

Compliance Monitoring Report 2018-19



environment
SOUTHLAND
REGIONAL COUNCIL

Te Taiao Tonga



**Environmental Compliance
Monitoring Report**

2018/19

**Report by –
Environment Southland
Compliance Team**

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Foreword

The 2018/19 Compliance Monitoring Report summarises the activities of Council's compliance monitoring and enforcement and technical teams throughout the Southland region. The summary is also an opportunity to highlight some key trends in environmental monitoring during the past year and benchmark them against the patterns observed during the previous two years.

The year has been very busy with 963 incidents responded to by the team – a similar amount to the previous year (961). There was again a significant increase in the number of high priority incidents (660, up from 462 the previous year). This is attributed to more air related complaints.

Air complaints, such as odour, dust and smoke can have short-lived effects due to the changeable nature of winds and environmental conditions. For this reason, air related incidents normally attract a high priority rating, meaning they need to be attended within 24 hours.

The subsequent increase in high priority incidents normally translates into increased demand on officer time as the incident is attended within an hour.

There continues to be a strong focus on compliance within the dairy sector.

The Mycoplasma Bovis bacteria continues to exist on a small number of farms. The Ministry of Primary Industries (MPI) is continuing to work to eradicate it from New Zealand, but its presence continues to impact on the dairy inspection programme.

In terms of on-farm practices, the compliance team has continued to operate de-contamination practices when entering and leaving farms.

In Southland, all dairy farms are inspected – 918 effluent discharge consents; some more than once in a given year.

The rate of significant non-compliance was 1.8%, down very slightly from 1.9% the previous year.

We follow up with each of the farms graded as significantly non-compliant, and details of this are readily available on our website.

When a farm is graded as significantly non-compliant there is a range of follow-up actions available. Not all of these actions result in enforcement. Other actions include re-inspection, infringement notices or abatement notices.

Our compliance approach is based on the 4Es (Enable, Encourage, Educate and Enforce), which remain at the heart of what we do.

Shed talks are done at the end of the dairy season, and can be seen as a useful opportunity at which to induct new farm staff, and identify any high risk areas. The numbers of farms taking advantage of the shed talks programme has trended down since the initiative was introduced about five years ago. Shed talks are designed to help farm managers and workers adapt to changes or variations to consent conditions.

Territorial authorities are adjusting to new consent requirements for wastewater and stormwater discharges.

Tourism pressures in Fiordland are creating some pressure points for authorities around dealing with issues, such as wastewater disposal.

With central government initiatives in the freshwater space, there will be a stronger focus on environmental compliance and monitoring in coming years.

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

The Council would like to take the opportunity thank the compliance 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.



N G Horrell
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 2018/19 year. It does not cover all of the activities of the area 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: Full compliance 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 of little value.

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 environmental 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.



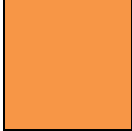
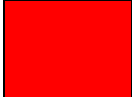
Both tables provide a rating in the form of a traffic light system and a comparison between the 2017/18 and 2018/19 year (see below).

Key

Site or consent holders name			
Description of noteworthy event	16/17	17/18	18/19
	Background denotes overall results for year shown in box		

Year

Grading

	Compliance Grade
	FULL COMPLIANCE – Compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
	LOW RISK NON-COMPLIANCE - Compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (e.g. failure to submit a monitoring report).
	MODERATE NON-COMPLIANCE - Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards. The non-compliance was deemed to have had some environmental consequences and/or there is a moderate risk of adverse environmental effects or there was a frequent recurrence of low risk or technical non-compliance.
	SIGNIFICANT NON-COMPLIANCE - Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards where there were significant environmental consequences and/or a high risk of adverse environmental effects.

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.

After consultation with consent holders and stakeholders we decided for this report to add a fourth compliance grade (yellow) to better reflect consent performance.

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

The Mycoplasma Bovis (M. Bovis) bacteria continues to exist on a small number of farms. The Ministry of Primary Industries (MPI) is continuing to work to eradicate M. Bovis from New Zealand but its presence continues to impact on the dairy inspection programme.

This year 17 inspections were rated as being significantly non-compliant of 918 inspections conducted. This equates to approximately 1.8% significant non-compliant inspections (the total number of inspections include dairy discharge inspections and wintering pad inspections).

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 and 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 is 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 through the soil profile into the groundwater aquifers or an underground source of water;
- *pollution of nearby streams and rivers* – where it runs off paddocks into waterways;
- *ineffective use of nutrients* - by the seeping of the nutrients past the root zone, before the plant can utilise them.

There are four outcomes following an inspection that determine a dairy farms performance against the conditions of their consent.

	Compliance grade
1	FULL COMPLIANCE. Compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
2	LOW RISK NON-COMPLIANCE. Compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (e.g. failure to submit a monitoring report).
5	MODERATE NON-COMPLIANCE. Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.
10	SIGNIFICANT NON-COMPLIANCE. Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.

1.1.1 Discharge consent inspections

The inspections during the 2018/19 year continued to be hampered by the outbreak of M. Bovis. Environment Southland Compliance continued to take a precautionary approach by not leaving the tanker tracks and driving only to the dairy shed. Staff would then get assistance from the farmers using on-farm transportation or conducting the inspections by foot. Prior to entry or departure from all properties Environment Southland adopted a clean on, clean off policy.

Should a vehicle be required to drive onto a farm in the case of an incident, investigation or emergency, that vehicle will not enter another property until it has been water blasted and decontaminated.

During 2018/19, 783 on-site and aerial dairy shed effluent discharge consent inspections were completed. Of these, 634 were graded as full compliance, 139 were graded as low risk or moderate non-compliance, and 10 were graded as significant non-compliance.

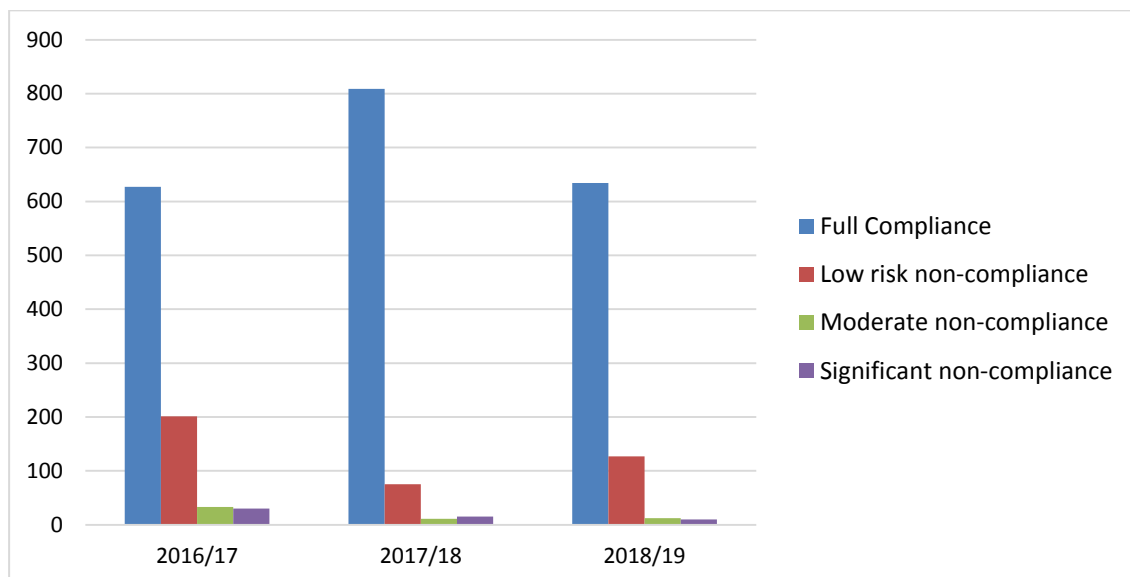


Figure 1: Comparison of discharge consent inspections over three years

If an inspection results in a grade of 10 (Significant non-compliant), a re-inspection is conducted. Some of the re-inspections are not completed due to the season end and are re-inspected early in the new season. Ten re-inspections were completed for the year 2018/19.

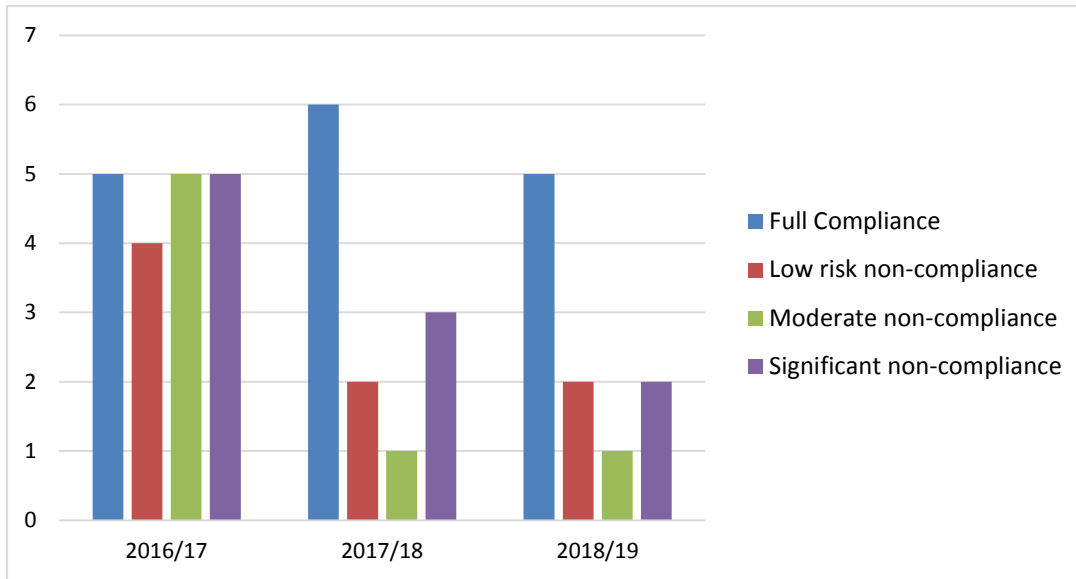


Figure 2: Comparison of discharge consent re-inspections over three years

1.1.2 Wintering pad inspections

Compliance staff undertook inspections of the purpose built sites used to feed and house cows over the winter period commonly known as wintering pads, wintering barns, calving pads, feed pad and loafing pads.

Compliance officers completed 135 inspections in the 2018/19 financial year of the various types of consented wintering pads. Of these, 100 were graded as full compliance, 28 were graded as low risk or moderate non-compliance and seven were graded as significant non-compliance.

1.2 Groundwater quality sampling for dairy

Groundwater is water that is present in soil pore spaces that has made its way down through the soil to underground areas called “aquifers”. Aquifers are subsurface geological formations consisting of sand, gravel or rock which “hold” water. Aquifers in Southland tend to be shallow. In many places the water level is only 1.5 to 5.0 metres below the ground.

Groundwater provides an important source of drinking water for people and livestock in Southland. It is also used for irrigation and dairy shed wash down, and it can be the primary source of water in streams over summer (base flow).

However, what is done on top of the land (land use) can affect the quality of the groundwater sitting below. Nitrate contamination of groundwater is common in Southland due to excess nitrogen in soil from fertiliser and effluent. This is a key issue, as it affects the health of people and livestock that use groundwater, and when nitrate contaminated groundwater enters streams in summer it can cause problem algal and plant growth.

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

Water samples are collected from shallow bores near the effluent disposal field and are then analysed for a number of parameters including nitrate and *E.coli* levels. The results generated from a period of between five to ten years can give a reasonable indication of the effects effluent application is having on groundwater. If deterioration is noted, further investigation will be required to determine what land-based activity may be contributing to the change.

The number of consents requiring groundwater monitoring varies each year as discharge consents are updated. In November 2018, 247 discharge consents required the effects of dairy effluent discharge on groundwater to be monitored. During the 2018/19 reporting period samples were collected in November 2018. Samples were due to be collected in April 2019 but due to the necessary resources not being available the April 2019 sampling was cancelled. Sampling is due to recommence in November 2019.

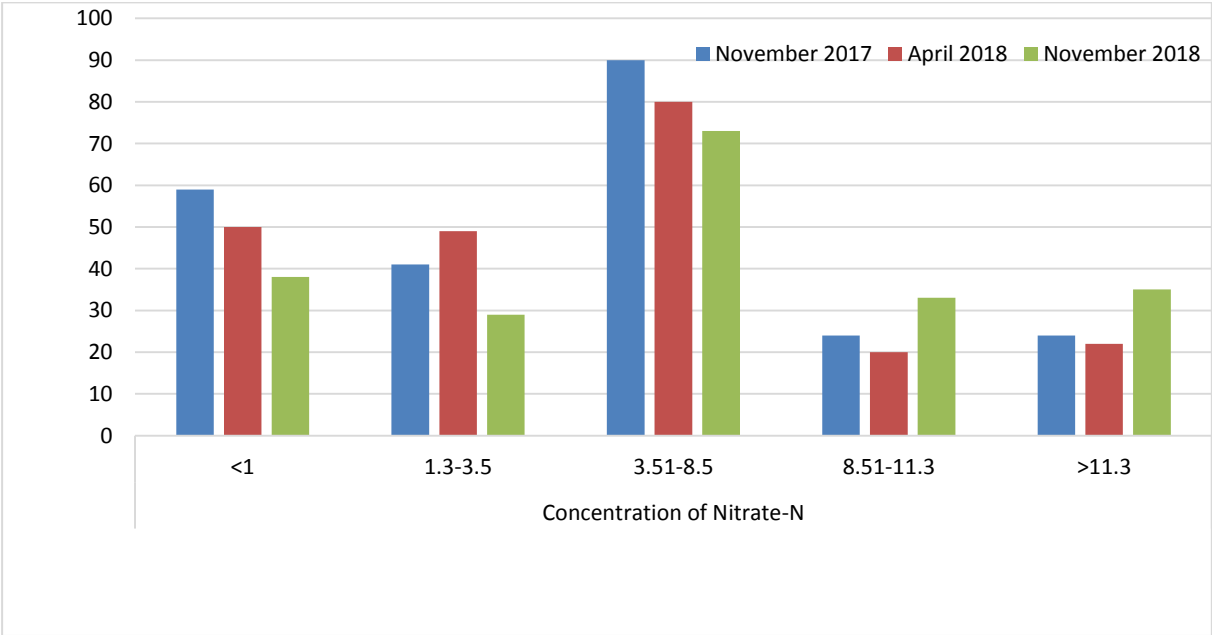


Figure 3: Dairy groundwater monitoring nitrate results for November 2017, April 2017 and November 2018. (Concentrations of Nitrate measured as g/m³).

1.3 Water consents

There were 1,177 active water consents with Environment Southland over the 2018/19 year. 84% of these consent holders were permitted to take water at a rate of less than 5 litres per second; 16% were permitted to take water at a rate of greater than 5 litres per second.

Low rate water take consents

Of the 985 low rate water take consents, 874 were for water needed for dairying and 111 for other purposes.

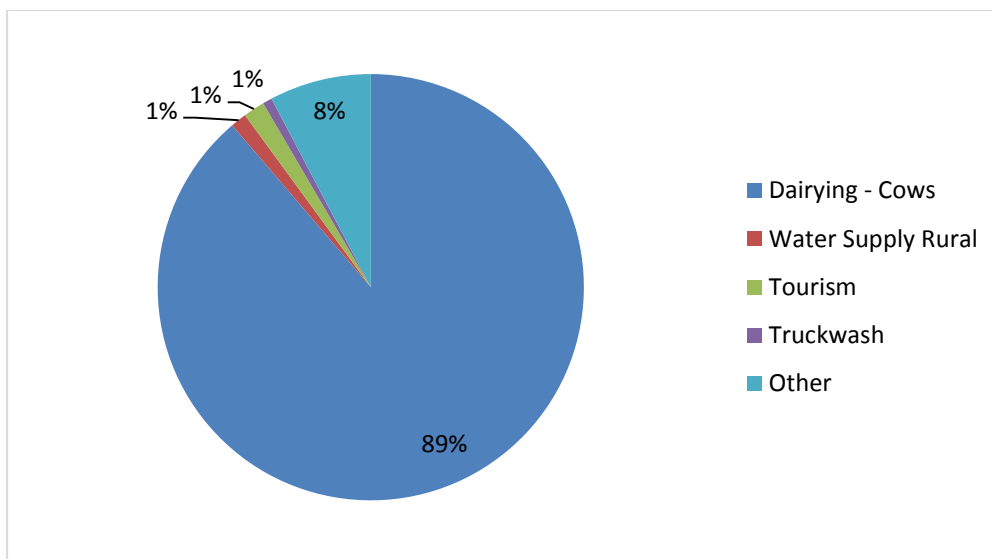


Figure 4: Low rate (less than 5L/s) water use in Southland.

While Southland receives regular rainfall, the demand on the resource is increasing. This year the level of compliance has been poor.

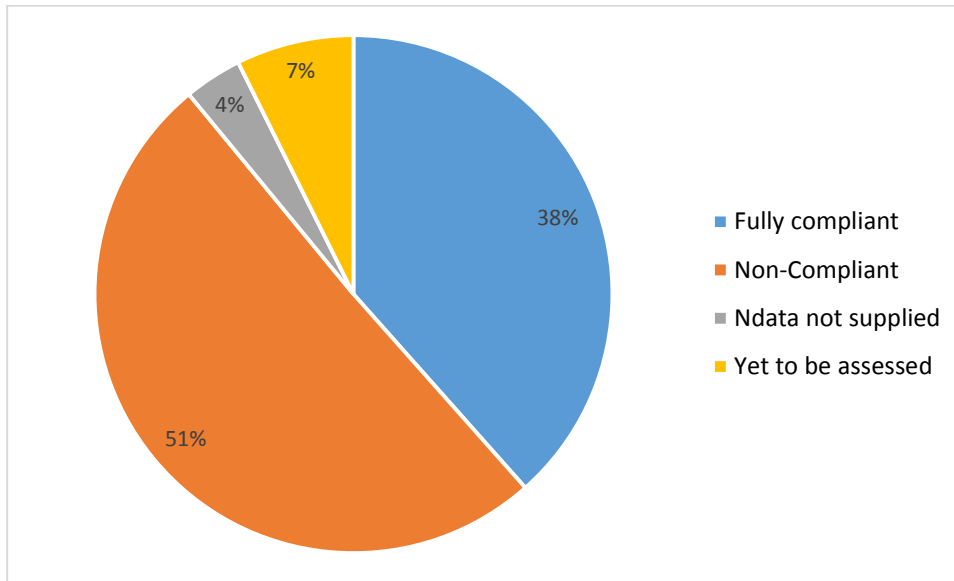


Figure 5: Low rate (less than 5 l/s) compliance 2018/19

For the low rate water take consents there was a low level of compliance. The main form of non-compliance was taking too much water. Typically consent holders only took too much water during the drier summer months, which in turn are the periods when the demand on water is the greatest. A lot of work has been done to educate consent holders in this area, however the greatest issue experienced was the quality of the data received and the fact that data was often missing. Other contributors to the non-compliance included consent holders taking water from bores not listed on their consents. The location of the bore is important to better understand which aquifer the water is being abstracted from.

Irrigation water consents

During the 2018/19 irrigation season there were 192 irrigation consents. Of those, 139 were for abstraction from groundwater, and 53 were for abstraction from surface water.

Irrigation in Southland is predominantly to encourage pasture growth, with 91 of the irrigation consents identified as being for pasture irrigation, 20 for crop irrigation and one for horticulture.

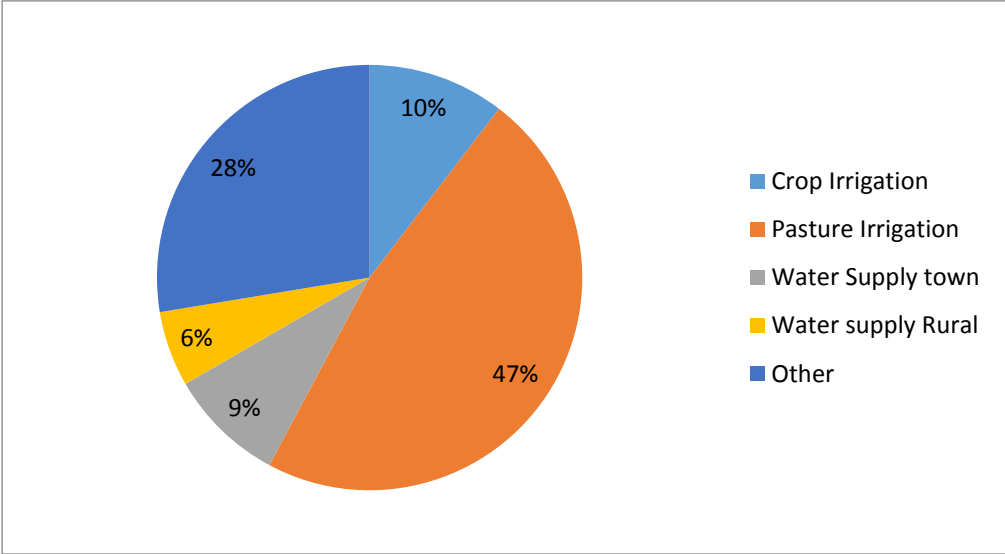


Figure 6: High rate (greater than 5 l/s) water use in Southland

2.0 Industrial audits – major industries

2.1 Meat industry

2.1.1 Alliance Group Limited

Alliance Group Limited operates two meat processing plants in Southland, at Lorneville and Mataura. The Makarewa plant operated by Alliance Group ceased operations in late 2018.

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 Group also holds resource consents for discharges to air, as well as land use and water abstraction.

Compliance was assessed against the current resource consents.



Figure 7: Upstream sampling site, Alliance Group Mataura Plant

Lorneville

Consents
<p>Alliance Group Limited holds 14 resource consents for the Lorneville plant. The primary consents are as follows:</p> <ul style="list-style-type: none"> • discharge of treated wastewater to the Makarewa River; • discharge of treated wastewater to land; • discharge of wastewater and stock yard solids to land; • discharge of contaminants to air; • discharge of stormwater into an open drain; • take surface water from the Makarewa and Oreti Rivers.

Complaints and self-reported Incidents	2016/17	2017/18	2018/19
Five complaints were received alleging odours from the Lorneville plant during 2018/19. These were not confirmed by Environment Southland staff.			

Consent performance summary	2016/17	2017/18	2018/19
<p>Several instances of ambient air quality PM₁₀ exceedances occurred during 2018/19. Subsequent stack emissions testing indicated that it was unlikely to be related to emissions from the Lorneville boiler. In the last 12 months the accuracy of ambient air quality measurements has been questioned with the current instrument potentially over-estimating the level of PM₁₀ in the ambient air environment, and consequently there is some doubt about the exceedances reported. Investigations into the accuracy of the current instrument are underway by Alliance Group staff.</p> <p>Two exceedances of wastewater discharge quality limits occurred in 2018/19. The <i>E.coli</i> limit was exceeded in July 2018 and the TSS limit was exceeded in September 2018.</p> <p>All other consents were substantially compliant for the 2018/19 period.</p>			

Makarewa

Consents
<p>Alliance Group Limited holds seven resource consents for the Makarewa plant, as follows:</p> <ul style="list-style-type: none"> • discharge wastewater to the Makarewa River; • discharge treated wastewater to land; • discharge stormwater to the Makarewa River; • take groundwater for meat processing; • take surface water for meat processing; • discharge contaminants to land from a landfill; • to plant trees on the bank of the Makarewa River.

Complaints and self-reported Incidents	2016/17	2017/18	2018/19
There were no complaints or self-reported incidents relating to the Makarewa plant for the 2018/19 period.			

Consent performance summary	2016/17	2017/18	2018/19
<p>Alliance Group stopped all processing at its Makarewa plant in 2018. Its permit to discharge stormwater to the Makarewa River and permits to take surface and groundwater have been transferred to Makarewa Coolstores Limited.</p> <p>Most of the monitoring requirements at the Makarewa plant were transferred to Makarewa Coolstores Limited with the consents in April 2019.</p> <p>All sample results were within the consented limits for the period.</p> <p>All other monitoring conditions were met for the 2018/19 period.</p>			

Mataura

Consents
<p>Alliance Group Limited holds eight resource consents for the Mataura plant, as follows:</p> <ul style="list-style-type: none"> • discharge of contaminants, including odour, to air; • discharge of treated meat works wastewater to the Mataura River; • discharge of stormwater to the Mataura River; • discharge of cooling water to the Mataura River; • discharge of wastewater treatment solids to land; • take water from a water race fed by the Mataura River for meat processing; • dam, divert, use and discharge water for hydro-electric power-generation; • take surface water for pelt and hide processing.

Complaints and self-reported Incidents	2016/17	2017/18	2018/19
<p>A number of odour complaints were made relating to the Mataura plant in 2018/19, none of which were confirmed by Environment Southland staff. Following plant improvements, odour complaints were much reduced on the 2017/18 year.</p>			

Air discharge consent performance	2017/18	2018/19
<p>Alliance Mataura was compliant with the air discharge consent for 2018/19.</p>		

Consent performance summary	2016/17	2017/18	2018/19
<p>A formal warning was issued relating to a prolonged discharge of wastewater in exceedance of the consented limits. While the discharge limits were exceeded, no receiving water limits were exceeded. Alliance Group Limited was co-operative and proactive in investigating the cause of the discharge quality exceedance.</p> <p>All other consents recorded a high level of compliance.</p>			

2.1.2 Blue Sky Meats (NZ) Limited

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

What do we look at?

Blue Sky Meats holds four resource consents. The consents issued for its operation permit the taking of groundwater, and the discharge of contaminants to air and to the land. Compliance is assessed against these resource consents.

Consents
<p>Blue Sky Meats (NZ) Limited holds four resource consents for the purpose of meat processing at its Morton Mains plant. They are:</p> <ul style="list-style-type: none"> • to take groundwater for a meat processing operation; • 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 from a rendering and blood drying plant, boiler plant and wastewater treatment and irrigation.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
Two complaints were received in relation to the Blue Sky Meats operation. One complaint was for odour believed to be originating from the site, and the other was for smoke. Both complaints were investigated by Environment Southland staff with neither of them being confirmed.			

Consent performance summary	2016/17	2017/18	2018/19
<p>Environment Southland conducts routine consent monitoring every two months. During these inspections no significant issues were identified.</p> <p>Blue Sky Meats was technically non-compliant with the provision of management plans and monitoring data in accordance with its reporting requirements.</p>			

2.1.3 South Pacific Meats Limited

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 holds four resource consents. The consents permit the discharges to land, to air, and to water. Compliance is assessed against these resource consents.

Consents
<p>South Pacific Meats Limited holds four resource consents for the purpose of meat processing at its Awarua plant. They are:</p> <ul style="list-style-type: none"> • to discharge stormwater containing contaminants into the New River Estuary; • to discharge contaminants to air from a rendering plant, wastewater treatment plant, boiler and associated processes; • to discharge meat works effluent sludge to land.

Complaints and self-reported Incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to the South Pacific Meats site during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
<p>There were two minor non-compliances reported. These were in relation to the discharge of meat works effluent sludge to land. There were no adverse effects as a result of the non-compliance.</p> <p>South Pacific Meats was technically non-compliant for the provision of monitoring data.</p>			

2.1.4 Prime Range Meats Limited

Prime Range Meats Limited operates a meat processing plant on the banks of the Waikiwi Stream in Invercargill. In addition to this, Prime Range Meats operates a small meat processing operation and wholesale outlet on the outskirts of Invercargill.

What do we look at?

Prime Range Meats holds two resource consents. The consents permit the discharge to air from the main plant, and the discharge of wastewater to land from its small processing operation. Compliance is assessed against these consents.

Consents
<p>Prime Range Meats Limited holds two resource consents for the purpose of meat processing. They are:</p> <ul style="list-style-type: none"> to discharge contaminants, including odour, to air from a meat works and rendering plant, and from a wastewater treatment system; to discharge treated wastewater to land from a meat processing operation.

Complaints and self-reported Incidents	2016/17	2017/18	2018/19
A complaint was received regarding an odour believed to have originated from the Prime Range Meats Plant. This was not confirmed by Environment Southland staff.			

Consent performance summary	2016/17	2017/18	2018/19
Prime Range Meats was technically non-compliant with the provision of monitoring data in accordance with its reporting requirements.			

2.2 Dairy industry

2.2.1 Fonterra Co-operative Group Limited

Fonterra Co-operative Group Ltd operates a milk processing facility at Edendale.



Figure 8: Fonterra, Edendale

What do we look at?

Fonterra holds 11 resource consents. The consents permit the taking of groundwater, the discharge to air, and the discharge of wastewater to land and to water. Compliance is assessed against these resource consents.

Consents

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

- to take groundwater for a dairy operation, and for the purpose of milk processing;
- to discharge process wastewater to land, and associated odours;
- to discharge treated wastewater, process water and stormwater to water;
- to discharge contaminants and odour to air from the manufacturing of dairy products, boiler operation, and wastewater treatment system;
- to discharge waste sludge and liquids to land;
- to discharge whey by-product to land.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
<p>Five complaints were received regarding odour believed to be originating from Fonterra's activities and site operations. All complaints were investigated by Environment Southland staff, with two of the complaints being confirmed. Both incidents related to odour, with one coming from the site wastewater treatment plant, and the other was confirmed to be coming from whey that was being discharged to land. These incidents were in breach of consent conditions and they received an infringement notice and a formal warning respectively. Investigations into these complaints were carried out by Fonterra staff and actions were taken to address the issues.</p>			

Consent performance summary	2016/17	2017/18	2018/19
<p>There were four exceedances of the consented limits for the discharge of wastewater and process water to the Maitava River. Although these were found by Fonterra to have had little to no effect on the river, the nature of the breaches was significant and appropriate enforcement action was taken. Investigations into these incidents were carried out by Fonterra staff and actions were taken to address the issues.</p> <p>The two confirmed odour complaints were both in breach of their respective consent conditions and resulted in non-compliance.</p> <p>A non-compliance grading was issued in relation to Fonterra's consent to irrigate wastewater to land. This was due to activities not being undertaken by the required date.</p> <p>One breach was reported in relation to the operation of the boilers. This resulted in a technical non-compliance.</p>			

2.2.2 Open Country Dairy (NZ) Limited

Open Country Dairy (NZ) Limited operates a milk processing plant at Awarua, to the south of Invercargill.

What do we look at?

Open Country Dairy (NZ) Limited has two resource consents. The consents permit the discharge of condensate and stormwater to a farm drain and pond, and the discharge to air from the boiler and milk powder plant. Compliance is assessed against these resource consents.

Consents
<p>Open Country Dairy holds two resource consents related to its dairy processing plant. They are:</p> <ul style="list-style-type: none"> • to discharge condensate and stormwater to a farm drain; • to discharge contaminants to the air from a milk processing plant and boiler.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to the Open Country Dairy site during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
Open Country Dairy was fully compliant with all of its monitoring and reporting requirements for the 2018/19 reporting period.			

2.2.3 Maitara Valley Milk Limited

Maitara Valley Milk Limited operates a milk processing plant at McNab, to the north east of Gore.

What do we look at?

Maitara Valley Milk Limited has five resource consents. The consents permit the taking of groundwater, the discharge to air, and the discharge of wastewater and sludge to land and stormwater to water. Compliance is assessed against these resource consents.

Consents
<p>Maitara Valley Milk Limited holds five resource consents related to its dairy processing plant. They are:</p> <ul style="list-style-type: none"> • to discharge sludge to land; • to discharge odour and contaminants to air from a milk processing plant and associated facilities; • to discharge stormwater to water; • to discharge treated wastewater to land; • to take and use groundwater.

Complaints and self-reported incidents	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to Maitara Valley Milk Ltd during the 2018/19 reporting period.	

Consent performance summary	2018/19
<p>One exceedance of the gross energy input occurred during the boiler commissioning when the boiler was operating at a higher level than its normal operational parameters.</p> <p>The daily discharge flow limit was exceeded on two occasions.</p> <p>The water take exceeded the daily abstraction limit on one occasion.</p> <p>No environmental impacts occurred as a result of any of the exceedances.</p> <p>There was full compliance with the remaining consent conditions and the sludge and stormwater consents.</p>	

2.3 Energy industry

2.3.1 Pioneer Energy Limited

The hydro-electric power station at Monowai, owned by Pioneer Energy Limited, is a community owned electricity provider and wholesaler. The company operates 13 power stations in Central Otago and Southland.

What do we look at?

Pioneer Energy Limited has 18 consents to operate their power generation scheme. The consents are for the ongoing operation and maintenance of the Monowai Power Station. The consents permit the take, use, and discharge of water for power generation, while ensuring that minimum flows are maintained in all of the existing waterways. Compliance is assessed against these consents.



Figure 9: Monowai Power Station

Consents

Pioneer Energy holds 18 resource consents related to the operation of its Monowai Power Scheme. They 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 waters of the Monowai River.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to Pioneer Energy during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
Pioneer Energy was technically non-compliant in relation to its fish passage monitoring and reporting requirements.			
Compliance was achieved with all other consented monitoring and reporting requirements for the 2018/19 reporting period.			

2.3.2 Meridian Energy Limited

Meridian Energy Limited operates the largest hydro-electric 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 in Doubtful Sound. Compliance performance was assessed against the current resource consents.

What do we look at?

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



Figure 10: Turbine Hall - Manapouri Power Station

Consents

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

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to Meridian Energy during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
<p>There was a good level of compliance demonstrated during the 2018 reporting period.</p> <p>There was one minor non-compliance reported. This related to the management of flows through the Te Anau lake control structure (TLC) in response to managing flows to protect wildlife. There were no adverse effects associated with this event.</p>			

2.4 Manufacturing industry

2.4.1 New Zealand Aluminium Smelters Limited

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 holds nine resource consents, six of which have monitoring and inspection requirements. Compliance during the 2018/19 period was assessed against these resource consent conditions.



Figure 11: Aerial view of NZAS site. (Image by NZAS)

Consents
<p>NZAS holds six discharge and water take consents that require inspecting, as follows:</p> <ul style="list-style-type: none">• discharge contaminants to land where they may enter coastal water;• discharge treated sewage to land;• discharge treated effluent to the Coastal Marine Area (CMA);• discharge of water including contaminants to the CMA;• discharge of contaminants to air from the aluminium smelter and related activities;• take and use groundwater for industrial supply.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
<p>Three complaints were received in the 2018/19 period. One incident was for a fire in the landfill which was responded to by Fire and Emergency New Zealand. Two incidents were for black smoke from the smelter. NZAS investigated the reported incident and traced it to one of the furnaces. Immediately on discovery the furnace was shut down.</p>			

Consent performance summary	2016/17	2017/18	2018/19
<p>NZAS remained compliant with consent limits during the 2018/19 period. Audit sampling of the effluent discharge, stormwater discharge and ambient air quality sampling was also completed by Environment Southland with no issues.</p> <p>NZAS continually provided notifications to Environment Southland regarding routine maintenance that may have resulted in concerns from members of the public during the 2018/19 period.</p>			

2.4.2 Daiken Southland Limited

Daiken Southland Limited operates a mixed density fibreboard (MDF) manufacturing plant, located south of the Matura.

What do we look at?

Daiken Southland is authorised to discharge stormwater and treated wastewater to water and land. Consents are also held for the discharge of contaminants to air and ash to land at this site. Compliance during the 2018/19 period was assessed against these resource consent conditions.



Figure 12: Aerial view of Daiken Southland site (Image by Daiken Southland Ltd)

Consents

Daiken Southland Limited holds 11 resource consents. Of these, six are discharge consents, as follows:

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

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-notifications were received during the 2018/19 period.			

Consent performance summary	2016/17	2017/18	2018/19
Daiken Southland was compliant with all monitored consent conditions for the 2018/19 period. All wastewater was discharged to land and all wastewater discharge limits were met, all limits on stormwater were met, all discharge to air limits were met and limits on discharge of ash to land were met.			

2.5 Fertiliser industry

2.5.1 Ballance Agri-Nutrients Limited

Ballance Agri-Nutrients Limited operates a fertiliser manufacturing facility at Awarua, to the south of Invercargill.

What do we look at?

Ballance Agri-Nutrients Limited holds three resource consents. The consents permit the taking of groundwater, the discharge of stormwater, and the discharge to air from its fertiliser manufacturing plant. Compliance is assessed against these resource consents.

Consents
Ballance Agri-Nutrients Limited holds three resource consents for its fertiliser manufacturing plant at Awarua. They are: <ul style="list-style-type: none">• to discharge stormwater from a fertiliser manufacturing facility to water;• to take groundwater for fertiliser processing;• to discharge contaminants to air from the manufacture of fertiliser and associated activities.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
A complaint was received regarding a truck travelling to the Ballance Agri-Nutrients plant accidentally discharging fertiliser onto the road. This incident was not related to the Ballance consents.			

Consent performance summary	2016/17	2017/18	2018/19
Ballance Agri-Nutrients was fully compliant with all of its consent conditions for the 2018/19 reporting period.			

2.5.2 Ravensdown Fertiliser Co-operative Limited

Ravensdown Fertiliser Co-operative Limited operates two sites in Southland; a limestone quarry at Dipton, and a wholesale outlet at Balfour.

What do we look at?

Ravensdown holds three resource consents which cover the operations at their two sites. The consents permit the discharge to air, and the discharge of stormwater from its sites. Compliance is assessed against these resource consents.

Consents
<p>Ravensdown Fertiliser Co-operative Limited holds two resource consents for the purpose of operating a limestone quarry at its Dipton site. They are:</p> <ul style="list-style-type: none"> • to discharge treated stormwater to water; • to discharge contaminants to air from limestone crushing, drying and handling. <p>The company holds one resource consent for its Balfour site, which is:</p> <ul style="list-style-type: none"> • to discharge stormwater from a limestone quarry.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
The Ravensdown sites at Dipton and Balfour were compliant with all of its consent conditions for the 2018/19 reporting period.			

2.6 Mining industry

2.6.1 Greenbriar Limited

What do we look at?

The consents held for the Greenbriar Limited mines authorise the discharge of treated mine water and stormwater to water. Consents are also held for the discharge of contaminants to air and ash to land and to take groundwater at these mine sites. Compliance was assessed against the current resource consents.

Ohai Mine site

Consents
<p>Twelve resource consents are held relating to mining activities at the Ohai mine site. The primary consents include:</p> <ul style="list-style-type: none"> • discharge of contaminants to air from mining, screening and stockpiling of coal; • discharge of treated wastewater to water; • discharge of surface and groundwater; • discharge of solid waste to land; • take surface water for a mining operation.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to the Ohai mine during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
Quality limits for turbidity and clarity of treated wastewater were exceeded on one occasion in July 2018. All sampling and reporting was completed on time as per consent conditions. All other limits were met.			

Goodwin and New Vale Mine sites

Consents
<p>Seven consents are held relating to mining activities at the Goodwin and New Vale mine sites, as follows:</p> <ul style="list-style-type: none"> • discharge of treated water to the Hedgehope Stream (Goodwin); • discharge of treated water to the Hedgehope Stream (New Vale); • take groundwater and surface water for mining (Goodwin); • take groundwater and surface water for mining (New Vale); • discharge of contaminants to air; • discharge of ash to land; • discharge of pelt processing solids to land.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to the Goodwin and New Vale mine sites during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
<p>At the Goodwin Mine there was one exceedance of its discharge consent quality limits for total suspended solids.</p> <p>At the New Vale Mine there was exceedance of total suspended solids limits on five occasions between December 2018 and June 2019.</p> <p>All other consents were compliant.</p>			



Figure 13: Mining operations, New Vale Mine, Waimumu

2.6.2 Bathurst Resources Limited

Bathurst Resources Limited operates an opencast coal mine in Nightcaps, Western Southland.

What do we look at?

The Bathurst Resources Limited's consents allow the discharge of treated site water to the Wairio Stream. The mine also holds consents for water abstraction, discharge of contaminants to air, and discharge of ash to land. Compliance is assessed against these resource consents.



Figure 14: Active mine pit, Bathurst Resources, Nightcaps

Consents
<p>Bathurst Resources Limited holds 13 consents related to its mining operation. They include:</p> <ul style="list-style-type: none">• take groundwater and surface water for dewatering;• discharge of stormwater to water;• discharge of treated site water to water;• discharge of ash from industrial operations, mixed with overburden, to land;• discharge of contaminants to air;• disturb the bed and divert the flow of a tributary.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to Bathurst Resources operations during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
Two minor non-compliances were reported. These were in relation to exceedances of the groundwater abstraction limit. There were no adverse effects as a result of the non-compliance. Compliance was achieved with all other consented monitoring and reporting requirements for the 2018/19 reporting period.			

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 2018/19 was assessed against their current resource consents.

Note: The consents for the Otautau sawmill are current, but the sawmill was closed in April 2018.

What do we look at?

Environment Southland inspects each site and audits the water sampling results to assess for sediment run-off and the concentrations of timber treatment metals, which can be toxic to aquatic life in high concentrations.

2.7.1 Craigpine Timber Limited

Craigpine Timber Limited operates a sawmilling and timber processing plant at Winton.

What do we look at?

Craigpine Timber holds two resource consents. These consents permit the discharge to water, and the discharge of contaminants to air from its processing activities. Compliance is assessed against these resource consents.

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

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
The site was fully compliant with its consent conditions during the 2018/19 reporting period.			

2.7.2 Findlater Sawmilling

Findlater Sawmilling Limited operates a sawmilling plant at Tussock Creek.

What do we look at?

Findlater Sawmilling Limited holds two resource consents. The consents permit the taking of groundwater, and the discharge of stormwater from its sawmilling and timber processing operation. Compliance is assessed against these resource consents.

Consents
Findlater Sawmilling holds two consents related to its sawmilling operation. They are: <ul style="list-style-type: none">• to take groundwater for a sawmilling operation;• to discharge stormwater to a wetland from a sawmilling operation.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
Findlater Sawmilling was fully compliant with all of its consent conditions for the 2018/19 reporting period.			

2.7.3 Lindsay & Dixon Limited

Lindsay & Dixon Limited operates a sawmilling plant at Tuatapere.

What do we look at?

Lindsay & Dixon Limited holds one consent. The consent permits the discharge of stormwater to water from its sawmilling and timber processing site. Compliance is assessed against this resource consent.

Consents
Lindsay & Dixon Limited holds one discharge consent related to its sawmilling operation. This is: <ul style="list-style-type: none">• to discharge stormwater, boiler blow-down water and sludge to land and to water.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
Monitoring results were fully compliant with the conditions of the consent.			

3.0 Sewage treatment and stormwater systems

3.1 Invercargill City Council

3.1.1 Sewage treatment systems

Invercargill City Council (ICC) operates wastewater treatment plants at three locations: Bluff, Clifton (south Invercargill) and Omaui.

What do we look at?

ICC holds resource consents for discharging treated wastewater, discharging biosolids (dried sludge from the wastewater treatment process), waste, leachate, and filter backwash to land. Compliance is assessed against these resource consents.

Consents
ICC holds seven resource consents relating to its sewage treatment plants. These include consents to: <ul style="list-style-type: none">• discharge treated wastewater to an estuary;• discharge treated wastewater to coastal water;• discharge contaminants to land;• discharge biosolids to land;• discharge contaminants to air.

Complaints and self-reported incidents

One complaint was received regarding an odour believed to be originating from the Clifton wastewater treatment plant. Environment Southland staff investigated and found that there was no odour present in the area.

One incident was reported by ICC. This was for a breach of an effluent pipeline which resulted in partially treated wastewater entering a waterway. This incident is still under investigation.

Wastewater

Bluff wastewater	2016/17	2017/18	2018/19
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.			

Invercargill wastewater	2016/17	2017/18	2018/19
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.			

Omaui wastewater	2016/17	2017/18	2018/19
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.			

Biosolids to land, Station Road	2016/17	2017/18	2018/19
There was no discharge of biosolids to the disposal area during the reporting period. Full compliance was achieved with all of the monitoring and reporting requirements of the consents.			

Biosolids to land, Christies Track	2016/17	2017/18	2018/19
There was no discharge of biosolids to the disposal area during the reporting period. Full compliance was achieved with all of the monitoring and reporting requirements of the consents.			

Water abstraction

ICC operates the water treatment plant at Branxholme, where water from the Oreti River is treated for supply to Invercargill and Bluff. ICC holds two resource consents relating to the operation of the plant. The consents permit the taking of water, and the discharge of filter backwash water to land and water.

Complaints and self-reported incidents

There were no complaints or self-reported incidents for the 2018/19 reporting period.

Consent performance summary	2016/17	2017/18	2018/19
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.			

3.1.2 Stormwater systems

What do we look at?

ICC holds a resource consent to discharge to water from its reticulated stormwater network. The consent permits the discharge of water, stormwater, and contaminants to water. Compliance is assessed against this resource consent.

Consents
<p>ICC holds one resource consent relating to stormwater discharges from its reticulated stormwater network. This is to:</p> <ul style="list-style-type: none"> • discharge stormwater, water, and contaminants to water.

Complaints and self-reported incidents

In total 32 incidents or complaints were reported during the 2018/19 period. Of these 32 events, 13 were caused by network blockages in ICC’s foul sewer network.

The remaining 19 were caused due to a number of miscellaneous reasons. These included:

- contamination resulting from oil, diesel, and petrol spills;
- cleaning of painting equipment in the roadside kerb;
- discharges from commercial and industrial premises;
- discolouration in the waterway from a milky looking substance;
- contamination resulting from residential drainage and plumbing issues;
- sediment run-off from work being undertaken along the roadside.

On all occasions staff from ICC investigated and took appropriate action to mitigate the issues associated with the discharges.

Complaints and self-reported incidents	2017/18	2018/19
13 incidents occurred as a result of blockages in ICC’s foul sewer network. These were all investigated by Environment Southland staff with five of these referred for enforcement action.		

Consent performance summary	2017/18	2018/19
ICC was in breach of the discharge conditions of its consent due to the confirmed discharge of sewage to the stormwater network.		

3.2 Southland District Council

3.2.1 Sewage treatment systems

Southland District Council (SDC) holds resource consents for the purpose of treating and discharging sewage at 21 locations within the Southland region. The compliance performance during 2018/19 was assessed against current resource consents.

What do we look at?

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

The quantity of water discharged is referred to as “discharge flows”. Discharge flows are the amount of sewage and wastewater either entering or leaving the sewage treatment system. All exceedances of discharge flows typically correspond to periods of high rainfall. This indicates that there is stormwater entering the sewage systems. Therefore although the discharge flows have increased the discharge is likely to be more dilute than normal due to mixing with rainwater.

Consents
SDC holds 24 discharge consents relating to sewage treatment, including consents to: <ul style="list-style-type: none">• discharge processed wastewater to land;• discharge processed wastewater to water;• discharge contaminates to air from wastewater treatment.

Complaints and self-reported incidents

Only one incident was reported to Environment Southland with respect to the sewage treatment systems. This related to an electrical fault with a pump discharging sewage onto the gravel track between two oxidation ponds. The area was cleaned and the electrical fault fixed.

Consent performance summary

Balfour	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.			

Browns	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.			

Curio Bay	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.			
Full compliance was achieved with the discharge flows and reporting requirements.			

Edendale/Wyndham	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.			
The annual average daily discharge flow exceeded the consent limit, and the maximum daily discharge flow limit was only exceeded on six occasions.			

Gorge Road	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.			

Lumsden	2016/17	2017/18	2018/19
Full compliance was achieved with respect to effluent quality.			
Full compliance was also achieved with consented dry weather flow limits and reporting requirements.			

Manapouri	2016/17	2017/18	2018/19
Compliance was achieved with respect to consented effluent quality and receiving water limits. Full compliance was achieved with the daily discharge flows and reporting requirements.			

Monowai	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the impact on the receiving environment.			

Nightcaps	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment. Full compliance was achieved with the discharge flows and reporting requirements.			

Ohai	2016/17	2017/18	2018/19
Full compliance was achieved with respect to all discharge and receiving water consent limits.			

Otautau	2016/17	2017/18	2018/19
Full compliance was achieved with respect to consented effluent quality limits, discharge flows and reporting requirements.			

Riversdale	2016/17	2017/18	2018/19
Full compliance was achieved with respect to all discharge flows, receiving water consent limits and reporting requirements.			

Riverton Rocks	2016/17	2017/18	2018/19
Compliance was achieved with respect to consented effluent quality, discharge flows limits and reporting requirements.			

Riverton township	2016/17	2017/18	2018/19
Full compliance was achieved with respect to consented effluent quality, discharge flows limits and reporting requirements.			

Stewart Island	2016/17	2017/18	2018/19
The DIN limit was exceeded on two occasions. Compliance was achieved with respect to the remaining consented limits and monitoring requirements.			

Te Anau – discharge to land & water	2016/17	2017/18	2018/19
Full compliance was achieved with respect to the “discharge to water” consented limits and monitoring requirements. However, the consented average monthly discharge flow limit was breached on six occasions.			

Te Anau – discharge to air	2016/17	2017/18	2018/19
No complaints regarding odour were received during the 2018/19 period.			

Tokonui	2016/17	2017/18	2018/19
Compliance was achieved with respect to consented effluent quality limits and reporting requirements. However, the maximum daily wastewater flow limit was exceeded on 14 occasions.			

Tuatapere	2016/17	2017/18	2018/19
Full compliance was achieved with respect to consented effluent quality, discharge flows limits and reporting requirements.			

Winton	2016/17	2017/18	2018/19
Full compliance was achieved with respect to consented effluent quality and discharge flow limits. One set of groundwater samples was not collected during the required period.			

Water abstraction

SDC holds 24 resource consents to abstract groundwater and surface water for community and rural water supply. This includes emergency takes to supplement urban supply.

Complaints and self-reported incidents

There were no complaints or self-reported incidents relating to the SDC water take consents for the 2018/19 period.

Consent performance summary

SDC has 23 consented water takes to take water for the townships and rural communities in Southland:

- 20 water takes were fully compliant with the abstraction limit;
- three consented takes did over abstract water for their townships or respective rural communities:
 - Ohai, Nightcaps and Wairio exceeded their consented limit on two occasions;
 - Eastern Bush/Otahu Flat exceeded their consented limit on 36 occasions;
 - Kakapo exceeded their abstraction limit on 91 occasions.

3.2.2 Stormwater systems

SDC holds resource consents for the purpose of discharging stormwater from 17 townships within the Southland region. The compliance performance during 2018/19 was assessed against current resource consents.

What do we look at?

SDC holds resource consents to discharge to water from the reticulated stormwater network systems at various townships around Southland. Compliance is assessed against these resource consent.

Consents
SDC holds four discharge consents to: <ul style="list-style-type: none">• discharge stormwater and land drainage water to surface water bodies and soakpits.

Complaints and self-reported incidents

Three complaints relating to stormwater were received by Environment Southland during the 2018/19 period. Two complaints related to the discharge of oil by a third party onto the land which entered the stormwater network. The incidents were investigated and the oil cleaned up. The third complaint related to the wrong dye being used for contamination source investigations.

Consent performance summary

Balfour, Browns, Lumsden, Mossburn, Riversdale, Tokonui and Waikaka	2018/19
14 sites across the towns were sampled during dry weather conditions. One site had results that exceeded the consent limits. No environmental effects were confirmed. The source of the contamination is currently unknown but being investigated.	

Dipton, Edendale, Manapouri, Nightcaps, Ohai, Otautau, Tuatapere, Wallacetown	2018/19
22 sites across the towns were sampled during dry weather conditions and six sites were sampled during wet weather conditions. The wet weather samples were fully compliant with the consent limits. However the results at two sites exceeded the dry weather consent limits. No environmental effects were confirmed. The source of the contamination is currently unknown but being investigated.	

Winton	2018/19
<p>Nine sites across Winton were sampled during dry weather conditions. Two sites had results that exceeded the consent limits. No environmental effects were confirmed. The source of the contamination is currently unknown, but being investigated.</p>	

Te Anau	2018/19
<p>Nine sites across Te Anau were sampled during dry weather conditions and eight sites were sampled during wet weather conditions. The wet weather samples fully complied with the consent limits. However, at one site the dry weather results exceeded the consent limits. No environmental effects were confirmed. The source of the contamination is currently unknown, but being investigated.</p>	

3.3 Gore District Council

3.3.1 Sewage treatment systems

The Gore District Council (GDC) holds five resource consents relating to their sewage treatment facilities. The compliance performance during 2018/19 was assessed against the current resource consents.

What do we look at?

As part of the consent requirements for GDC, the quantity of water being discharged and the quality of the wastewater and receiving waters are assessed.

Consents
The five resource consents relating to sewage treatment included: <ul style="list-style-type: none">• discharge of treated wastewater from the Mataura township;• discharge of treated wastewater from the Gore township;• discharge of treated wastewater at Waikaka;• discharge of contaminants to air from the Gore wastewater treatment system;• construct a wastewater reactor clarifier and waste activated sludge tank.

Complaints and self-reported incidents

GDC's annual report indicated that it had received a large number of complaints from the public regarding odour at the Gore oxidation ponds through the 2018/19 summer and that the issue had since been resolved.

Two complaints were made regarding discharge of sewage containing conspicuous algal growth, one at the Mataura wastewater treatment plant and one at the Gore wastewater treatment plant. Both were attended by Environment Southland staff members and investigated. The investigations determined that the discharges did not require enforcement action.

One self-reported incident of a sewage overflow from a pump station in Mataura occurred. The incident is still under investigation.

Consent performance summary

Gore	2016/17	2017/18	2018/19
<p>GDC met the sampling conditions for its wastewater discharge, however the rolling percentile limits for TSS were not met for the entirety of the 2018/19 period. Rolling percentile limits for <i>E.coli</i> in the discharge were also breached on 27 February 2019. Additionally, GDC's response to wastewater quality exceedances did not meet the terms of the consent conditions.</p> <p>Macroinvertebrate and periphyton monitoring was completed as per the consent conditions and did not show adverse effects on the receiving environment at this time.</p>			

Mataura	2016/17	2017/18	2018/19
<p>All water sample results were compliant with the consent for the 2018/19 period.</p> <p>A macroinvertebrate and periphyton survey was not completed as required by the consent.</p>			

Waikaka	2016/17	2017/18	2018/19
<p>All discharge and receiving water monitoring was compliant for the 2018/19 period, but GDC did not meet its reporting requirements.</p>			

Water abstraction

GDC holds 11 resource consents to abstract groundwater and surface water for industrial and community water supply. This includes emergency takes to supplement urban supply.

Complaints and self-reported incidents

There were no complaints or self-reported incidents relating to GDC water take consents for the 2018/19 period.

Consent performance summary

All water abstraction limits were adhered to during the 2018/19 period.

3.3.2 Stormwater systems

Stormwater networks

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

Consents
<p>GDC holds three stormwater resource consents. They are:</p> <ul style="list-style-type: none"> • discharge of stormwater to water for Gore township; • discharge of stormwater to water for Mataura township; • discharge of stormwater to water for Pukerau and Waikaka townships.

Complaints and self-reported incidents

Three complaints were received during the 2018/19 period, relating to discharges from the Gore stormwater network. These discharges occurred in an industrial area of Gore. The source of the contaminants was not confirmed and may have originated from properties outside the stormwater network. It was identified that an unsealed road was contributing to the high sediment loading of the creek during and after high rainfall events.

Consent performance summary

Gore	2018/19
<p>During the 2018/19 period, routine stormwater sampling was completed on four occasions. Several stormwater discharge sites with ongoing high <i>E.coli</i> levels have had <i>E.coli</i> type testing completed to investigate whether these discharges were the result of either foul sewer infiltration or cross-connections. Results from these investigations were not available at the time of writing this report.</p> <p>While this work to improve stormwater quality was undertaken in response to ongoing exceedances, some investigations of <i>E.coli</i> in excess of consented trigger levels did not meet the requirements of the consents.</p>	

Mataura	2018/19
<p>GDC undertook routine monitoring on four occasions in 2018/19 period. This included 12 samples at four discharge locations. 10 of the 12 samples exceeded consented trigger levels for further investigation. Four of these exceedances occurred in the catchment of Culling Terrace, which has been identified as contributing to very high <i>E.coli</i> levels in the stormwater discharge. Culling Terrace will have a significant upgrade to its wastewater sewerage system within the next financial year which is likely to remedy much of the <i>E.coli</i> contamination. The other six <i>E.coli</i> trigger level exceedances were not investigated.</p>	

Pukerau and Waikaka	2018/19
Four rounds of sampling were undertaken in accordance with the consent for the Waikaka and Pukerau stormwater networks. Two exceedances of the consented trigger levels require further investigation, which is underway.	

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 current land use consents to extract gravel from Southland rivers and during the 2018/19 financial year Environment Southland granted 12 new consents/consent renewals for gravel extraction.

In total, all current land use consents for gravel extraction total an extraction volume of 443,000 m³ of gravel.

Environment Southland Catchment staff regularly inspect the land use consents to ensure that the operation of the consent and the volume of gravel taken have been completed in accordance with the consent conditions. Overall compliance in the 2018/19 financial year has been good.



Figure 15: Gravel extraction on the Aparima River

5.0 Landfills

5.1 S J Timpany Contracting – cleanfill and solid waste

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

What do we look at?

S J Timpany Contracting 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.

Consents
<p>S J Timpany Contracting holds two resource consents, as follows:</p> <ul style="list-style-type: none"> • discharge of cleanfill and solid waste to land; • discharge of contaminants to air from the burning of vegetation.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-reported environmental incidents were received by Environment Southland relating to the S J Timpany Contracting cleanfill and limited scope landfill site during the 2018/19 reporting period.			

Consent performance summary	2016/17	2017/18	2018/19
<p>Issues with reporting in 2017/18 have been rectified in 2018/19.</p> <p>No immediate issues were raised during inspections, ground water sampling or surface water sampling undertaken by Environment Southland.</p>			



Figure 16: S J Timpany tip face April 2019

5.2 AB Lime Landfill

AB Lime Limited operates an agricultural fertiliser and lime business, a dairy farm and a Class A landfill business approximately 4 km east of the Winton township. This section focuses predominantly on the landfill.

What do we look at?

AB Lime holds six consents to operate the landfill. Compliance was assessed against current resource consent conditions.

Consents
<p>AB Lime holds six resource consents relating to the landfill, as follows:</p> <ul style="list-style-type: none"> • discharge of solid waste onto or into land; • discharge of contaminants to air from a landfill; • discharge of stormwater to a tributary of the Lochiel Stream; • take 40 cubic metres of groundwater; • take 500 cubic metres of surface water; • dam and divert surface water.

Complaints and self-reported incidents	2016/17	2017/18	2018/19
<p>During the 2018/19 period 30 complaints of odour from the landfill were received. Four odour complaints were confirmed by ES staff.</p> <p>As a result of the confirmed offensive odour events, an abatement notice, formal warning and finally an infringement notice was issued to AB Lime. In the past year AB Lime has actively moved to improve its odour management with engineering and procedural solutions.</p>			

Air discharge consent performance	2017/18	2018/19
<p>Landfill gas collection has increased with a number of additional gas wells drilled. The gas flare burning temperature has consistently been compliant with the consent limit.</p> <p>As mentioned previously breaches of the odour conditions of the consent occurred on several occasions during the 2018/19 period.</p>		

Other consent performance	2016/17	2017/18	2018/19
<p>AB Lime showed a high level of compliance relating to its discharge to land, discharge to water and water take permits. A malfunction of water quality monitoring equipment meant that stormwater quality was not measured at the frequency required by the consent for much of the year. However AB Lime have reacted to fix this fault in a timely manner and have implemented a contingency sampling regime to monitor the discharge effects on the receiving environment until new monitoring equipment can be installed. Groundwater and surface water sample results indicate that the landfill is not having an environmental effect on the receiving waters.</p> <p>A peer review inspection was completed in April 2019 with consulting engineer John Cocks, Environment Southland and AB Lime. The peer review concluded that the landfill was generally being operated in accordance with the consents and good practice.</p>			



Figure 17: View across areas 14 of the active landfill, AB Lime

6.0 Coastal Marine Area

6.1 South Port and New Zealand Aluminium Smelter Limited's coastal plan agreements



Figure 18: Tiwai Peninsula

The two main port facilities in Southland operate out of Bluff.

South Port service and manage Southland's import and export industries including aluminium, timber, fisheries, dairy, meat, wood chips, stock food, cement, alumina, fertiliser and petroleum products. New Zealand Aluminium Smelters (NZAS) service and manage the import and export operations of aluminium and aluminium based product based on the Tiwai Peninsula.

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.

Incidents reported

South Port

Two incidents were reported to Environment Southland which may have been linked to activities at the port. One incident related to the presence of palm kernel floating in Bluff harbour. The presence of palm kernel was not confirmed but the incident was reported to the Stevedore Management to be careful when unloading palm kernel if the wind speed increases.

The second incident related to the discharge of dust to air. This was not confirmed by Environment Southland staff, but following correspondence with the parties involved the level of dust has reduced considerably since the issue was raised.

NZAS Wharf

No incidents were reported from the wharf facility during the 2018/19 reporting period.

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 control the fishing of whitebait.

The Coastal Plan has set a 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. Following up on these illegal stands is expected to take place in 2019/20.

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 are inspected at the end of or after the season to ensure the removal conditions were being met.

7.0 Tourism

7.1 Department of Conservation

The Department of Conservation (DOC) holds 47 current resource consents, however, a number of these consents do not have inspection or monitoring requirements.

What do we look at?

A total of 17 DOC resource consents require routine monitoring or inspections. These consents relate to water takes and wastewater discharges associated with the DOC huts on the Milford, Kepler and Routeburn tracks. Additional huts and facilities are also located at Martins Bay, Anchor Island and West Arm, Lake Manapouri.

Consents
DOC holds resource consents for the following purposes:
<ul style="list-style-type: none"> • Coastal: 10 • Discharge: 17 • Land Use: 6 • Water: 10

Complaints and self-reported incidents	2016/17	2017/18	2018/19
No complaints or self-notified incidents were received.			

Consent performance summary	2016/17	2017/18	2018/19
Clinton Hut - full compliance.			
Mintaro Hut - full compliance.			
Dumpling Hut - full compliance.			
Sandfly Point Hut - monitoring data incomplete.			
Luxmore Hut - water abstraction limits exceeded for several months.			
Iris Burn Hut - full compliance.			
Moturau Hut - client inspections did not meet consent conditions.			
Lake McKenzie Hut - client inspections did not meet consent requirements.			

Consent performance summary	2016/17	2017/18	2018/19
Howden Hut - new consents issued. Full compliance.			
Martins Bay Hut - full compliance.			
Anchor Island - abstraction rates not being recorded or submitted.			
West Arm, Manapouri - monitoring data not submitted.			

Environment Southland inspections

Environment Southland inspects the Routeburn, Milford and Kepler tracks every three years. This includes an inspection of the sewage disposal systems at the huts, water takes for the huts, and several toilets and shelters along the tracks. The most recent inspections were completed in 2017/18 as follows.

Consent Inspections	2017/18
Routeburn Track (December 2017) Full compliance was recorded for all facilities on this track. <i>Note:</i> Only facilities in the Southland region were inspected.	
Milford Track (February 2018) Full compliance was recorded for all facilities on this track. Some recommendations were made to ensure all systems were operating as efficiently as possible.	
Kepler Track (March 2018) Full compliance was recorded for all facilities on this track, with the exception of the Luxmore Hut. Evidence of overland flow, discolouration of vegetation and odour was observed in the Luxmore disposal field.	



Figure 19: Mackinnon Pass Shelter, Milford Track

7.2 Milford Sound Tourism

Milford Sound Tourism (MST) is the primary infrastructure provider in Milford Sound. MST own and operate the harbour, wharves and visitors terminal. They also operate the wastewater treatment facilities at Milford Sound and at Knobs Flat.

What do we look at?

A total of five resource consents require routine monitoring or inspections. These consents relate to the wastewater discharges, hydro-electric generation, maintenance dredging and structures. Compliance during the 2018/19 period was assessed against these resource consent conditions.

Consents
<p>MST holds 13 resource consents. The primary consents include:</p> <ul style="list-style-type: none"> • discharge treated wastewater to groundwater at Knobs Flat; • discharge treated wastewater to water at Deepwater Basin; • discharge water to water from a hydro-electric power scheme; • carry out maintenance dredging in Freshwater Basin.

Complaints and self-reported incidents	2017/18	2018/19
No complaints or self-notifications were received during the 2018/19 period.		

Consent performance summary	2017/18	2018/19
<p>Compliance issues at Knobs Flat wastewater treatment site have continued from 2017/18 through the 2018/19 period. MST is investigating significant upgrades to the treatment and disposal system.</p> <p>Sample results showed full compliance at the Milford wastewater treatment plant. Some results and discharge volumes were supplied late.</p> <p>Site inspections were undertaken by Environment Southland staff and no issues were raised.</p>		



Figure 20: Milford Sound wastewater treatment plant

7.3 Coastal surface water activities in Fiordland

Coastal permits are required for undertaking commercial surface water activities in Fiordland. Environment Southland is responsible for ensuring compliance with coastal permits issued under the Regional Coastal Plan for Southland and Resource Management Act 1991.

Compliance of commercial surface water activities is assessed by monitoring surface water activity logs. Instances of consent holders operating outside consented limits occurred infrequently. At the time of writing only 75% of logs for the 2018/19 period had been received. Of the logs received many of these were provided outside of the consented timeframes or only after request. No on-water checking of commercial surface water compliance was completed in 2018/19, however, Environment Southland conducted one trip into Fiordland for biosecurity checks.

Part B

Incident Response

8.0 Incidents

Compliance officers respond to incidents either found by officers or reports of pollution from members of the public via our 24-hour pollution hotline (0800 76 88 45).

This year the number of incidents reported to the Compliance Division was similar to the number reported in the 2017/18 year. In the 2018/19 year there were 963 incidents reported in total (813 public, 150 staff).

The costs involved in attending and investigating an incident are charged where an offending party can be identified. Unfortunately, many of the incidents staff attend do not identify the offending party. In these cases, where mitigation action has to be taken to cease an environmental effect such as the removal of litter, rubbish and dead stock from waterways, the cost of such action is met by the ratepayer.

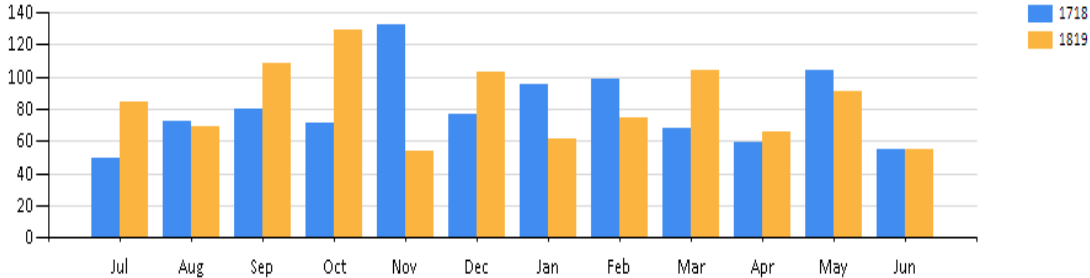


Figure 21: Number of reported incidents per month compared with last year’s incidents

Reported incidents per month compared over three years

The variety of incidents reported to the Compliance Division can be extremely wide and covers all manner of environmental incidents. A lot of incidents are reasonably rudimentary and can be completed in a short timeframe. There are some incidents that can start major investigations that have taken months to arrive at a resolution.

Priority of incidents

Not all incidents are created equal. The initial incident is assigned a priority from High (1 to 24 hours), Medium (2 days to 4 weeks) Low (1 Month to 6 months). The priority is determined high to low, initially based on the impacts to the environment and/or the community. Priorities can also be determined taking into account several factors including the need for rapid evidence collection, the receiving environment and time of day.

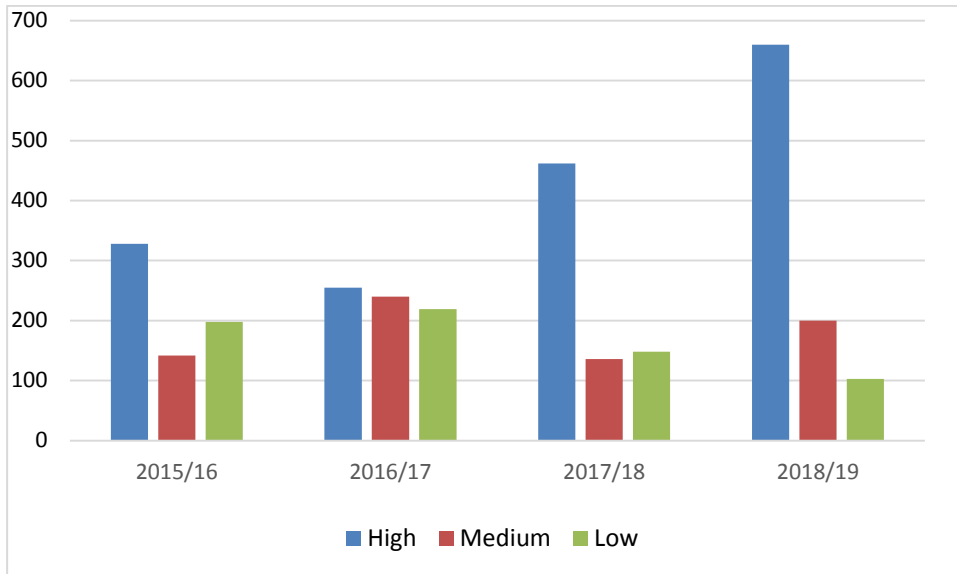


Figure 22: Priority response category compared to previous years

Priority response category compared to previous years

There was again a significant increase in the number of high priority incidents, which is attributed to more air-related complaints.

Air such as odour, dust and smoke can have short-lived effects due to the changeable nature of winds and environmental conditions. For this reason, air-related incidents normally attract a high priority rating.

The subsequent increase in high priority incidents normally translates into increased demand on officer time as the incident is attended within an hour and cannot be left until the next time an officer is in the area.

Part C

Enforcement

9.0 Enforcement

Environment Southland has developed an Enforcement Policy that is available on our website.

<https://www.es.govt.nz/Document%20Library/Plans,%20policies%20and%20strategies/Council%20policies/ES%20Compliance%20Policies.pdf>

This policy highlights the method that Environment Southland will use when considering and completing enforcement action against a person or a company.

9.1 Letters of Direction and Warnings

When enforcement action is believed to be necessary the Compliance Division use the most appropriate tool for the given situation. Enforcement action can be a directive action. Letters of direction, warnings, abatement notices and enforcement orders are all considered to be directive forms of enforcement.

A letter of direction is used in a minor to moderate situation with a co-operative, motivated party. It is designed to prevent further breaches, or to remedy or mitigate the effects of non-compliance. Normally the letter will give timelines and what action should be taken or ceased.

A formal warning is a written warning to a person or company that has committed an offence. No further action will be taken in respect of the breach, but it will form part of the history of non-compliance. Normally a formal warning will be given in a minor to moderate incident.

During the 2018/19 year, the Compliance team issued 57 letters of direction and issued 30 formal warnings.

9.2 Abatement notices

An abatement notice requires an offender to comply with the notice within a specified timeframe. Non-compliance with an abatement notice is an offence under the Resource Management Act 1991 and can receive infringement fines or prosecution.

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.

Abatement notices 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 2018/19 year, the Compliance team issued 29 abatement notices.

9.3 Enforcement orders

An enforcement order is another way of ensuring someone complies with the Resource Management Act. It is similar in some respects to an abatement notice, in that it is used to ensure that someone starts or stops 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 Environment 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).

Enforcement orders can be issued at sentencing, or prior to enforcement action being taken, or alternatively they can be used as a sole form of enforcement action.

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.

Two enforcement orders were applied for and granted during the 2018/19 year:

- **McDowall Rural Services Limited and Kent McDowall**
 - To remove material containing animal parts (referred to as skutch) and have the removal of the material independently monitored and lawfully disposed of to landfill.
 - To cease the use of the truck wash facility on site.

- **Neville Horton**

To remove and independently monitor the removal and lawful disposal of contaminated soil and extraneous material from a cleanfill site.

9.4 Infringement notices

An infringement notice can be issued to an individual or company that has committed a Resource Management Act offence. The infringement fine is \$300, \$500, \$750 or \$1,000, and if not paid in certain timeframes, will be sent to the Ministry of Justice for fine collection (where further fees are likely to be added).

Infringements can be appealed. Information on how to make an appeal is found on the back of each infringement notice, and can be explained by staff.

There were 32 infringement notices issued for the 2018/19 year, this is similar to last year.

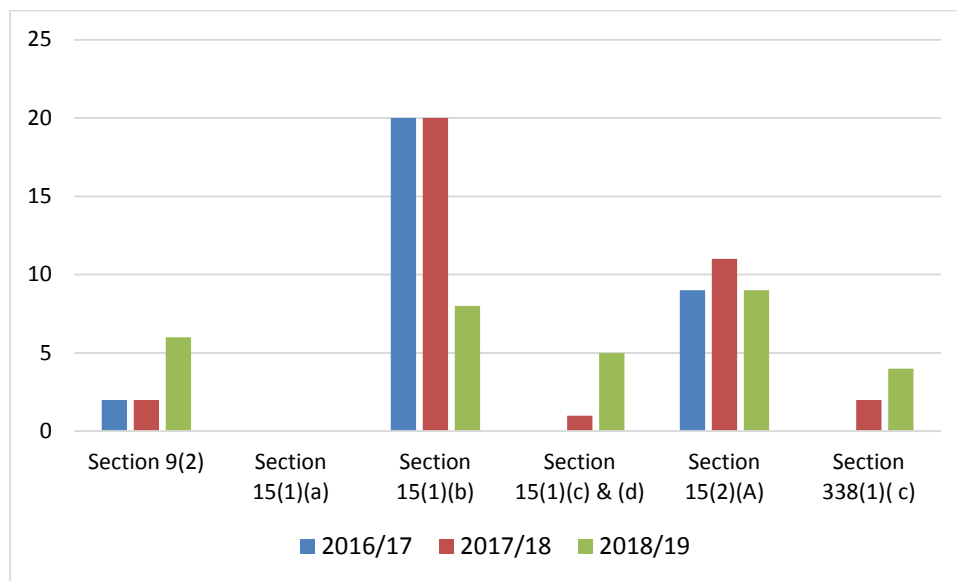


Figure 23: Infringement notices issued over the last three years

Notes:

Section 9	Restrictions on use of land
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
Section 338(1)(c)	Breach of an Abatement Notice

9.5 Alternative enforcement action

Environment Southland has developed a diversion policy to ensure that there is an alternative course of action other than prosecution in special circumstances.

Diversion has three primary purposes being rehabilitation; reparation and restoration; and ensuring that the Council's statutory objectives are better met.

In assessing eligibility for diversion, the Chief Executive will consider:

- offender-based criteria;
- offence-based criteria.

The weight given to particular criteria will be a matter for the Chief Executive's discretion. Ultimately, the Chief Executive will determine whether the public interest is best served by the continuation of a prosecution or by an offer of diversion.

In the 2018/19 year there were no cases were considered for alternative enforcement action.

9.6 Prosecutions

Environment Southland follows its enforcement policy procedure. Prior to proceeding with prosecution it puts the matter before the Enforcement Decision Group (EDG) for assessment. The EDG assesses each case against the principles of the Solicitor General's Prosecution Guidelines.

Once the EDG has completed its assessment, it can:

- recommend that the case cease;
- recommend a different outcome;
- ask for more information; or
- recommend an independent legal review.

If an independent legal review is carried out the final sign-off is to be completed by the Chief Executive. 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.

The matters that were prosecuted and completed in the 2018/19 year were:

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
Rangiatea Farms Ltd	3/10/2017	15(1)(b)	Discharge of a contaminate to land which may enter water	Guilty	06/08/2018	Convicted and fine issued	\$21,375
Gregory Deal	3/10/2017	15(1)(b)	Discharge of a contaminate to land which may enter water	Guilty	06/08/2018	Convicted and fine issued	\$21,375
	3/10/2017	22(1)	Failing to provide information	Guilty	06/08/2018	Convicted and fine issued	\$1,425

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
McDowall Rural Services Ltd	09/08/2017	15(1)(c)	Discharge of a contaminate to air from an industrial site	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of contaminant/product from the property to Class A landfill.	\$0
	09/08/2017	338(1)(c)	Breach of abatement notice	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of	\$0

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
						contaminant/product from the property to Class A landfill.	
	09/08/2017	15(1)(b)	Discharge a contaminate to land which may enter water	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of contaminant /product from the property to Class A landfill.	\$0
	01/09/2017	15(1)(b)	Discharge a contaminate to land which may enter water	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of contaminant /product from the property to Class A landfill.	\$0
Kent McDowall	09/08/2017	15(1)(c)	Discharge of a contaminate to air from an industrial site	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of contaminant /product from the property to Class A landfill.	\$0
	09/08/2017	338(1)(c)	Breach of abatement notice	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of contaminant /product from the property to Class A landfill.	\$0
	09/08/2017	15(1)(b)	Discharge a contaminate to land which may enter water	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of contaminant /product from the property to Class A landfill.	\$0
	01/09/2017	15(1)(b)	Discharge a contaminate to land which may enter water	Guilty	27/11/2018	Court convicted and discharged without fine. Enforcement Order granted requiring the removal of	\$0

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
						contaminant /product from the property to Class A landfill.	
Gordon McDowall	09/08/2017	15(1)(c)	Discharge of a contaminate to air from an industrial site	Guilty	N/A	Charge withdrawn as defendant has been removed as director/shareholder.	N/A
	09/08/2017	338(1)(c)	Breach of abatement notice	Guilty	N/A	Charge withdrawn as defendant has been removed as director/shareholder.	N/A
	09/08/2017	15(1)(b)	Discharge a contaminate to land which may enter water	Guilty	N/A	Charge withdrawn as defendant has been removed as director/shareholder.	N/A
	01/09/2017	15(1)(b)	Discharge a contaminate to land which may enter water	Guilty	N/A	Charge withdrawn as defendant has been removed as director/shareholder.	N/A

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
Gladvale Farms Ltd	08/11/2017	15(1)(b)	Discharge of a contaminate to land which may enter water	Guilty	27/11/2018	Convicted and fine issued	\$27,000
Geoff Lindsay	08/11/2017	15(1)(b)	Discharge of a contaminate to land which may enter water	Guilty	27/11/2018	Convicted and fine issued	\$22,500

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
Horizons Flowers NZ Ltd	06/12/2017	14(2)(a)	Took, used, dammed or diverted water other than open coastal water without resource consent	Guilty	27/11/2018	Convicted and fine issued	\$17,800
	02/12/2017	323(1)(a)	Breach of abatement notice	Guilty	27/11/2018	Convicted and fine issued	\$17,800
	02/12/2017	14(2)(a)	Took, used, dammed or diverted water other than open coastal water without resource consent	Guilty	27/11/2018	Convicted and fine issued	\$17,800
Roy Smak	06/12/2017	14(2)(a)	Took, used, dammed or diverted water other than open coastal water	Guilty	27/11/2018	Convicted and fine issued	\$7,125

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
			without resource consent				
	02/12/2017	14(2)(a)	Took, used, dammed or diverted water other than open coastal water without resource consent	Guilty	27/11/2018	Convicted and fine issued	\$7,125

Defendant	Offence Date	Charge	Charge description	Plea	Sentencing	Outcome	Fine
G Laidlaw	02/03/2017	15(1)(b)	Discharge of a contaminate to land which may enter water	Guilty	07/02/2019	S.106 discharge without conviction. No costs.	\$0
	02/03/2017	15(1)(d)	Discharge to land of a contaminate from an industrial or trade premises	Guilty	07/02/2019	S.106 discharge without conviction. No costs.	\$0

Glossary

Ammoniacal Nitrogen (NH₄N)	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 are potentially toxic to aquatic life.
ANZECC	Australia New Zealand Environmental Conservation Council. This organisation develops guidelines that are applicable to the Australian and New Zealand situations.
Black Water	Wastewater containing human faeces and urine, generated from toilets.
cBOD₅	Carbonaceous Biochemical Oxygen Demand – A measure of the ability of contaminants to consume and remove oxygen from water, reducing its availability to aquatic life.
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 and the particulate matter 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.
ES	Environment Southland
Formaldehyde	An organic compound that is a by-product of the resins used to bind MDF particles together
Faecal Coliforms (FC)	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/m³	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 contaminants 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 parts per million (ppm)).
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.
PM₁₀ Particulate Matter	The unburnt material that is commonly discharged with the gas or smoke from a fire or boiler. This is measured as PM ₁₀ , meaning a particle size of 10 micrometres or less.
Sewage	Domestic human wastewater and excrement.

Sewerage system	A pipe network use to transport sewage.
Skutch	An industrial by-product comprised of material containing animal parts and ear tags.
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.
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 Solid (TSS)	Very small particles that have the potential to affect the colour and clarity of a waterway and can potentially settle out onto a streambed smothering aquatic life in waterways.
Turbidity	Turbidity is a laboratory measurement to determine the clarity of the water. The higher the result, the more cloudy the water.
µg/m³	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
Wastewater	Water that has been used in the home, in a business or as a part of an industrial process

Compliance Team (as at September 2019)



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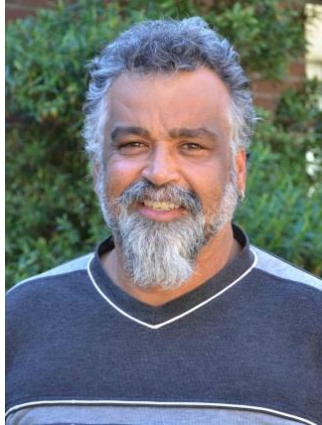
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