

Compliance Monitoring Report

2022–23



environment
SOUTHLAND
REGIONAL COUNCIL

Te Taiao Tonga



**Environmental Compliance
Monitoring Report**

2022/23

**Report by –
Environment Southland
Compliance Team**

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Foreword

The 2022/23 Compliance Monitoring Report provides an overview of Environment Southland's compliance, monitoring and enforcement (CME) activities.

During the past year, there has been more reporting and a general trend of improvement across the performance of many of the activities the Resource Management team oversees.

All industries within Southland require a range of resource consents to discharge to air, water, coast and land. These discharges are monitored to ensure compliance with consents and to minimise impacts on the environment. The team's aim is to maintain and improve the environmental outcomes associated with the activities we regulate for the sustainable management of Southland's natural resources - land, water, air and coast - in partnership with the community.

This year, monitoring of industrial and water abstraction consents has increased, and staff have been able to identify and follow up on lower level non-compliance to front-foot issues before they escalate.

When action has been needed around consent issues relating to major industries and local authorities, consent holders have generally been engaged and cooperative and have taken actions or are in the process of remediating the respective situation.

In regards to local authorities, they are often dealing with less than satisfactory behaviours that are out of their control, such as people deliberately or accidentally spilling paint into drains. Incidents have included the likes of foam being discharged into a stormwater system as a result of fire-fighting activities. This can then reflect on the environmental performance of those reticulation networks they manage and compliance with associated consents.

In all instances, Environment Southland works with industries or authorities to ensure that spills and discharges are avoided as much as possible, adequately mitigated and resolved.

We monitor consent conditions to ensure sampling and reporting requirements are being met and regularly provide advice and education. This is consistent with our ongoing focus on the 4E's: Engage, Educate, Enable and Enforce.

This year saw amended winter grazing rules come into effect. For most of New Zealand there were two ways to comply with the rules that were to operate as a permitted activity or to have a winter grazing consent. Environment Southland developed a third option for all properties who met everything within the rules except slope and created a deemed permitted activity for winter grazing as a mechanism to assist with encouraging compliance.

We continued to work with industry groups to encourage and enable compliance with these new rules. We worked with farmers to educate them regarding the rules and to encourage best practice and positive environmental outcomes around the likes of buffers, slopes, and critical source areas.

While we continue to be pleased with improving practice, staff have already started work on planning for the 2024 season.

One of the key reasons the Resource Management team have been able to undertake more monitoring activities this year is because staff numbers have stabilised after several years affected by the pandemic. It has also allowed the newer members of the team to develop competencies across a wider range of work.

Changing legislation continues to make the regulatory function more complex. The growing numbers of consents and their complexity also means the team have had to reassess how best to manage and prioritise work.

With more legislative changes ahead, there will be continued demand on CME. We will continue to review how we manage this more efficiently to achieve the environmental outcomes we are striving for.

N G Horrell
Chairman Environment Southland

N 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 2022/23 year.

CME activities are an important part of the regulatory function of regional councils throughout New Zealand, to ensure responsibilities under the Resource Management Act 1991 (RMA) are effectively implemented. For the purpose of this report, CME means:

- compliance - adherence to the RMA, including the rules established under regional plans (operative and proposed), National Environmental Standards and meeting resource consent conditions;
- monitoring - the activities carried out by Environment Southland to assess compliance with the RMA, and responding to complaints from the public about potential breaches;
- enforcement - actions taken by Environment Southland to respond to non-compliance with the RMA.

This report provides a summary of Southland industry’s performance against their primary consents. It covers mainly dairy farming, local authorities and industrial operations, but also includes smaller consent holders such as coastal structures and whitebait stands.

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 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 2020/21, 2021/22 and 2022/23 years (see below).

Key

Site or consent holders name			
Description of noteworthy event	20/21	21/22	22/23
	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> Background denotes overall results for year shown in box </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> Year </div> </div>		

Grading

	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. 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.
10	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, proactively addressing or highlighting potential issues and evidence of environmental ethics.

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

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

Part A

Incident Response

1.0 Incidents

Incidents come in many forms and can be either found by compliance officers or reported by members of the public through our online options or our 24/7 phone line (0800 76 88 45).

Incidents include everything from serious pollution situations like contaminants getting into our waterways and outdoor burning creating a smoke nuisance through to rubbish complaints. We have an officer on call 24/7 and they will assess reports based on their urgency and respond as required.

This year the number of incidents reported to the compliance division by the public remained steady with the previous year. In the 2022/23 year there were 1064 incidents (719 public, 345 staff) compared to 2021/22 year that had 880 incidents (712 public, 168 staff) reported in total.

The response to incidents can vary significantly. Some simply require a phone call, others one or more site visits and the taking of samples, Follow up actions also vary, with many able to be completed on the day or within a few days. Some incidents however can be quite technical, require further expertise and a full investigation to establish the full picture and any liability. These investigations can take sometimes take several weeks to months to arrive at a resolution.

Where possible, for confirmed breaches of rules or legislation, the costs involved in attending and investigating an incident are charged to an offending party. Unfortunately for many of the incidents staff attend, such as the removal of rubbish and dead stock from waterways, it is not possible to identify the offending party and the costs need to be met by ratepayers.

Note: The higher number in May 2023 relates to proactive work in relation to intensive winter grazing

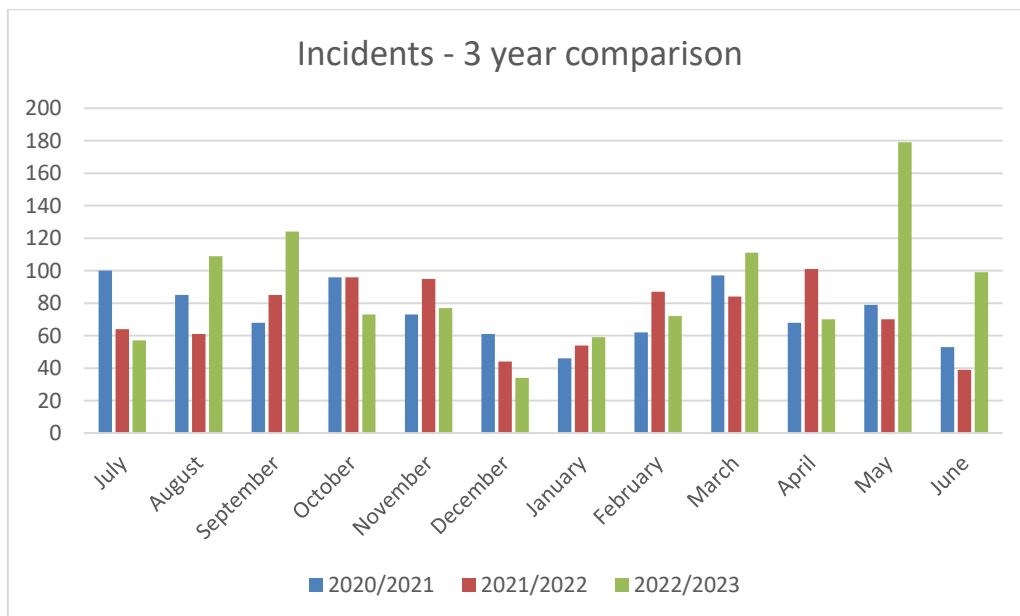


Figure 1: Reported incidents per month compared over three years

Priority of incidents

Not all Incidents are created equal. When reported, the initial incident is assigned a priority from High (1 hour to 24 hours), Medium (2 days to 4 weeks) Low (1 month to 6 months). The priority is determined initially based on the impacts to the environment, the community and cultural values. Priorities can also be determined taking into account several factors including the need for rapid evidence collection and the receiving environment.

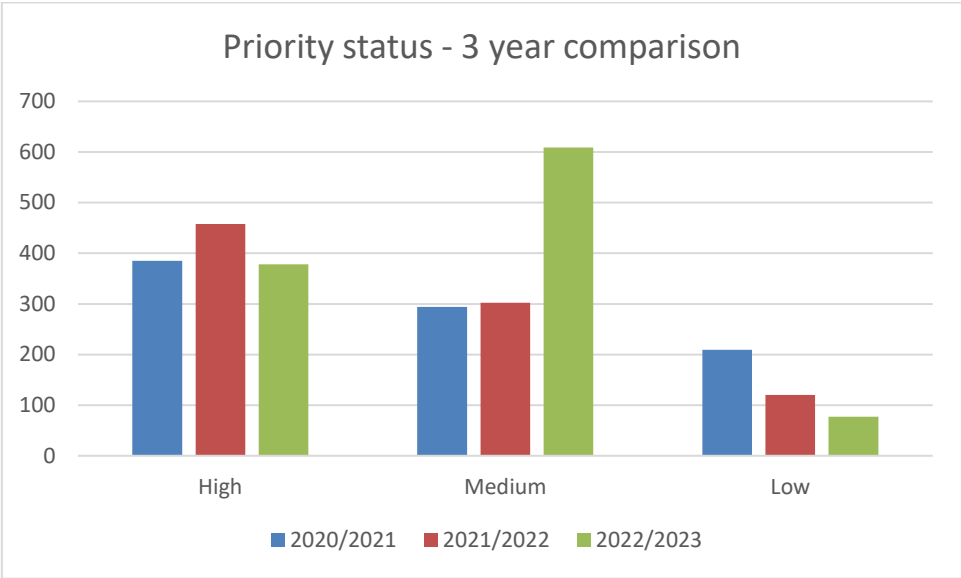


Figure 2: Priority response category compared to previous years

There was a decrease in the number of high priority incidents and a noticeable decrease in the number of low priority incidents this year. However, medium priority incidents increased significantly.

Part B

Inspection and audit activities

2.0 Agricultural audits

This year we had the addition of intensive winter grazing consent inspections to our agricultural monitoring regime and our staff took the opportunity to map a number of permitted activities happening on farms, including offal holes and silage stacks. This provides us with good information, from which to understand the number of permitted activities taking place.

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

However, pasture can only use so much effluent at a time. It 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.

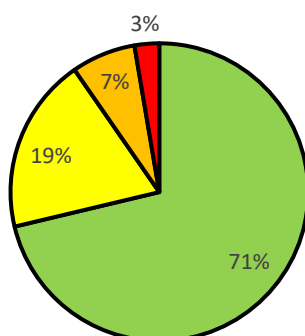
There are four outcomes as referenced in the grading section following an inspection that determine a dairy farm’s performance against the conditions of their consent.

2.1.1 Discharge consent inspections

During the 2022/23 season staff completed 933 dairy discharge permit inspections. 172 were aerial and 761 were on-site inspections. Of these, 665 were fully compliant, 178 were graded low risk non-compliance, 65 were graded moderate non-compliance, and 25 were graded significant non-compliance.

Performance rating for 2022/23 inspections

■ Full compliance ■ Low risk non-compliance ■ Moderate non-compliance ■ Significant non-compliance



If an inspection results in a grade of 10 (significant non-compliant), a reinspection is often conducted. 14 re-inspections were completed for the year 2022/23 with the remainder either not required or are scheduled to be completed in the upcoming season. Sometimes a re-inspection may not be required if we receive evidence by way of photographs and engineer reports detailing the issues on farm have been corrected.

2.1.2 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 pads and loafing pads.

Prior to monitoring of these purpose built facilities, this season the compliance officers undertook a desktop exercise to identify those who have consents for these facilities but have not yet built them. In previous years we have gone out to inspect to determine this, however this year we elected to telephone those who didn't have them last season and to update our records in the hope to streamline this monitoring programme for the seasons to come.

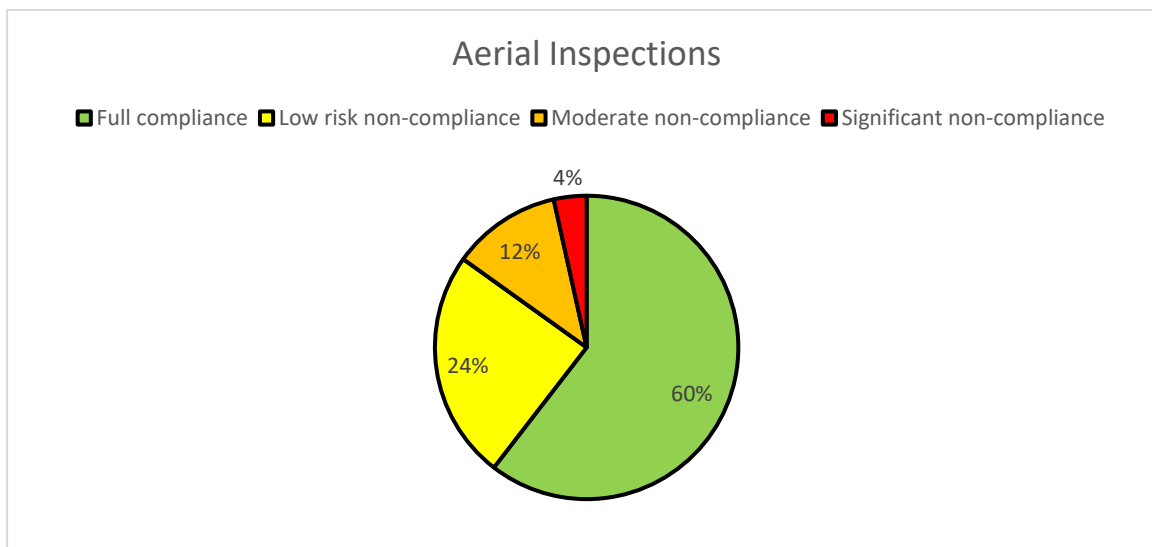
Reporting falls in the middle of this monitoring period and so at 30 June 2023, compliance officers had completed 50 inspections during the 2022/23 financial year of the various types of consented wintering pads.

2.1.3 Aerial inspections

In the 2022/23 season we were fully staffed with compliance monitoring staff at three officers and so we relied less heavily on aerial inspections and turned our focus towards engagement with our consent holders and completed site visits wherever possible.

Compliance staff undertook 172 aerial inspections. This is significantly down from 521 aerial inspections in 2021/22.

Of the 172 aerial inspections, 104 were graded as fully compliant, 42 were graded as low risk non-compliance, 20 moderate non-compliance and six were graded as significant non-compliance.



2.2 Groundwater quality sampling for dairy

Groundwater is water 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 (baseflow).

However, what we do 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 measurable 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.

2.3 Dairy Top Performers

The dairy top performer programme was developed in 2020 to acknowledge dairying operations that had a good compliance rating.

To be eligible for the dairy top performer programme each consent holder must:

- have no health and safety warnings;
- have 5 years full compliance on all of their resource consents; and
- be fully compliant with all legislation including national environmental standards
- have no unreasonable outstanding debt to ES;

The first year saw the recipients receive a letter thanking them for their efforts and encouraging them to keep up the good work and over the subsequent years, the programme has continued to develop and grow.

In the 2022/23 season, all consent holders who were eligible were asked if they wish to participate in the voluntary programme. Participation means they would no longer receive routine monitoring of their dairy consents. Instead, these consent holders would self-monitor and return their inspection data with 15% of those returned selected at random for a quality assurance visit by a monitoring officer.

In 2022/23, 91 consent holders participated and returned their forms and all completed quality assurance checks were fully compliant.

2.4 Water consents

Water take permits are divided into two groups dependent on the rate at which water is taken and are monitored in different ways:

- Low rate water take consents where water has a maximum rate of take of less than 5 litres per second.
- High rate water take consents where water has a maximum rate of take of 5 litres per second or greater.

High rate water takes are regulated in part by Measurement and Reporting of Water Takes Regulations 2010, which has specific requirements about how water volume is measured and how the data is report.

Low rate water take consents

There are a wide range of industries with low rate water consents from gravel wash to car wash operations, with the dairy industry having the greatest number of low rate water take consents, with a total of 83% of all water take consents abstracting less than 5 litres per second.

While Southland receives regular rainfall, the demand on the water resource is increasing. This year the level of compliance was 77% of consent holders being fully compliant with all consent conditions. Low risk non-compliance is usually as a result of failing to supply adequate abstraction data as required by the conditions of a consent.

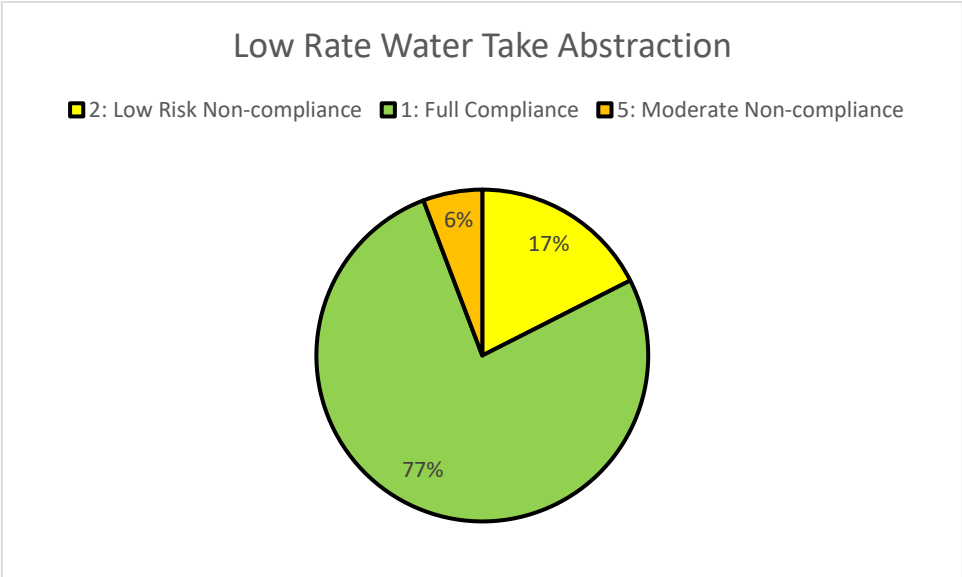


Figure 6: Low rate (less than 5L/s) Compliance 2022/23

For the most part Environment Southland adopts an educative approach to compliance with low rate water permits. This approach has resulted in a continued improvement in compliance over a number of years.

This year Environment Southland has considered enforcement options when dealing with significant or repeated non-compliance. Eight low rate water take consents with significant exceedances of their

abstraction limit or repeated non-compliance over three years have been issued with formal warnings or infringements.

High rate water take consents (abstraction rate 5 litres per second or greater)

There are 213 current high rate water take consents. Environment Southland has assessed the abstraction records of 42 of these consents. The compliance status of each consent assessed is shown in the figure below.

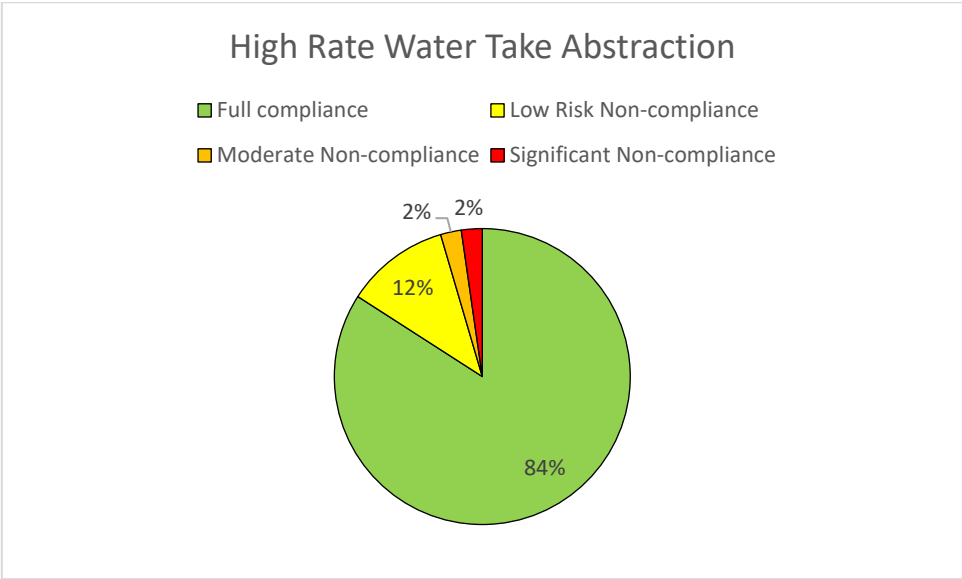


Figure 7: High rate water take (5L/s or greater) compliance 2022/2023

One abatement notice and infringement was issued for taking surface water when a consent holder was required to cease abstraction due to low flows in the river.

Fish Screen Inspections

Fish screens are mechanical structures, usually designed and engineered for a specific surface water take to ensure fish remain in the waterway from where the water is abstracted without harm.

This is a consent condition that was previously not monitored so as part of our five-year plan, we have scheduled a project of work where all of these consents are monitored over the five-year period. 2022/23 has been our pilot season that has seen us monitor 15 of the 74 consents. The remainder of the consents are to be done over the next four seasons.

All consent holders who are to be inspected each season will be sent a letter outlining the monitoring at the beginning of the season and we call ahead to schedule a time for the monitoring to occur. This is due to a number of the screens needing to be dug out or mechanically lifted so we can check the size of the screen so we need their staff to be present to do this.

At the conclusion of the monitoring, a detailed report is written and reviewed by a technical expert that outlines the compliance level of the screen and sets timeframes for becoming compliant if they aren't at the time of monitoring. Some of these timeframes will need to be longer than others due to the cost and labour involved in upgrading the screens and we are working with individual consent holders to find a fair and reasonable balance on these.

Of the 15 consents monitored, four were non-compliant, four were compliant and effective and seven were compliant but ineffective. The non-compliances tended to be due to low sweep velocity rates and aperture sizes were too large.



Figure 8: An example of a rotating drum screen and of another fish screen design

2.5 Synthetic Nitrogen Reporting

In August 2020, the Government announced changes to the National Policy Statement for Freshwater Management (NPS-FM), the National Environmental Standard for Freshwater (NES-FW) and changes to the Resource Management Act which had a limit to the amount of nitrogen that can be applied to land introduced.

From July 2021 if the use of nitrogen fertiliser on pastoral land exceeds 190 kg/ha/year then a consent will be required. This cap does not apply to arable or horticultural land use.

The National Environmental Standards require any person operating a dairy farm to report to Council each year on their nitrogen fertiliser use. This reporting includes information on the types of fertiliser used, the rate of application and the location and date of application.

The standards in the National Environmental Standards are in addition to the permitted activity criteria in the proposed Southland Water and Land Plan and any discharge of fertiliser still needs to meet the conditions in Rule 14.

For the first season's (2021/22) reporting was due on 31 July 2022 and fell within this reporting year. We can report:

- 20 sets of data were over the limit and advice and education was provided to all. Some of these were due to administrative errors working with the new central government reporting tool.
- 153 consent holders did not supply their data. Environment Southland took an educational approach to encourage them to supply data for the 2022/23 season and were graded as non-compliant
- 828 data sets were supplied and graded as fully compliant

2.6 Winter Grazing

Intensive winter grazing is a farming practice where livestock are grazed on paddocks that are planted with forage crops. The most common forage crops are fodder beet, brassicas, cereals and maize.

When done poorly, it can have serious negative effects on the environment and animal welfare.

Intensive winter grazing regulations were introduced in the National Environmental Standard for Freshwater (NES-F) as part of essential freshwater reforms and were amended in April 2022 with the aim of making the standards more practical for farmers while increasing environmental outcomes. The updated regulations came into effect from 1 November 2022 to allow farmers time to plan and prepare for winter 2023.

For most of New Zealand there were two ways to comply with the rules that were to operate as a permitted activity or to have a winter grazing consent. Environment Southland developed a third option for all properties who met everything within the rules except slope and created a deemed permitted activity for winter grazing.

Each year the compliance team have a standard approach towards the CME function of winter grazing which consists of:

- Developing an annual strategy and plan for our response
- Participation in the organisational engagement activities (field days, industry group meetings)
- 3 wintering flights (one each in June, July and August)
- Looking out for non-compliance while completing routine monitoring in the community
- Responding to complaints via our pollution line

This year we also added a series of proactive roadside monitoring to our approach to try to provide advice and education to some sectors that have not previously dealt with the regional council and never needed consents and were unaware of the rules and how they are affected.

During the 2022/23 financial year the compliance division:*

- Identified 111 potential sites which could have issues and 97 advice and education letters were sent to the landowners
- Identified 21 potential sites of issue during the first winter grazing flight in June 2023
- 4 calls via our pollution hotline with two being confirmed and two unconfirmed incidents

** Please note that this reporting stops part way through the winter grazing season and full outcomes will be made available outside this report in standard reporting to Council*

3.0 Forestry Operations in Southland

National Environmental Standard – Plantation Forestry

The National Environmental Standard for plantation forestry (NES-PF) came into effect on 1 May 2018. The NES-PF are regulations under the Resource Management Act 1991 (RMA) and apply to any forest of at least one hectare that has been planted specifically for commercial purposes and will be harvested.

The NES-PF regulations aims to:

- maintain or improve the environmental outcomes associated with managing plantation forestry activities;
- provide efficiencies and greater certainty in the management of these activities; and
- provide consistent rules across the country by setting planning requirements for certain specified activities.

The regulations cover eight core plantation forestry activities that have potential environmental effects:

1. Afforestation (planting new forest)
2. Pruning and thinning-to-waste (selective felling of trees where the felled trees remain on site)
3. Earthworks
4. River crossings
5. Forestry quarrying (extraction of rock, sand, or gravel within a plantation forest or for operation of a forest on adjacent land)
6. Harvesting
7. Mechanical land preparation
8. Replanting

Plantation forestry operators are required to submit written notices and plans for afforestation, earthworks, river crossings, forest quarrying, harvesting, replanting wilding species and slash traps.

Environment Southland’s approach to forestry

Environment Southland have an organisational approach to monitoring the NES – Plantation Forestry. Notifications are received, logged into our system by the regulatory administration team. The administration team refer to the catchment integration officer who supports each forestry company. The catchment integration officer then assesses and the notification and completes site visit as determined as necessary.

Where the catchment integration officer identifies any areas of concern or breaches relating to the activity, this is referred to the compliance team for investigation.

Identified breaches

During the 2022/23 financial year there were no breaches of the NES – Plantation Forestry referred to compliance for investigation.

4.0 Industrial audits – major industries

4.1 Meat industry

4.1.1 Alliance Group Limited

Alliance Group Limited operates two meat processing plants in Southland, one at Lorneville and one at Matura.

What do we look at?

Environment Southland investigate complaints and self-reported incidents and assess compliance against the conditions listed in the primary resource consents.



Figure 9: Alliance Lorneville Plant

Lorneville

Consents
Alliance Group Limited holds 13 resource consents for the Lorneville plant. The primary consents include: <ul style="list-style-type: none">• The discharge of treated wastewater to the Makarewa River;• The discharge of treated wastewater to land;• The discharge of wastewater and stockyard solids to land;• The discharge of contaminants to air;• The discharge of stormwater into an open drain;• To take surface water from the Makarewa and Oreti Rivers.

Complaints and self-reported Incidents	2020/21	2021/22	2022/23
Two self-reported exceedances of the consent receiving water limits were received. An infringement notice was issued.			

Consent performance summary	2020/21	2021/22	2022/23
<p>The dissolved oxygen (DO) limits in the Makarewa River were breached on two occasions between the period of the 15 February 2023 and 1 March 2023 as a result of the treated wastewater discharge. Reports and notifications were supplied late and on one occasion the wrong pond was sampled.</p> <p>Environment Southland responded to these non-compliances with an infringement notice for the DO exceedances and are meeting with Alliance Lorneville on a quarterly basis to work through these issues.</p> <p>Alliance Lorneville was compliant with all other resource consent conditions monitored.</p>			

Summary of non-compliance

Details: The dissolved oxygen of the Makarewa River dropped below consented levels as a result of the wastewater discharge.

Actions taken so far: Environment Southland has issued one infringement notice

Actions to ensure compliance moving forward: Quarterly meetings to discuss wastewater quality.

Mataura

Consents
Alliance Group Limited holds ten resource consents for the Mataura plant. The consents are:

- The discharge of contaminants, including odour, to air;
- The discharge of treated meat works wastewater to the Mataura River;
- The discharge of storm water to the Mataura River;
- The discharge of cooling water to the Mataura River;
- The discharge of wastewater treatment solids to land;
- To take water from a water race fed by the Mataura River for meat processing;
- To take water for cooling from the Mataura River;
- To use a weir on the Mataura River ;
- To take and discharge water for hydroelectric generation;
- To take surface water for pelt and hide processing.

Complaints and self-reported Incidents	2020/21	2021/22	2022/23
<p>One complaint and six self-reported incidents were received.</p> <p>One odour complaint was received by the public which was confirmed but not considered objectionable or offence.</p> <p>There was one self-reported incident of wastewater discharge to land. Alliance responded to this immediately and it caused no environmental effects. No formal enforcement action undertaken in this instance.</p> <p>Five self-reported exceedances of the discharge limits were received. Enforcement action taken as outlined under consent performance.</p>			

Consent performance summary	2020/21	2021/22	2022/23
<p>Alliance Mataura undertook all of the monitoring required by their consents. The discharge limits were exceeded on multiple occasions during the 2022/23 period.</p> <p>The main non-compliances were for five breaches of the consented discharge quality limits for Carbonaceous Biochemical Oxygen Demand (cBOD₅) (g/m³) levels from 1 February 2023 – 13 March 2023.</p> <p>The second and third non-compliances were for the rolling average median and 95th percentile for dissolved reactive phosphorous (DRP). These were due to a high spike in March that led to the median level being exceeded for three months at the time of this report being written.</p> <p>Alliance Mataura have shown an engaged, cooperative manner at identifying avenues to rectify and mitigate future incidents. They have received two infringements and further investigation is being completed by Environment Southland to determine any further action that may be required.</p> <p>Alliance Mataura was compliant with all other resource consents.</p>			

Summary of non-compliance

Details: Five breaches of discharge quality limits.

Actions taken so far: Environment Southland has issued two infringement notices.

Actions to ensure compliance moving forward: Alliance is taking action to ensure their treatment systems meet the requirements of the consent. Environment Southland continues to monitor the discharge quality



Figure 10: Alliance Maitai Plant

4.1.2 Blue Sky Meats (NZ) Limited

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

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>Blue Sky Meats (N.Z.) Limited holds seven resource consents for the purpose of meat processing at its Morton Mains plant. The primary consents are:</p> <ul style="list-style-type: none"> • To take groundwater for a meat processing operation; • The discharge of wastewater to land via a spray irrigator; • The discharge of contaminants to air from a rendering and blood drying plant, boiler plant, and wastewater treatment and irrigation.

Complaints and self-reported Incidents	2020/21	2021/22	2022/23
<p>One confirmed self-notification involving a breach of Blue Sky Meats discharge permit was received during the 2022/23 period. This incident involved discharges of a contaminant to a dried up bed of a waterway.</p> <p>Satisfactory actions were undertaken by the consent holder to identify and clean up the incident to avoid any further contamination.</p>			

Consent performance summary	2020/21	2021/22	2022/23
<p>Blue Sky Meats was graded non-compliant in relation to the discharge of contaminants to land in a way that may enter water as stated above. Blue Sky Meats have otherwise been operating in a way that satisfies its consent requirements for the 2022/23 period.</p> <p>A site inspection undertaken in 2023 identified that in certain areas Blue Sky Meats were undertaking good practices that went beyond consent condition requirements.</p> <p>Following these events, Blue Sky Meats have installed controls to reduce the likelihood of these occurring again and a formal warning was issued.</p>			

4.1.3 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?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

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

Complaints and self-reported Incidents	2020/21	2021/22	2022/23
One complaint was made regarding a minor discharge to water during July 2022. The contaminant did not make it to storm water and was contained inside.			

Consent performance summary	2020/21	2021/22	2022/23
<p>There were two minor non-compliance in relation to late supply of data during the 2022/23 period.</p> <p>During August 2022 there was a minor over application of sludge onto land in one paddock. This had low environmental impact. There were other minor non-compliances due to reporting requirements.</p>			

4.1.4 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?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

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

Complaints and self-reported Incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
<p>During the reporting period Prime Range Meats Ltd varied a consent condition in relation to its permit to discharge treated wastewater to land.</p> <p>Prime Range Meats was recorded to be non-compliant with its air discharge permit following a site inspection:</p> <ul style="list-style-type: none"> • The first non-compliance was in relation to a monitoring condition relating to the bio-filter. Prime Range Meats are required to continuously monitor the inlet airflow temperature to the bio-filter. No continuous monitoring was occurring at the time of the inspection. New equipment was installed following the inspection which has since failed due to the internal conditions within the system. Prime Range Meats is using an electrical engineering company to look into other solutions. • The second non-compliance was due to the inability to demonstrate full compliance with a requirement to measure moisture content within the bio-filter bed(s). A moisture meter has now been purchased and used for testing to ensure full-compliance with the relevant consent condition. • The other non-compliance was due to the inability to meet the requirements of a condition requiring full coverage of a scum mat over its anaerobic treatment pond. Prime Range Meats 			

were unable to meet the requirements of this permit due to the requirements of the desludging operations which is critical to maintain long-term treatment performance. A consent variation has since been sought to address this non-compliance which would otherwise continue periodically into the future.

Despite the non-compliances in relation to the bio-filter & anaerobic pond, there was no indication during the site inspection that either systems were failing. The consent holder was undertaking all other required monitoring, management and maintenance & both systems appeared to be in good working condition. In addition no odour complaints were received during the reporting period.

4.2 Dairy industry

4.2.1 Fonterra Co-operative Group Limited

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



Figure 11: Fonterra, Edendale

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents

Fonterra Co-operative Group Limited holds eight resource consents related to dairy processing at its Edendale plant. The primary consents include:

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

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No complaints or self-reported incidents were received during the 2022/23 reporting period.			

Consent performance summary	2020/21	2021/22	2022/23
<p>There was one low risk non-compliance of its air discharge consent due to a fault in a sulphur dioxide monitoring instrument. The consent holder undertook appropriate actions in relation to the non-compliance, including mitigation efforts. Upon reviewing the data following the instrument repair it was unlikely any negative environmental impacts occurred due to the non-compliance.</p> <p>There were two low risk non-compliances identified within Fonterra Edendale’s Groundwater Abstraction Annual Report 2021/22. The first was an exceedance of the maximum rate of abstraction from a bore. The non-compliance occurred during a power outage and no further abstraction exceedances have occurred. The other involves non-compliant flow meters that do not meet the requirements of its permit. The flow meters were installed prior to the consent being granted and are compliant with manufacturer’s specifications. Fonterra advised it will be rectifying this non-compliance post peak season water take (April-June 2023).</p> <p>There was one low risk non-compliance due to a late supply of its management plan relating to its permit to discharge wastewater to land and associated aerosols and odour into air.</p> <p>There was one low risk non-compliance relating to its permit to discharge whey by-product to pasture. This non-compliance was clerical in nature involving a requirement to vary a condition in its permit which has since occurred.</p>			

4.2.2 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?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
Open Country Dairy holds three resource consents relating to its dairy processing plant. The primary consents include: <ul style="list-style-type: none">• The discharge of condensate and stormwater from a milk processing plant to a farm drain;• The discharge of contaminants to the air from a milk processing plant and boilers;• The construction of two new wastewater pipelines.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
One complaint was received during the 2022/23 period. The complaint was regarding a milk spill due to a collision between a car and milk tanker and was cleaned up in a timely manner.			

Consent performance summary	2020/21	2021/22	2022/23
Open Country Dairy's stormwater discharge permit requires them to monitor water quality by taking samples. Two out of four consecutive samples exceeded the nitrogen limit of 2g/m ³ between September 2022 and March 2023. These were considered to be minor exceedances.			
There were four minor non-compliances for late supply of monitoring reports.			

4.2.3 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?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>Maitara Valley Milk Limited holds ten resource consents related to its dairy processing plant. The primary consents include:</p> <ul style="list-style-type: none"> • To discharge odour and contaminants to air from a milk processing plant and associated facilities; • To discharge treated wastewater to land; • To discharge treated stormwater to natural water; • To construct effluent storage tanks to hold effluent and sludge from milking processes; • To take and use groundwater • To discharge sludge to land.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-reported environmental incidents were received by Environment Southland relating to Maitara Valley Milk Ltd processing plant during the 2022/23 reporting period.			

Consent performance summary	2020/21	2021/22	2022/23
<p>The discharge to land, air and water all had consents that were fully compliant.</p> <p>The groundwater level monitoring data for the water take permits were fully compliant as data was sent by telemetry and the water takes did not exceed their limits.</p> <p>Consents regarding the effluent storage were also fully compliant for the 2022/23 period.</p>			

4.3 Energy industry

4.3.1 Pioneer Energy Limited

The hydroelectric power station at Monowai is owned by Pioneer Energy. The company operates 13 power stations across Southland and Central Otago.

What do we look at?

Environment Southland investigate complaints and self-reported incidents and assess compliance against the conditions listed in the primary resource consents.



Figure 12: Monowai Power Station

Consents

Pioneer Energy holds 17 resource consents related to the operation of its Monowai Power Scheme. The primary consents 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;
- to use, maintain & modify fish passage at locations in the Monowai River.

Complaints and self-reported incidents

2020/21

2021/22

2022/23

No confirmed complaints or self-notifications were received during the 2022/23 period.

Consent performance summary

2020/21

2021/22

2022/23

Pioneer Energy was fully compliant with the consent monitoring and reporting requirements for the 2022/23 period.

4.3.2 Meridian Energy Limited

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

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.



Figure 13: Turbine Hall - Manapouri Power Station

Consents

Meridian Energy Ltd holds 20 resource consents relating to the operation of the Manapouri Power Scheme. The primary consents are:

- 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;
- the discharge of stormwater to land;
- to carry out bed disturbance;
- the discharge of contaminants to air;
- the discharge of water and contaminants to the coastal marine area;
- to occupy Lake Manapouri and coastal marine area with wharves.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
There were no confirmed complaints or self-reported incidents during the monitoring period of 2022/23.			

Consent performance summary	2020/21	2021/22	2022/23
<p>A minor non-compliance was recorded against Meridian Energy Ltd’s discharge to water permit. In January 2023 Meridian was in breach of its consent due to both increasing and decreasing flows in the Waiau River immediately downstream of the Lake Te Anau control structure during the same calendar day. The change was due to manual transitioning between the numbers of gates in operation. Any environmental impacts due to the change in river flow was considered to be low as this occurred over a short period of time, with a relatively small volume of water. No further action was taken by ES in relation to this non-compliance. Information provided by a consultant engaged by Meridian to provide independent reporting on the hydrometric data showed that there were no other breaches of the flow fluctuation requirement of its permit for the remainder of the reporting period.</p> <p>A minor non-compliance was recorded against Meridian Energy Ltd’s permit to carry out various bed disturbance on lake Manapouri and the Waiau River for the maintenance of the Manapouri Lake Control Structure. During a period in February 2023 there were nine occasions, visual clarity requirements were not met during small scale works in the Waiau Arm.</p> <p>During each exceedance the in-river works were ceased and conditions reassessed with work not resuming until visual clarity had cleared and returned to compliance level. Visual clarity on this occasion was monitored by NIWA. No further action was taken in relation to the non-compliance(s) as each breach was identified and remedied promptly therefore unlikely causing any significant or long term effects. In addition no turbid water from the works moved up the Waiau Arm towards Lake Manapouri.</p>			

4.4 Manufacturing industry

4.4.1 New Zealand Aluminium Smelters Limited

New Zealand Aluminium Smelters Limited (NZAS) is located on the Tiwai Peninsula at Awarua.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the resource consents.



Figure 14: Aerial view of NZAS site. (Image by NZAS)

Consents

New Zealand Aluminium Smelters Limited (NZAS) holds six discharge and water take consents that require inspecting. The consents are:

- the discharge of contaminants to land where they may enter coastal water;
- the discharge of treated sewage to land;
- the discharge of treated effluent to the Coastal Marine Area (CMA);
- the discharge of water including contaminants to the CMA;
- the discharge of contaminants to air from the aluminium smelter and related activities;
- to take and use groundwater for industrial supply.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
<p>NZAS was issued with an abatement notice in 2021 for the discharge of contaminants from a contaminated site to groundwater, which was highlighted during NZAS’s closure investigations. The actions required by this notice have been completed and on-going monitoring is taking place to determine if the actions taken have been successful.</p> <p>NZAS received one confirmed complaint of a fuel leak, a site visit confirmed they had taken all actions to clean up mess. Preventative measures were put in place.</p>			

Consent performance summary	2020/21	2021/22	2022/23
<p>All monitoring required by the consents was undertaken and all discharge limits were met for 2022/23.</p>			

Summary of non-compliance

Details: Discharge of contaminants from a contaminated site to water.

Actions taken so far: Environment Southland has issued an abatement notice, which required actions to reduce unconsented discharges to land and groundwater. These actions have been completed.

Actions to ensure compliance moving forward: Groundwater monitoring to confirm the effectiveness of remedial actions is ongoing.

4.4.2 Daiken Southland Limited

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

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.



Figure 15: Aerial view of Daiken Southland site (Image by Daiken Southland Limited)

Consents
<p>Daiken Southland Limited holds 11 resource consents. The primary consents include:</p> <ul style="list-style-type: none"> • the discharge of contaminants to air from fibreboard processing, including the treatment of wastewater; • the discharge of effluent and treatment pond seepage to land; • the discharge of untreated stormwater and treated wastewater to water; • the discharge of stormwater to land; • the discharge from a tile drain to a watercourse; • the discharge of ash to land.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Daiken was compliant with all monitoring conditions for the 2022/23 monitoring period.			

4.5 Fertiliser industry

4.5.1 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?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

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

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Ballance Agri-Nutrients was compliant with all monitored consent conditions for the 2022/23 period.			

4.5.2 Ravensdown Limited

Ravensdown Limited operates a limestone quarry at Dipton.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>Ravensdown Limited holds three resource consents. Two of these permits are for the purpose of operating a limestone quarry at its Dipton site. The consents are:</p> <ul style="list-style-type: none"> • The discharge stormwater from a fertiliser storage and loading yard to land • The discharge of contaminants to air from limestone crushing, drying and handling

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Ravensdown ltd was fully compliant with all requirements for its permit during the 2022/23 period.			

4.5.3 Fernhill Limeworks Limited

Fernhill Limeworks Limited operates a limestone quarry at Kauana, north of Winton.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
Fernhill Limeworks Limited holds two resource consents for the purpose of operating a limestone quarry. The consents are: <ul style="list-style-type: none">• the discharge of treated stormwater to water;• the discharge of contaminants to air from limestone crushing, drying and handling.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent Performance Summary	2020/21	2021/22	2022/23
Fernhill Lime Works Limited was fully compliant with all requirements of its consent during the 2022/23 period.			

4.6 Mining industry

4.6.1 Greenbriar Limited

Greenbriar Ltd operate coal mines at Ohai and Waimumu (Goodwin and New vale mine sites).

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Ohai Mine site

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

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
The monitoring for the Ohai mine was undertaken as per the requirements of the consents and all discharge limits were met during the 2022/23 period.			



Figure 16: Ohai mine site 2023

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"> • to discharge treated water to the Hedgehope Stream (Goodwin); • to discharge treated water to the Hedgehope Stream (New Vale); • to take groundwater and surface water for mining (New Vale); • to discharge contaminants to air; • to discharge ash to land; • to discharge pelt processing solids to land; • to discharge dust suppressant to land.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
The monitoring for the New Vale and Goodwin mine was undertaken as per the requirements of the consents and all discharge limits were met during the 2022/23 period.			



Figure 17: New Vale mine site 2023

4.6.2 Bathurst Resources Limited

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

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.



Figure 18: Active mine pit, Bathurst Resources, Nightcaps

Consents
<p>Bathurst Resources Limited holds 12 consents related to its mining operation. The primary consents include:</p> <ul style="list-style-type: none"> • to take groundwater and surface water for dewatering; • the discharge of stormwater to water; • the discharge of treated site water to water; • the discharge of ash from industrial operations, mixed with overburden, to land; • the discharge of contaminants to air; • to disturb the bed and divert the flow of a tributary.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
There were no confirmed complaints or self-reported incidents during 2022/23 monitoring period.			

Consent performance summary	2020/21	2021/22	2022/23
Bathurst resources undertook all monitoring required by their consents and was fully compliant with the monitoring restrictions and limits for the 2022/23 monitoring period.			

4.7 Sawmill industry

4.7.1 R Richardson Limited

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
R Richardson Limited holds one consent related to its sawmilling operation at Winton. The consent is: <ul style="list-style-type: none">To discharge timber yard stormwater and condensate to water.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
There were no confirmed complaints or self-reported incidents received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
R Richardson had one low risk non-compliance for missed sampling and reporting for the 2022/23 period. To address the non-compliance the consent holder agreed to an additional round of sampling to be undertaken in the 2023/24 period. In addition Environment Southland requested that the sampling and reporting requirements of its permit are scheduled with its contractor to ensure full compliance moving forward. Advice and education was also provided around its permit.			

4.7.2 Findlater Sawmilling

Findlater Sawmilling Limited operates a sawmilling plant at Tussock Creek.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary 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	2020/21	2021/22	2022/23
There were no confirmed complaints or self-notifications received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Findlater Sawmilling Limited was compliant with all monitored consent conditions for the 2022/23 period.			

4.7.3 Lindsay & Dixon Limited

Lindsay & Dixon Limited operates a sawmilling plant at Tuatapere.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>Lindsay & Dixon Limited hold four consents, two of which are discharge consents related to its sawmilling operation at Tuatapere. The consents are:</p> <ul style="list-style-type: none"> • the discharge of stormwater to water from a sawmilling and timber processing site at Tuatapere; • to discharge settling pond sludge to land from a sawmilling and timber processing site at Tuatapere; • the installing and removing of culverts and bridges for a logging operation.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
<p>There was a moderate non-compliance recorded against Lindsay & Dixon’s discharge permit during the reporting period. During a routine site inspection it was found that the majority of stormwater swales and drains at the sawmill site were blocked with mud and sawdust. A request for immediate remediation was made in order to ensure that stormwater drains effectively from site as well as reduce risk of sediment contamination into the receiving freshwater tributaries. In addition further advice and education was provided to improve sediment control on site. Two routine stormwater samples runs were undertaken following the site inspection. A high cBOD₅ result was reported in a drain sample. No explanation for the reading was able to be provided. Lindsay & Dixon proactively retested the stormwater drain and the results retested within normal limits. All other monitoring results were within expected limits. Another site inspection will be planned for the 2023/24 period.</p>			

5.0 Sewage Treatment and Stormwater Systems

5.1 Invercargill City Council

5.1.1 Sewage treatment systems

The Invercargill City Council (ICC) holds resource consents for the purpose of treating and discharging wastewater at three locations within the Invercargill region.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>ICC holds 10 resource consents relating to its sewage treatment plants. These include consents to:</p> <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	2020/21	2021/22	2022/23
<p>One confirmed odour complaint was received during the 2022/23 reporting period. A member of the public reported an odour which was believed to come from the Clifton Wastewater Treatment Plant on 2 March 2023. A Resource Management Officer confirmed the odour which originated from the Clifton Wastewater Treatment Plant on 3 March 2023. The odour was brief and occurred during maintenance on the plant and rectified. No further action was taken in relation to the non-compliance of its relevant permit.</p>			

Wastewater

Bluff wastewater	2020/21	2021/22	2022/23
<p>One non-compliance was recorded against ICC's permit to discharge wastewater into the coastal and marine area at Bluff. This non-compliance was technical in nature due to late supply of data. ICC was fully compliant with all other requirements of its permit at the time of writing this report.</p>			
Invercargill wastewater	2020/21	2021/22	2022/23
<p>Two non-compliances were recorded against its air discharge permit during the 2022/23 reporting period:</p> <ul style="list-style-type: none"> • A non-compliance was recorded due to an odour complaint as previously stated. 			

- No odour liaison meeting occurred during 2022. Environment Southland advised that the expectation would be for ICC to ensure the meeting goes ahead in 2023 as required by its permit

ICC was compliant with all monitored consent conditions for the 2022/23 period.

Omaui wastewater	2020/21	2021/22	2022/23
ICC was compliant with all monitored consent conditions for the 2022/23 period.			

Biosolids to land, Station Road	2020/21	2021/22	2022/23
ICC was compliant with all monitored consent conditions for the 2022/23 period.			

Biosolids to land, Christies Track	2020/21	2021/22	2022/23
ICC was compliant with all monitored consent conditions for the 2022/23 period.			

Water abstraction

ICC operates the water treatment plant at Branxholme, where water from the Oreti River is treated for supply to Invercargill and Bluff. The City Council 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	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
<p><i>Discharge permit:</i> A technical non-compliance was recorded against its discharge permit on one occasion during the 2022/23 reporting period. This non-compliance was technical in nature due to late supply of data</p> <p>ICC was fully compliant with all other requirements of its permit during the reporting period.</p> <p><i>Abstraction permit:</i> The Invercargill City Council was non-compliant with the requirements of the Water Measurement and Reporting Regulations 2010. The Regulations require the ICC to record the</p>			

volume of water taken every 15 minutes and supply this to Environment Southland daily, this has not been undertaken. The regulations require that measuring devices are verified as measuring within 5% of actual volume every five years, the ICC has not met this requirement.

5.1.2 Stormwater systems

The Invercargill City Council (ICC) holds a resource consent for the purpose of discharging stormwater at multiple locations within the Invercargill area.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
ICC holds one resource consent relating to stormwater discharges from its reticulated stormwater network. This is to discharge stormwater, water, and contaminants to water.

Complaints and self-reported incidents

During the 2022/23 period 16 confirmed incidents or complaints were reported. This is a 45% increase from the 2021/22 period which recorded a total of 11 confirmed incidents or complaints.

Of these 16, eight were related to sewage entering the stormwater network. Seven of these were results of hydrocarbon spills while one was due to a Class A/B foam entering into the stormwater network.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
<p>The eight incidents involving sewage entering into the stormwater network occurred either through a blocked foulsewer main or private connection. The cause of the blockages were due to fat build up in the line, bituminous substance, rags or clothing items. An ICC staff member attended all incidents and used relevant contractors to identify, remove where practicable and remediate the sites in a satisfactory manner. On all occasions samples were taken by ICC and an inspection was undertaken to assess any environmental effects on the receiving waters. Where appropriate temporary signage was erected by ICC to warn members of the public of the potential water quality risk.</p> <p>The seven incidents involving hydrocarbon spills into the stormwater network were caused by members of the public or businesses either knowingly or unknowingly discharging hydrocarbons to the reticulated stormwater network summarised below:</p> <ul style="list-style-type: none"> On three occasions no source of the hydrocarbon spill was found by ICC. Two of the three incidents involved a hydrocarbon spill onto the road/kerbside. One of the three incidents involved a hydrocarbon discharge from an ICC stormwater outfall which ceased by the following day. ICC undertook steps to control and remediate the effects of the contaminants on the receding water. 			

Complaints and self-reported incidents	2020/21	2021/22	2022/23
<ul style="list-style-type: none"> • Two of these incidents were due to unforeseen circumstances such as theft or arson. ICC undertook steps to control and remediate the effects of the contaminants on the receiving water. • On one occasion ICC issued an infringement notice to the known offender. • On one occasion ICC found two alleged offenders following an investigation into the catchment due to a hydrocarbon spill discharging from a stormwater outlet. One alleged offender received advice and education by ICC and ES referred this alleged offender internally for Selected Land Use Site registration consideration. The likely source of this offence was later identified by ICC who subsequently issued this alleged offender with a notice to fix and ES issued an abatement notice. The discharge at the stormwater outfall has since ceased. <p>One incident involved FENZ using class A/B foam to extinguish a large rubber fire at a local school where the foam entered the stormwater network. It is unknown how many litres of contaminated substance entered the stormwater drain before bunding was implemented. ICC used relevant contractors to clean and remediate the site accordingly. A satisfactory assessment was undertaken by ICC to assess any potential environment effects and sign were erected as a precaution for the public. To prevent a recurrence a FENZ Senior Risk Reduction Advisor worked with the school to minimise/eliminate the risk of a similar incident occurring</p>			

Consent performance summary	2020/21	2021/22	2022/23
<p>ICC was in breach of the discharge conditions of its consent due to the confirmed discharge of sewage, and other hazardous substances, from the stormwater network.</p> <p>A non-compliance was recorded in relation to ICC's annual stormwater report 2022/23 which did not contain all information required by its permit. Advice and education around improving reporting to better demonstrate compliance with its consent requirements was given. Environment Southland also requested greater transparency within the ICC's annual report to demonstrate whether an improvement to the quality of stormwater within Invercargill City has occurred since the permit was issued.</p>			

Summary of non-compliance

Details: Sixteen confirmed instances discharge of prohibited substances including sewage and fuel from the stormwater network.

Actions taken so far: Environment Southland has been working with ICC to ensure that spills and discharges are avoided as much as possible, adequately mitigated and resolved

Actions to ensure compliance moving forward: Environment Southland is monitoring the situation and will take action where the response to non-compliance is inadequate.

5.2 Southland District Council

5.2.1 Sewage treatment systems

The Southland District Council (SDC) holds resource consents for the purpose of treating and discharging wastewater at 23 locations within the Southland district. The compliance performance during 2022/23 was assessed against current resource consents.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
SDC holds 25 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 contaminants to air from wastewater treatment.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
Two self-reported incidents were received. One was a self-notification of a partially treated sewage spill to land between Te Anau and Manapouri as a result of a car crashing into a raised sewerage line air vent. One self-notification of an overflow from the Riversdale oxidation pond to land due to a blockage between the pond and soakage channels.			

Consent performance summary

Balfour	2020/21	2021/22	2022/23
The downstream dissolved oxygen (DO) level was exceeded on one occasion. This was the first exceedance of this nature so SDC advised to investigate discharge DO improvements.			
The daily discharge inflow exceeded the consent outflow limit on 140 occasions during rain. There was no risk of any adverse environmental impacts from these exceedances. The flow limit is currently being addressed through the re-consenting application.			

Browns	2020/21	2021/22	2022/23
<p>SDC Browns wastewater treatment system was fully compliant with all receiving water monitoring consent conditions for the 2022/23 period. A total phosphorus test on the discharge was missed on one occasion. All remaining discharge testing was fully compliant.</p> <p>The daily discharge inflow exceeded the consent outflow limit on 30 occasions during rain. There was no risk of any adverse environmental impacts from these exceedances.</p>			

Curio Bay	2020/21	2021/22	2022/23
<p>SDC Curio Bay wastewater treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.</p>			

Edendale/Wyndham	2020/21	2021/22	2022/23
<p>SDC Edendale/Wyndham wastewater treatment system was fully compliant with all effluent quality and receiving water monitoring consent conditions for the 2022/23 period.</p> <p>The annual average daily discharge inflow exceeded the consent outflow limit, and the maximum daily discharge flow limit was exceeded on 21 occasions during rain. There was no risk of any adverse environmental impacts from these exceedances. The flow limit is currently being addressed through the re-consenting application.</p>			

Gorge Road	2020/21	2021/22	2022/23
<p>SDC Gorge Road treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.</p>			

Lumsden	2020/21	2021/22	2022/23
SDC Lumsden treatment system was fully compliant with all monitoring consent conditions for the 2022/23 period.			

Manapouri	2020/21	2021/22	2022/23
SDC Manapouri treatment system was fully compliant with all monitoring consent conditions for the 2022/23 period.			

Monowai	2020/21	2021/22	2022/23
SDC Monowai treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.			

Nightcaps	2020/21	2021/22	2022/23
SDC Nightcaps treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.			

Ohai	2020/21	2021/22	2022/23
The discharge E.coli limit was exceeded on one occasion due to high flows bypassing the UV unit. A new larger UV was installed June 2023 which will treat all flow volumes. The daily discharge outflows exceeded the consent outflow limit on 36 occasions during rain. SDC is undertaking ongoing work to reduce stormwater infiltration into the sewerage network.			

Otautau	2020/21	2021/22	2022/23
SDC Otautau treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.			

Riversdale	2020/21	2021/22	2022/23
The downstream dissolved oxygen (DO) limit decreased below the consented limit on one occasion. Construction of the rapid infiltration basins to remove the discharge from the waterway and discharge to land has started. The remaining monitoring was fully compliant with the consent conditions for the 2022/23 period. There was an overflow from the Riversdale oxidation pond to land due to a blockage between the pond and soakage channels. Environment Southland was not notified until a month after the overflow.			

Riverton Rocks	2020/21	2021/22	2022/23
SDC Riverton Rocks wastewater treatment system was fully compliant with all monitoring consent conditions for the 2022/23 period.			

Riverton township	2020/21	2021/22	2022/23
SDC Riverton township wastewater treatment system was fully compliant with all effluent quality and receiving water monitoring consent conditions for the 2022/23 period.			

Stewart Island	2020/21	2021/22	2022/23
On four occasions the dissolved inorganic nitrogen limit in the water body was exceeded. New disposal lines have been laid to improve the land disposal.			

Te Anau – Upukerora	2020/21	2021/22	2022/23
SDC Te Anau wastewater treatment system was fully compliant with all monitoring consent conditions for the discharge to land, water and air permits for the 2022/23 period.			

Te Anau – Kepler	2021/22	2022/23
The annual wastewater total nitrogen loading was exceeded by 11.4%. Review of the environmental management plan is being undertaken in response. The E.coli limit was breached in one bore on one occasion. Well head protection was added to all bores in response. The remaining monitoring and reporting requirements were complied with for the 2022/23 period.		

Tokanui	2020/21	2021/22	2022/23
SDC Tokanui treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.			

Tuatapere	2020/21	2021/22	2022/23
SDC Tuatapere treatment system was fully compliant with all monitored consent conditions for the 2022/23 period.			

Winton	2020/21	2021/22	2022/23
The discharge was changed from multiple pipe outlets on the side of the river to one diffuser across the width of the river in December 2021 which resulted in improved ammoniacal nitrogen downstream. However, there was still one exceedance of the downstream			

ammoniacal nitrogen in February 2023 during very low flows. The daily inflows were greater than the outflow limit on 344 days. The wastewater treatment system was fully compliant with the remaining monitoring consent conditions for the 2022/23 period. SDC are in the process of re-consenting with the long term intention to change the discharge to land.

Note: 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 sewerage systems. Therefore, although the discharge flows have increased the discharge is likely to be more dilute than normal due to mixing with rainwater. Discharge inflows are sometimes used as a proxy for outflows. Oxidation ponds and wetlands provide retention of the wastewater and buffering of the inflows therefore occasional increased inflows will not result in increased outflows.

Water abstraction

The Southland District Council holds 23 resource consents to abstract groundwater and surface water for community and rural water supply. This includes emergency water 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 2022/23 period. However, one rural water supply, Eastern Bush/Otahu Flat, is operating without a consent, as the previous consent expired before a new consent application was lodged. The application for the new consent is still in progress.

Consent performance summary

SDC abstracted water from 22 consented locations for the townships and rural communities in Southland during the 2022/23 period.

- 21 water takes were fully compliant with the abstraction limit.
- The emergency water take for Te Anau was not exercised.
- Only one consented take, Ohai, Nightcaps and Wairio, exceeded its consented limit on one occasion due to SDC having to empty then refill the reservoir due to insufficient chlorine dosing due to high organics. Sufficient chlorine is essential for human health.

5.2.2 Stormwater systems

The Southland District Council (SDC) holds resource consents for the purpose of discharging stormwater from 18 townships within the Southland region. The compliance performance during 2022/23 was assessed against current resource consents.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
SDC holds five discharge consents. The primary consent is the discharge of stormwater and land drainage water to surface water bodies and soak pits.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
<p>One public complaint was received regarding oil from a vehicle discharging into a gutter in Tuatapere. SDC investigated and cleaned up spill.</p> <p>One public complaint was received regarding the discharge of sediment into Riverton Harbour from a construction site. SDC investigated the discharge and followed up with the site.</p> <p>Five public complaints were received regarding the discharge of oil into an open stormwater drain in Winton. Environment Southland put out booms and SDC undertook an extensive investigation including using CCTV camera in the stormwater network to try and find the source believed to be coming from private property. Unfortunately the source of the discharge was unable to be located. The discharge has since stopped.</p>			

Consent performance summary

Balfour, Browns, Lumsden, Mossburn, Riversdale, Tokonui and Waikaka	2020/21	2021/22	2022/23
The monitoring conditions of the consent were compliant for the 2022/23 period.			

Dipton, Edendale, Manapouri, Nightcaps, Ohai, Otautau, Tuatapere and Wallacetown	2020/21	2021/22	2022/23
The first round of dry weather monitoring was undertaken for all sites except Otautau. The Dipton dry weather results exceeded the consent limits. Investigations are ongoing at Dipton to locate the source. The remaining dry weather results complied with the consent. Wet weather monitoring was not undertaken for Dipton and Edendale. The wet weather samples that were collected were fully compliant with the consent limits for the six towns monitored. The annual report for 2022/23 was received.			

Winton	2020/21	2021/22	2022/23
The first round of dry weather monitoring was undertaken for all sites. However follow up site visits within six months for sites that were previously dry were not undertaken. The annual report for 2022/23 was received.			

Te Anau	2020/21	2021/22	2022/23
Results from the dry weather samples that were collected complied with the consent limits. Follow up site visits within six months for sites that were dry was not undertaken. The annual report for 2022/23 was received.			

5.3 Gore District Council

5.3.1 Sewage treatment systems

The Gore District Council (GDC) holds resource consents for the purpose of treating and discharging wastewater at three locations within the Gore district. The compliance performance during 2022/23 was assessed against the current resource consents.

The applications for renewal of the discharge consents at the Mataura and Gore wastewater treatment plants are still in progress.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
GDC holds five sewage treatment related resource consents. These consents are: <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;• discharge of waste activated sludge to land from industrial or trade processes.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
There were no incidents relating to wastewater treatment for 2022/23.			

Consent performance summary

Gore	2020/21	2021/22	2022/23
The Gore wastewater treatment system was compliant with all monitored consent conditions for the 2022/23 period. Ecological monitoring indicates that there was likely to be some effect on the composition of macroinvertebrate communities and periphyton cover in the Mataura River downstream of the discharge. Gore District Council's consent to discharge to the Mataura River expires in December 2023. An application to renew this consent was lodged with Environment Southland in January 2021.			

Mataura	2020/21	2021/22	2022/23
All monitoring required by the consent was undertaken and all water sample results were compliant with the consent for the 2022/23 period. The consent to discharge treated wastewater to the Mataura River expired in May 2021. An application to renew the discharge consent was lodged in January 2021 and the Gore District Council currently has the right to continue to operate under section 124 of the RMA until the consenting process is complete.			

Waikaka	2020/21	2021/22	2022/23
All monitoring required by the consent was undertaken and all water sample results were compliant with the consent for the 2022/23 period.			

Water abstraction

GDC holds nine 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 the GDC water take consents for the 2022/23 period.

Consent performance summary

Information supplied for the Gore district Councils water permits showed compliance with the abstraction limits of the consents. A flow meter was not in place to at one of the bores at Jacobstown for part of the year due to equipment failure.

5.3.2 Stormwater systems

Stormwater networks

The Gore District Council (GDC) holds resource consents for the purpose of discharging stormwater at three locations within the Gore region.

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

Complaints and self-reported incidents	2020/21	2021/22	2022/23
<p>Following a number of stormwater non-compliances in the 2019/20 year, an abatement notice was issued. The abatement notice required the GDC to create a stormwater bylaw giving themselves the regulatory tools to enable compliance with their consent. The bylaw was notified in 2022 and public consultation was undertaken. Following that consultation no further action has been taken by the Gore District Council to implement the bylaw. Twice during 2023 Environment Southland has identified breaches of the receiving water standards of the Gore stormwater discharge consent and the abatement notice. At the time of writing Environment Southland is undertaking further investigation.</p>			

Consent performance summary

Gore	2020/21	2021/22	2022/23
<p>GDC undertook all monitoring required by the consent in 2022/23 including routine sampling on four occasions. GDC were highly proactive in investigating potential private wastewater cross-connections or wastewater infiltration to the stormwater network. During these investigations one broken pipe was found to be allowing wastewater into the stormwater network. This has been rectified. Two breaches of the receiving water standards of the consent we identified during 2023. Environment Southland is undertaking further investigation.</p>			

Summary of non-compliance

Details: Gore district Council was found in breach of an abatement notice to cease the discharge of contaminated stormwater on two occasions.

Actions taken so far: At the time of writing Environment Southland is undertaking further investigation into these events.

Mataura	2020/21	2021/22	2022/23
<p>GDC undertook all monitoring required by the consent in 2022/23. GDC were highly proactive in investigating potential private wastewater cross-connections.</p>			

Pukerau and Waikaka	2020/21	2021/22	2022/23
<p>GDC completed all required monitoring in Pukerau and Waikaka. In 2021/22 the Pukerau stormwater network was identified as having infiltration of wastewater to the stormwater network. This was rectified during 2022/23. The Waikaka network was fully compliant for the period.</p>			

6.0 Quarrying

6.1 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 has 100 current land use consents to extract gravel from Southland Rivers.

From 1 April 2023 the monitoring of the gravel extraction consents moved from the catchment operations team to the compliance team. This was the beginning of taking an organisational approach towards gravel management. During the first year of this change, a largely educational approach is being taken to ensure consent holders understand the conditions in their consent and also for our monitoring team to familiarise themselves with the sites.

Gravel Wash

Gravel wash sites require a consent to discharge to either land or water and a number also hold a consent for water abstraction.

There are 14 current gravel wash discharge consents and we monitored all except one of these in February this year. All 13 were graded fully compliant, while the other one is a new consent that wasn't in place at the time of the inspections

7.0 Landfills

7.1 S J Timpany Contracting – Landfill

S J Timpany Contracting operates a landfill at Otatara, accepting solid waste, asbestos and contaminated soils. The site also has a holding pad which allows for sample testing of contaminated soils and the encapsulation of contaminants prior to acceptance.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
S J Timpany Contracting holds a consent to discharge clean fill and solid waste to land.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No incidents or self-reported incidents were received during the 2022/23 reporting period.			

Consent performance summary	2020/21	2021/22	2022/23
S J Timpany landfill was fully compliant with all monitored consent conditions during the 2022/23 period. No issues were identified by Environment Southland during the assessment of consent monitoring reports, site inspections, ground water sampling or surface water sampling.			



Figure 19: S J Timpany Landfill 2023

7.2 AB Lime Limited

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.

A B Lime applied for new consents during 2020 to allow the landfill to increase the volume of waste received at the site. These were issued on 16 July 2021 and all consents have subsequently been given effect to.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>AB Lime Limited holds 11 resource consents relating to the landfill. The consents active are:</p> <ul style="list-style-type: none"> • the discharge solid waste onto or into land; • to discharge contaminants into air from refuse disposal facilities receiving greater than 100,000m³/year of uncompacted solid waste; • to discharge up to 200m³ per day of leachate onto or into land within the landfill footprint for the purposes of recirculation; • to discharge contaminants into air from combustion processes where combustible refuses matter is flared; • to install two wells for monitoring purposes; • the discharge of stormwater to a tributary of the Lochiel Stream; • to use masking agents to disguise odour; • to take 40 cubic metres of groundwater; • to take 500 cubic metres of surface water; • to dam and divert surface water; • to discharge contaminants to the air form the extraction of limestone from an open quarry.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
<p>No confirmed complaints during the 2022/23 period. AB Lime received one odour complaint direct from the public which was subsequently self-reported to ES. No odour was confirmed. During the investigation into the complaint AB Lime demonstrated that appropriate checks and mitigations were in place.</p>			

Air discharge consent performance	2020/21	2021/22	2022/23
<p>AB Lime Landfill was compliant with all monitored consent conditions for the 2022/23 period.</p>			

Other consent performance	2020/21	2021/22	2022/23
<p>AB Lime Ltd showed a high level of compliance with its consent conditions for the 2022/23 period.</p>			
<p>Two low risk non-compliances were recorded during the reporting period due to late supply of data and instrument failure. In both instances the reasons behind the non-compliance was out of AB Lime Limited's control and no further action was taken as AB Lime demonstrated that the appropriate steps were being undertaken to ensure it is working towards full-compliance.</p>			



Figure 20: View of active filling in area 15 with area 14 behind, AB Lime

8.0 Coastal Marine Area

8.1 South Port and New Zealand Aluminium Smelter Limited’s coastal plan agreements



Figure 21: 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), based on the Tiwai Peninsula, service and manage the import and export operations of aluminium and aluminium feed stocks.

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	2020/21	2021/22	2022/23
There were no confirmed complaints self-reported incidents related to the South Port discharge agreement.			

NZAS Wharf	2020/21	2021/22	2022/23
Environment Southland (ES) received two complaints related to dust emissions while unloading alumina at the Tiwai Wharf. It was found that the dust emissions complied with the Discharge Agreement issued under the provisions of the Regional Coastal Plan. ES has been monitoring the discharges from the wharf ahead of the Discharge Agreement expiry in September 2026.			

8.2 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.

Whitebait stands are inspected during whitebaiting season in September each year and the programme sits alongside a communications campaign. Inspections are completed early to mid-season, which allows owners additional time for repairs.

During the annual inspections, any illegal stands which are located are left with an illegal stand notice attached to the stand for the owners to contact Environment Southland.

Whitebait stands are inspected for compliance, with common conditions such as each stand displaying a unique stand number, displaying the consent holder's name, being at the consented length and in a state of good repair.



Figure 22: Example of whitebait stands

9.0 Tourism

9.1 Department of Conservation

The Department of Conservation (DOC) holds resource consents throughout the Southland region for a number of different purposes.

What do we look at?

Environment Southland investigate complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
DOC holds resource consents for the following purposes:
<ul style="list-style-type: none"> • Coastal: 15 • Discharge: 28 • Land Use: 6 • Water: 14

Complaints and self-reported incidents	2020/21	2021/22	2022/23
There was one self-notification from DOC of an oil spill located at its berth in Deepwater Basin, Milford Sound. Upon investigation into the incident it was found that no reasonable action was taken by the DOC staff member who found the oil spill, to contain and recover the spill. This incident was also a moderate non-compliance of its relevant coastal permit. The overall circumstances of this incident were considered and a decision made to issue DOC with a formal warning for a breach of its permit.			

Consent performance summary	2020/21	2021/22	2022/23
<p>Clinton Hut - DOC hold two permits in relation to the Clinton Hut. A technical non-compliance was recorded against its permit to discharge treated wastewater to land due to an upstream sample breaking in transit. The concentration of the parameters in the downstream sample were within expected limits. No further action was taken in relation to the non-compliance. The consent holder was otherwise compliant with all other requirements of its permit for the 2022/23 period.</p> <p>DOC met all requirements of its abstraction permit during the 2022/23 period.</p>			

Consent performance summary	2020/21	2021/22	2022/23
<p>Mintaro Hut - DOC at the Mintaro Hut met all monitoring and reporting requirements for both its surface water take and discharge permits for the 2022/23 period.</p>			

Consent performance summary	2020/21	2021/22	2022/23
<p>Dumpling Hut - DOC's permit to discharge permit at Dumpling Hut does not have any regular reporting requirements. Environment Southland were not made aware of any complaints</p>			

Consent performance summary	2020/21	2021/22	2022/23
reported by DOC in relation to the activity. No records were made against this permit for the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Luxmore Hut - DOC's discharge permit at Luxmore Hut does not have any regular reporting requirements. Environment Southland were not made aware of any complaints reported by DOC in relation to the activity. No compliance records were made against this permit during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Iris Burn Hut - DOC hold two permits in relation to the Iris Burn Hut. Non-compliance was recorded against its surface water take permit due to non-supply of its annual verification data. A timeframe to submit the data to ES was given to the consent holder which was not met. A non-supply of data fee was issued and the annual verification data subsequently supplied to ES. DOC's discharge permit does not have any regular reporting requirements. Environment Southland were not made aware of any complaints reported by DOC in relation to the activity.			

Consent performance summary	2020/21	2021/22	2022/23
Moturau Hut - DOC at the Moturau Hut met all its monitoring and reporting requirements for its discharge to land permit during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Lake McKenzie Hut - DOC hold three permits in relation to the McKenzie Hut. A moderate non-compliance was recorded against its surface water take permit due to non-supply of its annual verification data. A timeframe to submit the data was given to the consent holder, which was subsequently met. No further action was taken by ES in relation to this non-compliance. DOC met all its monitoring and reporting requirements for both its discharge permits during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Howden Hut - Howden Hut has been closed since it sustained damage during flooding in February 2020.			

Consent performance summary	2020/21	2021/22	2022/23
Martins Bay Hut - DOC at the Martins Bay Hut met all its monitoring and reporting requirements for its discharge permit during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Anchor Island - DOC did not exercise its consent at Anchor Island during the 2022/23 reporting period.			

Consent performance summary	2020/21	2021/22	2022/23
Mavora Lakes - DOC at Mavora Lakes met all requirements for its discharge to land permit during the 2022/23 period.			

Environment Southland inspections

Environment Southland inspects the Routeburn, Milford and Kepler Tracks approximately 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. No inspections were undertaken in the 2022/23 reporting period due to resourcing. 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. Note: 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 23: Mackinnon Pass Shelter, Milford Track

9.2 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?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
<p>Milford Sound Tourism holds six resource consents. The primary consents include:</p> <ul style="list-style-type: none"> • discharge treated wastewater to groundwater at Knobs Flat; • carry out maintenance dredging in Freshwater Basin; • discharge treated wastewater to water at Deepwater Basin; • occupy part of the coastal marine with an existing discharge pipe; • dam, divert and use water, discharge water containing sediment to water, and discharge water to water from a hydro-electric power scheme at Knobs Flat; • occupy coastal marine with wharf and dolphin structures.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent Performance	2020/21	2021/22	2022/23
<p>There were four minor non-compliances for missing or late supply of data at Milford Sound and Knobs Flat.</p> <p>Early within 2023, non-compliance was recorded for failure for one rotating cleansing unit at the Knobs Flat treatment plant.</p> <p>During 2022, non-compliance was recorded for treated effluent discharge exceeded E.Coli limits from the Knobs Flat treatment plant. As a result, Milford Sound Tourism made the decision to close the treatment plant.</p>			

9.3 Ultimate Hikes

Ultimate Hikes holds eight current resource consents throughout the Southland region for a number of different purposes.

What do we look at?

Environment Southland investigates complaints and self-reported incidents and assesses compliance against the conditions listed in the primary resource consents.

Consents
Ultimate Hikes holds resource consents for the following purposes: <ul style="list-style-type: none"> to discharge treated sewage onto and into land; to discharge uncontaminated overflow water to a waterway; to take and use surface water.

Complaints and self-reported incidents	2020/21	2021/22	2022/23
No confirmed complaints or self-notifications were received during the 2022/23 period.			

Consent performance summary	2020/21	2021/22	2022/23
Glade House - Ultimate Hikes at Glade House did not supply documentation and results of monitoring as required by their consent during 2022/23.			

Consent performance summary	2020/21	2021/22	2022/23
Pompolona Lodge - Ultimate Hikes at the Pompolona Lodge did not supply documentation and results of monitoring as required by their consent during 2022/23.			

Consent performance summary	2020/21	2021/22	2022/23
Quinton Lodge - Ultimate Hikes at Quinton Lodge did not supply documentation and results of monitoring as required by their consent during 2022/23.			

Consent performance summary	2020/21	2021/22	2022/23
Mackenzie Lodge - Ultimate Hikes at Mackenzie Lodge has no monitoring required on this consent.			

Environment Southland Inspections

Environment Southland inspects the Routeburn and Milford Tracks approximately 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. Inspections were last done 2017/2018.

9.3 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 the Resource Management Act 1991.

Compliance of commercial surface water activities is assessed by monitoring surface water activity logs provided as a condition of consents. During 2022/23 51% of logs received were assessed. Of those assessed 96% were fulling compliant, 4% were non-compliant.

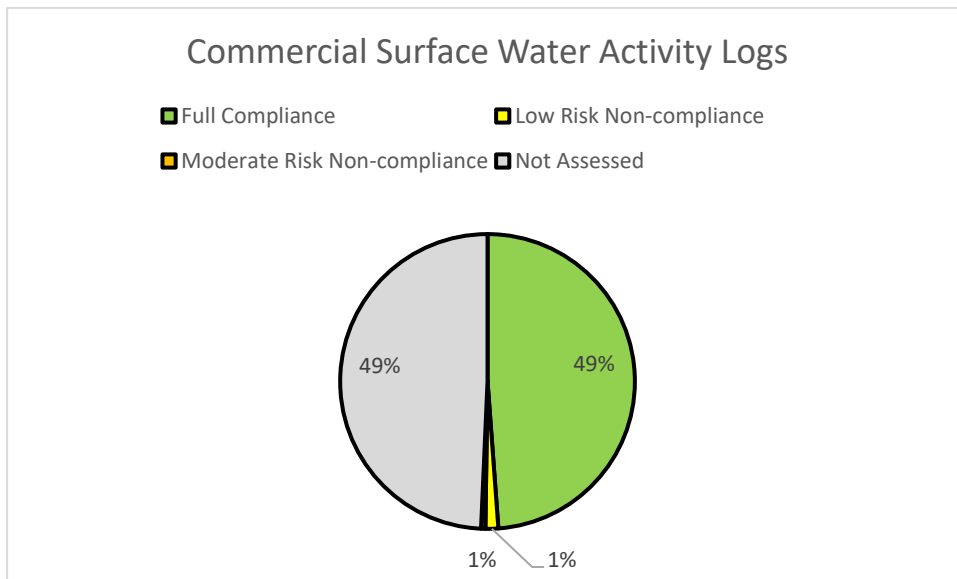


Figure 24: Commercial Surface Water Activity Logs

10.0 Small Industries

10.1 Cleanfill site inspections

Cleanfill sites are spread throughout Southland. There are 25 consented sites in total.

Cleanfills are “fill sites” that only accept materials that have no adverse effects on people or the environment when they are buried. Cleanfill materials include virgin natural materials such as clay, soil, rock, and other inert materials such as bricks.

It is important that cleanfills are free from combustible, degradable, hazardous or liquid wastes because they are not designed with the appropriate measures in place to protect the environment from contact with them in the same way as landfills. Appropriate use of cleanfills helps divert a large portion of the waste stream from landfills.

We monitor these to ensure that only materials that meet the necessary criteria are being deposited and no unexpected damage to the environment is occurring.

During 2022/23, 13 inspections were completed with 10 being graded as fully compliant, one as moderate non-compliance and two as significantly non-compliant. Two abatement notices were issued and one formal warning.



Figure 25: An example of green waste which is not allowed to be discharged to a cleanfill

10.2 Truck wash inspection

Truck washes are facilities where stock and other large trucks are cleaned in order to reduce risk of disease spread and effluent discharging to roads. Contaminants in the wash water varies dependent on the type of truck washed. The common contaminants seen are pathogens (effluent), ammoniacal nitrogen (effluent), phosphorus (sediment), hydrocarbons (fuel residue) and metals. This essential service requires wash water storage facilities with sufficient areas of flat land for discharging this wash water. While truck washes are a small industry by comparison, the risk to the environment can be large if the wash water is poorly managed.

Truck washes are usually inspected annually, unless otherwise stated in the resource consent. Some truck washes have desktop reporting requirements such as water sample results and wash water discharge logs. There are 20 consented truck washes in Southland.

During the 2022/23 year, 15 were inspected and all these inspections were found to be fully compliant. There has been one significant non-compliance for over application of discharge volume combined with previous low risk non-compliance history. This has been referred for enforcement consideration.



Figure 26: An example of a truck wash facility

Part C

Enforcement

11.0 Enforcement

Environment Southland has an Enforcement Policy available on our website at the following link:

<https://www.es.govt.nz/environment/compliance/compliance-information>

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

Following an investigation into an incident or breach, enforcement action may be considered. When enforcement action is believed to be necessary the compliance division uses the most appropriate tool for the given situation. Enforcement action can be a directive action such as a letters of direction, warning, abatement notice or enforcement

11.1 Advice Letters

These are used when where there are identified minor non-compliance with no immediate environmental impacts and are used to advise people of a rule or regulation they may be breaching or at risk of breaching. These are designed to highlight the issue and give people the opportunity to correct the situation and prevent further non-compliance.

In the 2022/23 year we issued 97 letters of advice and these related to early monitoring of the new intensive winter grazing rules, where people were advised prior to stock being on the crop that they were in breach of the slope or critical source area rules.

11.2 Letters of Direction and Warnings

A letter of direction is used in a minor to moderate situation with a cooperative, 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 2022/23 year, the compliance division issued 13 letters of direction and 40 formal warnings. For comparison 2021/22 the compliance division issued 36 letters of direction and issued 36 formal warnings.

11.3 Abatement notices

An abatement notice requires an offender to comply with the notice within a specified timeframe.

Unlike enforcement orders they are issued by compliance officers and do not require an application to be made to the Environment Court. Depending on the situation, they may just be a tool which ensures people do the right thing and we are able to assess that they have, or they can be used in more serious cases to ensure illegal activity having an impact on the environment is ceased.

Non-compliance with an abatement notice is an offence under the Resource Management Act 1991 and can receive infringement fines or prosecution.

During the 2022/23 year, the compliance division issued 60 abatement notices. In 2021/22 the compliance division issued 23 abatement notices.

11.4 Enforcement orders

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

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

Enforcement orders offer more options than an abatement notice, including the ability to recover clean-up costs in avoiding, remedying or mitigating any adverse effect on the environment.

The court may also order restoration of a natural or physical resource. If the order is not complied with, council may go ahead and comply on the respondent's behalf (and recover the cost of doing so).

Enforcement orders can be issued at sentencing or can be issued prior to enforcement action being taken or alternatively 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.

No enforcement orders were applied for or granted during the 2022/23 year, however a prosecution trial did take place for a breach of an enforcement order.

11.5 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 \$1000, and if not paid in certain timeframes, is then sent to the Ministry of Justice for fine collection (where further fees are likely to be added).

Infringements are a punitive tool that acknowledge a person or company has breached the Resource Management Act.

Infringements can be appealed and information on how to make an appeal is found on the back of each infringement notice. Staff can also explain this and payment arrangements can be made for those struggling to pay.

During the 2022/23 year, the compliance division issued 33 infringement notices. For comparison 2021/22 the compliance division issued 18 infringement notices.

11.6 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 - rehabilitation, reparation and restoration, as well ensuring that the Council's statutory objectives are met.

The chief executive is responsible for determining whether the public interest is best served by the continuation of a prosecution or by an offer of diversion. In assessing eligibility for diversion, the chief executive will consider:

- Offender-based criteria; and
- Offence-based criteria.

The weight given to particular criteria will be a matter for the chief executive's discretion.

No diversions were finalised in the 2022/23 period. In the 2021/22 year there were no cases considered for alternative enforcement action.

11.7 Prosecutions

Consideration of an offence for prosecution is done through the Enforcement Policy. Prior to proceeding with prosecution the matter is put before the Enforcement Decision Group (EDG) – a group of internal experts who consider the evidence against each case against the principles of the Solicitor General's Prosecution Guidelines.

Following an EDG process, the group can conclude that the case can cease, recommend a different outcome, ask for more information or recommend an independent legal review.

A legal review is returned and final sign-off is completed by the chief executive for prosecution action to proceed. 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.

In 2022/23 one prosecution was finalised, with a judgement made in favour of Environment Southland for breach of an enforcement order. For comparison no prosecutions were finalised in the 2021/22 period.

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	The Australian 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 a – 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.

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 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 cloudier 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.