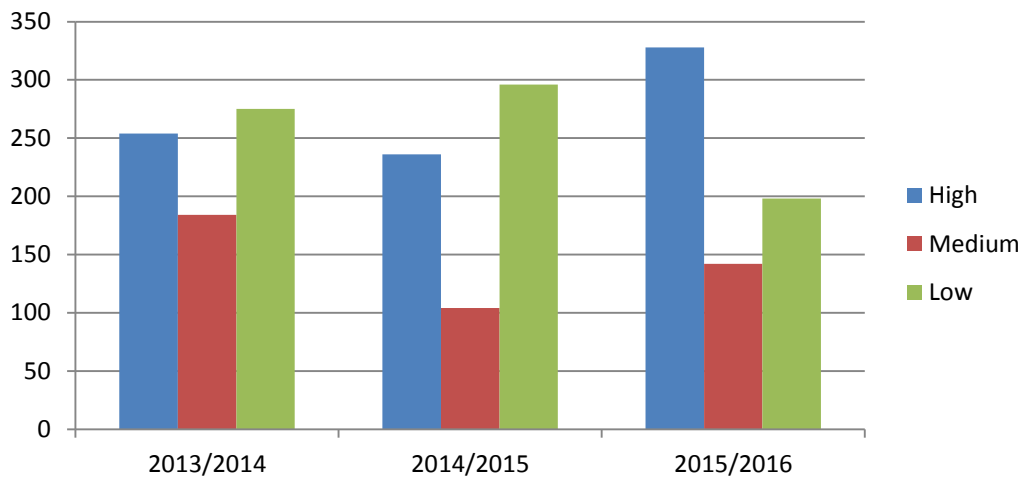


Figure 6 - Reported incidents per month compared over three years.

Incidents have many sources. Most incidents are investigated within a very short time frame following a callout; however some can lead to in-depth investigations that can span many months.

Incidents are assigned a priority from one hour for urgent matters to six months for matters with low environmental impacts. Priorities are determined by taking into account several factors including potential harm to the environment, the need for evidence collection and the receiving environment.





**Figure 7 - Priority response category compared to previous years.**

Smoky chimney complaints normally have a high priority due to the immediacy of the issue. The introduction of the Regional Air Plan has meant that there is a lot more awareness of the issues that relate to air pollution, which has led to a significant increase in the number of high priority incidents.

# **Part C**

## **Enforcement**



## 9.0 Enforcement

For many, enforcement is more closely associated with the police and law courts, however other organisations including Environment Southland have statutory roles and responsibilities with regard to the enforcement of specific laws.

The enforcement tools available to the compliance officers at Environment Southland range from official warnings, infringement notices, abatement notices, enforcement orders and prosecution.

In most cases, where an inspection of an incident occurs, the costs associated can be recovered.

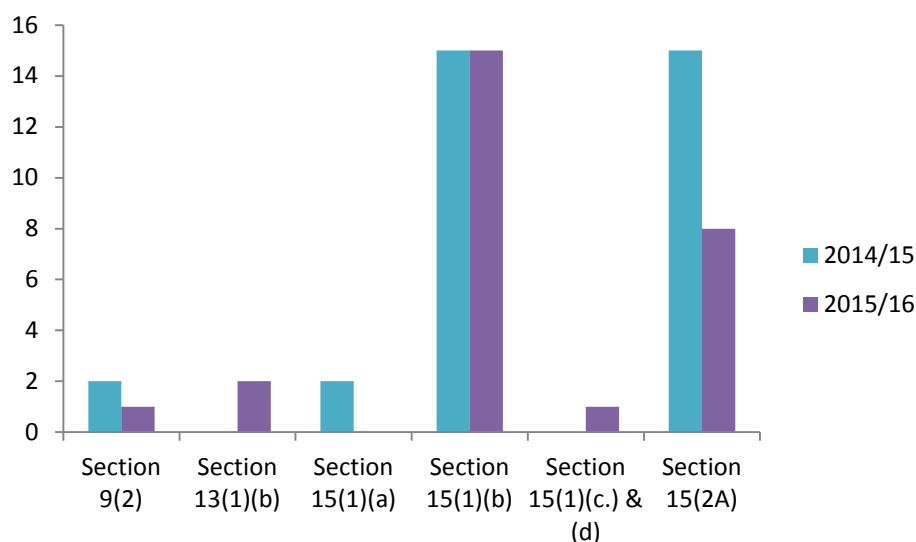
### 9.1 Infringement Notices

The Environment Southland compliance team takes a measured approach when responding to offences.

An infringement notice (as detailed in the Resource Management Act) imposes a relatively minor penalty and does not result in a conviction. It is a useful tool in cases where there are minor impacts on the environment.

The infringement notice requires a detailed investigation as it can be disputed in court. The penalty for an infringement notice can range from \$300-\$1,000.

During the 2015/16 year, there were 13 formal warnings and 26 infringement notices issued, which is a decrease on the previous year when 36 infringement notices were issued.



**Figure 8 – Reasons for infringement notices issued comparing 2014/15 and 2015/16.**

Section 9	Restrictions on use of land
Section 13	Restriction on certain uses of beds of lakes and rivers
Section 15 (1)(a)	Discharge of contaminant or water into water
Section 15(1)(b)	Discharge of contaminant onto or into land in circumstances which may result in that contaminant entering water
Section 15 (1)(c) & (d)	Contaminant from any industrial or trade premises into air; or Contaminant from any industrial or trade premises onto or into land
Section 15(2A)	Discharge of a contaminant into the air, or into or onto land, from a place or any other source, whether moveable or not, in a manner that contravenes a regional rule

## 9.2 Abatement Notices

An abatement notice requires an offender to comply with the notice within a specified timeframe. This means that when an activity has been identified as being, or likely to be harmful for the environment. The abatement notice requires that the activity is stopped before it starts or is stopped from continuing or has someone take action to correct the harmful effects.

They are issued to people or organisations that breach a rule in the Act, any regulation, or a condition of resource consent. Unlike enforcement orders they are issued by compliance officers and do not require an application to be made to the Environment Court.

During the 2015/16 year, 11 abatement notices were issued. The majority of these were complied with.

## 9.3 Prosecutions

Environment Southland will only proceed with a prosecution if satisfied that the test for prosecution is met.

This means:

- the evidence which can be presented in court is sufficient to provide a reasonable prospect of conviction – the Evidential Test; and
- prosecution is required in the public interest – the Public Interest Test.

Each aspect of the test must be separately considered and satisfied before a decision to take prosecution action is made.

The council must analyse and evaluate all of the evidence and information in a thorough and critical manner and receive legal opinions before proceeding.

The matters that were prosecuted and completed in the 2015/16 year were:

### **Southland Regional Council vs Blue Sky Meats**

Blue Sky Meats Limited was charged with two charges of discharging effluent in circumstances where it may enter water.

On 9 October 2014 an incident was reported that wastewater effluent had flowed over land and was entering a waterway. On investigation, it was found that irrigator guns had over applied effluent that had resulted in the effluent reaching a waterway.

On 10 October 2014 a second incident was reported that wastewater effluent had again flowed overland and was entering a waterway. On investigation it was found that irrigators had over applied and the wastewater effluent had entered a waterway.

Blue Sky Meats pled guilty to both charges and were fined \$25,125 on each offence.

Environment Southland was granted an enforcement order.

### **Southland Regional Council vs P G Pullar**

The inspection on 13 May 2014 uncovered a number of issues on Phillip Pullar's property. These issues included a discharge of sewerage, piled effluent sludge and associated runoff, over applied ponded effluent, discharges of effluent and silage leachate to a waterway and lane sludge pooling and entering a waterway.

On the 27 August 2014 compliance staff discovered a severely polluted waterway at a Pukerau rest area. An investigation started and an open

tile drain was discovered discharging molasses from Mr Pullar's property.

On 10 September 2014 compliance staff found discharges of silage leachate and effluent to waterways on the property. The effluent was found to be coming from a leak in one of the storage ponds on the property.

There were 10 charges laid against Mr Pullar for the various discharges and he pled guilty to all charges. Three of the charges related to silage leachate discharges for which he was fined \$18,750 on each offence. The remaining seven discharges related to various other discharges and he received a fine of \$9,640 for each charge. The fines imposed totalled \$123,730.

### **Southland Regional Council vs Taha Asia Pacific**

Taha Asia Pacific Limited had four charges laid relating to the illegal discharge of aluminium dross at two sites; a gravel pit at Edendale and a farm in Awarua.

On 17 July 2014 compliance officers responded to a report of aluminium dross being deposited in a gravel pit in Edendale. Officers investigated and found 1,000 tonne of dross product stored on unsealed ground in the pit. The material had been mixed with gravel, increasing the amount of contaminated material to over 10,000 tonnes. Surface water and groundwater samples showed elevated levels of contaminants under and around the material.

On 24 February 2015, Environment Southland was made aware of a second deposit of aluminium dross at a farm in Awarua. The material had been used to make farm tracks on the property some time in 2012.

The company pled guilty to all four charges and received fines of \$25,650 on each of the offences at Edendale, and \$25,650 for the Awarua offence. The total of the fines imposed was \$102,600.

### **Southland Regional Council vs Mark Anthony Egginton**

Mark Egginton, manager of Taha Asia Pacific Limited, had four charges laid relating to the illegal discharge of aluminium dross at two sites; a gravel pit at Edendale and a farm in Awarua. A fifth charge related to a breach of an enforcement order. Mr Egginton pled guilty to all charges, and was sentenced to 100 hours of community work as an overall penalty on all charges.

### **Southland Regional Council vs Crawford Enterprises Limited**

Crawford Enterprises Limited had two charges laid for the discharge of contaminants relating to the dumping of aluminium dross at an Edendale gravel pit. The company pled guilty to both charges and received a fine of \$29,700 per charge. The total of the fines imposed was \$59,400.

### **Southland Regional Council vs Wayne Arthur Carpenter**

Wayne Carpenter had five charges laid in relation to the discharge of contaminants on two dairy farms near Tisbury, Invercargill. One of the charges related to a breach of an abatement notice on the Motu Rimu Road property.

On the 20 August 2015 compliance officers undertook a routine dairy farm inspection and identified an overflowing storage saucer and a discharge of effluent through a stormwater diversion.

On the 23 October 2015 compliance officers carried out a re-inspection of the dairy farm and found a discharge of dairy shed effluent to a waterway from an over application from the irrigator pods. The storage saucer was also overflowing again.

A second farm owned by Mr Carpenter, on Bath Road, was also inspected on the 23 October 2015. Officers identified laneway runoff and an overflowing storage saucer and stone trap.

Mr Carpenter pled guilty to all five charges. For the Motu Rimu Road property he received a fine of \$37,500 for the discharge to water through the stormwater diversion, \$18,750 for the overflowing saucer and \$15,000 for breach of an abatement notice.

For the two charges at the Bath Road property, Mr Carpenter received a fine of \$16,875 for each charge.

The total of the fines imposed was \$105,000

### **Southland Regional Council vs Gilbert Andrew Watt**

An inspection undertaken on Gilbert Watt's Riversdale property on the 15 October 2014 found a discharge of dairy shed effluent which had entered a tile and discharged to water.

The over application was the result of a mechanical failure on the irrigation system and maintenance of the alarm and automatic switch off system had not been kept current. Due to this lack of maintenance, the irrigation system continued to operate after it had failed.

Gilbert Watt pled guilty to a single charge and was fined \$31,500.



### **Southland Regional Council vs Murray William Black**

During a discharge permit inspection, Council staff discovered the unauthorised application of underpass effluent to land from a stalled travelling irrigator. Underpass effluent had ponded and then flowed to a field tile before discharging into a waterway

Murray Black, the property owner, pled guilty to a single charge and was fined \$22,500.

### **Southland Regional Council vs Cornelus Rudolfes Maria Woutersen**

Cornelus Woutersen was employed as a share milker on Murray Black's Dacre property, where Council staff located a discharge of underpass effluent to land which had entered water on 2 December 2014.

Officers located an unauthorised, stalled, irrigator which had applied underpass effluent to land. Effluent had ponded and then flowed into a field tile before discharging into a waterway.

Cornelus Woutersen, who was in charge of the day to day management of the effluent system, pled guilty to a single charge and was fined \$21,375.

## **9.4 Enforcement Orders**

An enforcement order is another way of getting someone to comply with the Resource Management Act. It is similar in some respects to an abatement notice, in that it is used to get someone to start or stop doing something.

However, it differs from an abatement notice in that anybody (not just the council) can apply for an enforcement order against somebody else. These are issued by the Environment Court rather than the council.

Enforcement orders offer more options than an abatement notice, including the ability to recover clean-up costs in avoiding, remedying or mitigating any adverse effect on the environment. The court may also order restoration of a natural or physical resource. If the order is not complied with, council may go ahead and comply on the respondent's behalf (and recover the cost of doing so).

If a problem or the options to resolve it are complex, enforcement proceedings provide a court-supervised procedure for bringing about a conclusion, and if problems are encountered during the implementation of the solution, direction can be sought from the court.

Three enforcement orders were applied for and granted during the 2015/16 year.

### **Southland Regional Council vs Blue Sky Meats**

Blue Sky Meats Limited received an enforcement order to make extensive changes to its irrigation systems and wastewater storage capabilities.

### **Southland Regional Council vs Phillip Pullar**

Mr Pullar received an enforcement order ensuring that his effluent disposal system was fit for purpose and any modifications identified were completed.

### **Southland Regional Council vs Wayne Carpenter**

Mr Carpenter received an enforcement order ensuring that his effluent disposal system was fit for purpose and any modifications identified were completed.

### **Southland Regional vs Kevin John Singh Belling**

Mr Belling received an enforcement order ensuring that his effluent disposal system was fit for purpose and any modifications identified were completed.

## Glossary

Ammoniacal Nitrogen (NH <sub>4</sub> N)	Ammoniacal nitrogen is rarely found at high levels in natural waters. Its presence is an excellent means of detecting pollution. It is a major component in urine excreted by mammals. High levels of ammoniacal nitrogen can potentially be toxic to aquatic life.
ANZECC	The Australia New Zealand Environmental Conservation Council. This organisation develops guidelines that are applicable to Australian and New Zealand situations.
Black Water	Wastewater containing human faeces and urine, generated from toilets.
cBOD <sub>5</sub>	Carbonaceous Biochemical Oxygen Demand – a measure of the ability of contaminants to adversely remove oxygen from water
CCA	Copper (Cu), Chromium (Cr) and Arsenic (As) are the usual metals analysed for when considering the timber treatment process. High levels of metals can become toxic to aquatic life.
Clarity	The distance that can be seen through the water. The higher the clarity the greater the visibility in the water.
Chl <i>a</i>	Chlorophyll <i>a</i> – the pigment in plant cells which captures light energy for photosynthesis.
DAF Unit	Dissolved Air Flotation unit. This is an effluent treatment system whereby air is pumped into the effluent under pressure. When the air is discharged into the tank containing effluent, it returns to atmospheric pressure, the dissolved air comes out of suspension and forms bubbles on the particulate matter. These bubbles then float to the surface to be removed as sludge.
DIN	Dissolved Inorganic Nitrogen – Nitrate + Nitrite Nitrogen plus Ammoniacal Nitrogen.
DO	Dissolved Oxygen – Oxygen is important to sustain life. DO is the amount of oxygen dissolved in water.

DRP	Dissolved Reactive Phosphorus – a form of phosphorus that is readily available to plants to sustain growth. High levels of Phosphorus and Nitrogen in receiving waters can promote the growth of nuisance weeds in waterways.
<i>E. coli</i>	Escherichia coli - <i>E.coli</i> is a bacterium that is commonly found in the lower intestine of warm-blooded organisms. They are a subset of the Faecal Coliform group and are regarded as an indicator of faecal contamination and therefore the presence of pathogenic (harmful) bacteria.
EC	Electrical Conductivity – the ability of water to conduct electricity. This gives a conservative measure of the mineral content of water. Generally, the greater the conductivity of the water, the greater the mineral content of the water.
Formaldehyde	An organic compound that is a by-product of the resins used to bind MDF particles together.
Faecal Coliforms (FC)	These are organisms that are present in the gut and faeces of warm-blooded animals and are used as indicators of the presence of pathogenic organisms.
g/m <sup>3</sup>	Grams of material in 1 cubic metre of water – a measure of concentration in a liquid or gas.
Grey Water	Wastewater that is generated from domestic activities like clothes washing, dishwashing and bathing.
Heavy Metals	A set of elements that exhibit metallic properties that typically have high atomic weights and that can damage living things and tend to accumulate in the food chain.
Loading	The quantity of contaminates discharged over a set period of time.
LTP	Long-Term Plan. This is a document projecting Council activities, as required by the Local Government Act 2002.
mg/kg	Unit to measure concentration in a solid (equivalent to ppm (parts per million) or g/m <sup>3</sup> the unit used to measure concentrations in liquids).
MPN	Most Probable Number – a statistical estimate of the mean density of bacteria in a water sample.

Nitrate-N	An oxidised form of Nitrogen – Nitrate Nitrogen is soluble and is therefore readily available to plant life to sustain growth.
PAH	Polycyclic Aromatic Hydrocarbons – a class of over 100 different organic molecules composed of only carbon and hydrogen. PAHs are flat molecules with each carbon having three adjacent carbon atoms similar to the structure of graphite. The USEPA has listed 16 of these as priority chemicals due to their potential health effects.
PM <sub>10</sub> Particulate Matter	The unburnt material that is commonly discharged with the gas or smoke from a fire or boiler. This is measured as PM <sub>10</sub> , meaning a particle size of 10 micrometers or less.
Sewage	A mixture of black and grey water.
Stormwater system	A system of pipes and drains that carry rain and snowmelt from street surfaces, roofs and other paved areas. The stormwater system leads directly to waterways, without being treated.
Total Filterable Particulate Matter	Quantity of particles collected by collected on a filter.
Total Nitrogen (TN)	An important element in the growth of plant material. It is required for protein formation and consequently animals have a significant N content. Total Nitrogen is a measure of all nitrogen present
Total Phosphorus TP	Phosphorus is an important element in the growth of plant material. Total Phosphorus is a measure of all phosphorus present, including all forms of phosphorous whether it is tightly bound to particulate matter or potentially available to plant life.
Total Suspended Solids - TSS	Very small particles that have the potential to affect the colour and clarity of a water body and can potentially settle out onto a streambed smothering aquatic life in the waterways.

Turbidity	Turbidity is a laboratory measurement to determine the clarity of the water. The higher the result the more cloudy the water.
$\mu\text{g}/\text{m}^3$	A measure of concentration in a liquid or gas. Micrograms of material in 1 cubic metre of water. 1 gram = 1,000,000 micrograms.
USEPA	US Environmental Protection Agency

# Compliance Team



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