



2014/2015 Pollution Prevention and Compliance Report



2014/2015

**Pollution Prevention and
Compliance Report**

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EXECUTIVE SUMMARY

INTRODUCTION

The Bay of Plenty Regional Council (BOPRC) works to support the sustainable development of the region through managing the effects of people's use of freshwater, geothermal, land, air and coastal resources. We also have a broader responsibility for the economic, social and cultural well-being of the regional community.

Bay of Plenty Regional Council uses a variety of regulatory and non-regulatory tools to manage the environmental impacts of activities throughout the region, including rules and resource consents made under the Resource Management Act 1991 (the RMA). Compliance with the requirements of these rules and resource consents provides an important measure of how we, as a regulatory authority, engage with the community to manage environmental impacts.

This report provides an overview of findings from compliance monitoring undertaken from 1 July 2014 to 30 June 2015, and discusses projects undertaken by the Pollution Prevention team to improve environmental management across the region. Compliance is presented across the region's nine Water Management Areas (WMAs), to show the spatial distribution of consented activities and compliance monitoring. The report also provides a discussion on some significant emerging issues relating to resource management across the region, and how they impact the community's ability to meet compliance requirements, and our approach to implementing compliance.

This is the first annual report produced by the team that captures the range of work undertaken across the region. The report will form a foundation for future reporting, which will allow us to better identify and understand long-term trends.

SUMMARY OF FINDINGS

Compliance across the region was generally good with 80% of resource consent assessments achieving full compliance. Of the 20% found to be non-compliant, the majority were low risk. Only 8% of all assessments found high risk or major non-compliance. Geographically, compliance levels were largely consistent across the region. Seven of the nine WMAs achieved greater than 70% compliance.

The highest performing WMAs were Tauranga Harbour and Rotorua Lakes, with 86% and 80% compliance levels respectively. The Ōhiwa Harbour and Waiotahi (64%) and East Coast (55%) WMAs were the lowest; however these results may be influenced by the smaller number and different mix of consents assessed within those areas.

Compliance levels varied depending on the activity. Greater detail and discussion on the compliance results for activities is provided within the report.

CHALLENGES AND OPPORTUNITIES

The biggest challenges managing compliance in the Bay of Plenty Region are trying to monitor compliance with non-consented (permitted) activities, managing the administrative burden of maintaining and monitoring over 5,000 resource consents; and capturing and collating the data in a format that allows us to analyse, identify and understand long-term trends and target our compliance monitoring.

This report forms a foundation for future reporting, that will allow us to better understand and document long-term trends in:

- Common challenges for particular consent types.
- Patterns in compliance for different areas of the region.
- Changes in compliance findings across time.

In better understanding these trends, we can continue to improve our compliance programme to take a stronger environmental risks-based approach, which can better target recurring issues, and improve the consistency of our service to consent holders.

The statistics used in this report provide a robust and valuable insight into the activities across the region but deficiencies are evident when trying to understand trends in the types of non-compliance, and analyse it in a geospatial context. Council is currently rolling out a new compliance and consents data management system (ACCELA), which will provide significant improvements in these areas and will allow us to identify trends in greater detail, further guiding how we structure our compliance monitoring.

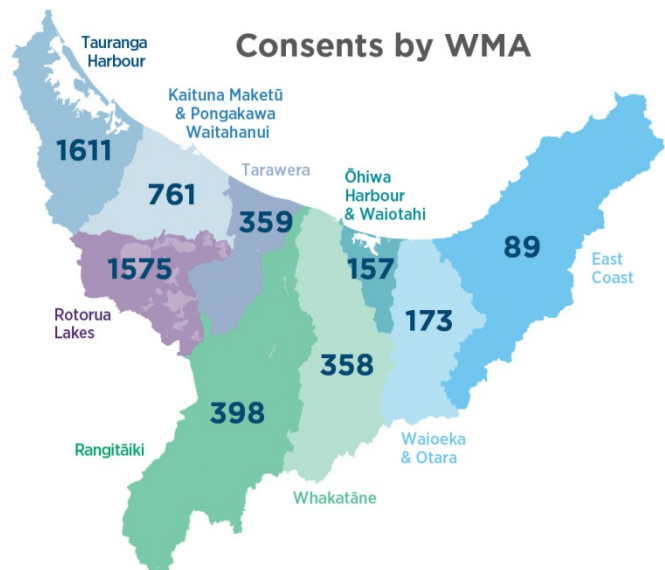
2014/2015 MONITORING PERIOD

COMPLIANCE ACROSS THE REGION



5481 } 40% consents assessed
Consents

2684
assessments



Most assessments carried out - by type More than 150 assessments and not including 'other' category



14% (380)
Dairy Effluent



14% (380)
Rotorua Lake Structures



13% (359)
Earthworks



12% (324)
Agricultural Water Use

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INTRODUCTION

Bay of Plenty Regional Council works to support the sustainable development of the region through managing the effects of people's use of freshwater, geothermal, land, air and coastal resources. We also have a broader responsibility for the economic, social and cultural well-being of the regional community.

Bay of Plenty Regional Council uses a range of regulatory and non-regulatory tools to manage environmental impacts of activities. The most commonly used tools are resource consents and regional plans made under the Resource Management Act 1991 (the RMA).

This report provides an overview of findings from compliance monitoring undertaken from 1 July 2014 to 30 June 2015. It also provides a discussion on some significant emerging issues relating to resource management across the region, particularly around waste and wastewater.

The total number of consents for each category, the actual number of consents assessed during the period, and the total number of compliance assessments carried out for those consents is summarised for each main activity type.

Historically, compliance reports have been produced infrequently, and focussed on one activity. This report is the first time in over a decade where compliance across a number of activities has been summarised in one place. It is also the first time work streams outside compliance monitoring have been incorporated, and as such this report provides an overview of all activity undertaken as part of the Pollution Prevention programme.

WHY MONITOR COMPLIANCE?

Thriving together - mō te taiao, mō ngā tāngata

Thriving together - for the environment, for the people

Achieving regulatory compliance is often about meeting a minimum acceptable standard of resource use. Our goal is to promote behaviour change and achieve voluntary compliance and ultimately best practice.

We want the region's resource users to see resource management not just as compliance, but as adopting good practice. This can be achieved if the community takes ownership of resource management issues.

Monitoring consents, compliance and complaints:

- Raises awareness with consent holders and land users about the level of environmental management that is required.
- Allows early detection of activities that might be adversely affecting the environment, and allows action to be taken to remedy and mitigate those effects.
- Ensures any non-compliance with consent conditions is identified and appropriate action taken.
- Gives assurance to communities that the resource management framework they were consulted on is being upheld.
- Contributes to assessing long-term trends over time.
- Helps councils make informed decisions.
- Provides useful information about where policies and plans are not meeting the desired and anticipated environmental outcomes - feedback may lead to changes to policies and plans.

"To pass a law and not have it enforced is to authorise the very thing you wish to prohibit."
Cardinal Richelieu, 1585 - 1642.

POLLUTION PREVENTION TEAM

The BOPRC Pollution Prevention Team (the PP Team) is responsible for monitoring nearly 5,500 resource consents, which authorise a range of activities that could impact on the environment. As further development of the region occurs, the number of resource consents will increase.

The PP Team is spread across the region, based in Whakatāne, Rotorua and Tauranga. Our main roles are:

- Monitoring compliance with resource consent conditions or plan provisions, and the impact of activities on the environment.
- Providing a 24-hour, 7-day incident response service – this includes investigating environmental incidents and alleged non-compliance with resource consents, regional plans and the RMA.
- Taking enforcement action against those responsible for breaches of the RMA.
- Preventing and cleaning-up pollution through special projects and proactive monitoring (for example, our Industrial Pollution Prevention Programme).
- Implementing the national Water Metering regulations.
- Managing and assessing effects from contaminated land.
- Promoting sustainable waste management.

HOW WE DO IT

How often an activity is assessed depends on its environmental risk profile and the consent holder’s compliance history. Environmental risk is determined by a number of factors, including the type of activity being undertaken (e.g. large scale pulp and paper processing site compared to a lake structure), the sensitivity of the receiving environment (e.g. discharge of a process wastewater to a waterway, compared to a stormwater discharge to land soakage) and site specific risks (e.g. a dairy farm with effluent storage near a water way compared to one with no surface water near the storage ponds).

The frequency of site inspections for each activity was reviewed in 2015 using a risk-based approach and a new compliance monitoring frequency adopted in our RMA Charges Policy for the 2015/16 year. The Policy is available on our website.

In addition to site visits, the team also audits incoming returns, records and reports. These are called Performance Audits. Examples of these Performance Audits include assessing water, air and soil quality monitoring results, water usage records, management plans and harvesting plans.

COMPLIANCE GRADE	EXPLANATION
Grade A	Complying: Compliance with consent conditions.
Grade B	Low Risk Non-Compliance: Compliance with most consent conditions. Any non-compliance is of a low risk to the environment.
Grade C	Moderate to High Risk Non-Compliance: Compliance with most consent conditions and the environmental consequence of any non-compliance is deemed to be minor to moderate, but has the potential to result in more serious environmental effects.
Grade D	Major Non-Compliance: Failure to comply with a number of consent conditions and/or the environmental consequences of non-compliance was deemed to be significant.

Table 1: Explanation of Compliance Grades

WHAT IS CLASSED AS AN ASSESSMENT?

Both a site inspection and a performance audit can be classified as an “assessment” when the assessment has been assigned a compliance grade. A compliance grade is applied that reflects the level of compliance with the consent conditions. Compliance grades are described in Table 1.

ENFORCEMENT

In most cases when non-compliance occurs, staff work with the consent holder to bring them back into compliance without using enforcement. When this approach is unsuccessful or inappropriate, BOPRC can use a variety of enforcement tools.

Directive action includes:

- Issuing field sheets or formal letters detailing works/actions that may be required to achieve compliance.
- Issuing an abatement notice to a party or parties formally requiring works/actions be undertaken, or ceased, to ensure that compliance is achieved.
- For more serious issues, a Court ordered enforcement order can be applied for. These are rarely used as they can be very expensive and take considerable time to prepare and be heard by the Court. It is more common to apply to the Court for an enforcement order as part of a prosecution sentencing.

Punitive action includes:

- Issuing infringement notices. These are set fines ranging from \$300 up to \$1,000. They can be issued to individuals or organisations breaching the RMA.
- Taking a prosecution. Bay of Plenty Regional Council only takes prosecutions for the most serious of incidents, or where repeated non-compliance of a less serious nature has occurred. The maximum penalty can be up to two years imprisonment and a \$300,000 fine for individuals, or a fine up to \$600,000 for any other entity.

Formal enforcement action taken during the 2014/2015 year is discussed in the Regulatory Enforcement chapter.

PLANNING BOUNDARIES AND WATER MANAGEMENT AREAS

The National Policy Statement for Freshwater Management (NPS) supports improved freshwater management in New Zealand. It does this by directing regional councils to establish objectives and set limits for fresh water in their regional plans.

Bay of Plenty Regional Council is implementing the NPS through a community based process which will identify the key values that make our waterways special, and how they should be protected. This process includes the formation of nine Water Management Areas (WMAs).

The boundaries of the WMAs are based on a range of factors, including surface water catchments, iwi cultural boundaries, Treaty settlements, major projects, and where people live. The boundaries of these areas are illustrated in Figure 1. The nine WMAs are:

- Te Awanui Tauranga Harbour
- Kaituna/Maketū and Pongakawa/Waitahanui
- Tarawera
- Ōhiwa Harbour and Waitotahi
- Rotorua Lakes
- Rangitāiki
- Whakatāne and Tauranga
- Waioeka and Otara
- East Coast

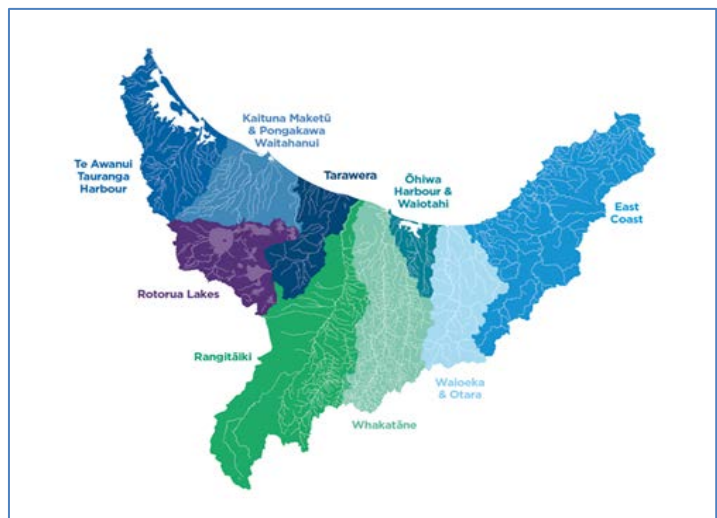


Figure 1: Location of the nine Water Management Areas in the Bay of Plenty region

Compliance has been reported for each Water Management Areas (WMA). Presenting data in this format demonstrates the activities and potential pressures occurring in different parts of the region.

Where consents cross WMA boundaries, or are located offshore, they are grouped in the best fitting WMA.

LIMITATIONS OF DATA

This report has been prepared using data from the BOPRC Compliance Database. The statistics provide a robust and valuable insight into activities across the region but deficiencies are evident when trying to understand trends in the types of non-compliance, and analyse it at a geospatial level.

Bay of Plenty Regional Council is currently rolling out a new compliance and consents data management system (ACCELA) which will provide significant improvements in these areas.

RESOURCE CONSENT FORMAT

Although one activity can have multiple resource consents, particularly large-scale industrial operations or works, the majority of resource consents authorise a number of different activities. For the purpose of monitoring compliance and recovering costs, these consents are currently assigned the most appropriate activity code in the compliance database.

The new consenting and compliance software will allow a resource consent to contain multiple activity specific consents. For example, an application for water abstraction might now contain consents for:

- Installation of Water Take structure
- Consent for Water Take
- Consent for Water Use

This change will provide much greater data resolution and accuracy, as compliance records can be grouped more accurately by different activity types within resource consents.

RESULTS: COMPLIANCE ACROSS THE REGION

Compliance across the region was generally good. Eighty percent of resource consent assessments resulted in a fully complying grade. Of the 20% found to be non-compliant, the majority were low risk (grade B). Only 8% of all assessments found high risk or major non-compliance.

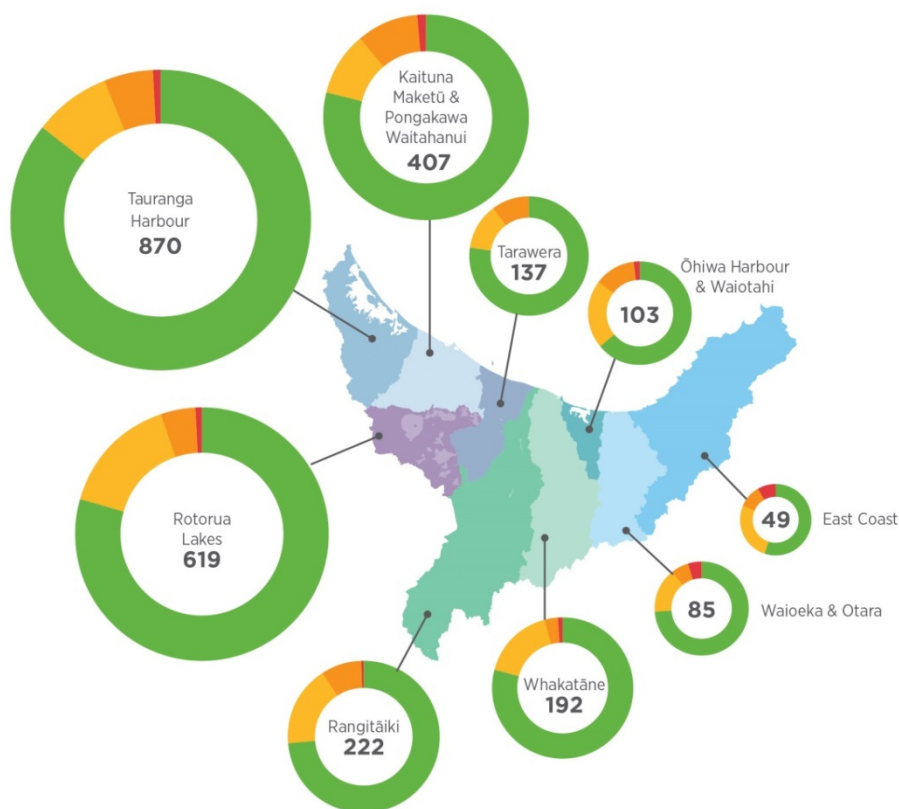
From a geographical perspective, compliance levels were largely consistent, with seven of the nine WMAs achieving greater than 70% compliance.

The majority of compliance inspections were carried out in three WMAs: Tauranga Harbour, Rotorua Lakes and Kaituna Maketū and Pongakawa Waitahanui. Compliance within these WMAs was above average, at 86%, 80% and 79% respectively.

The highest performing WMAs were Tauranga Harbour and Rotorua Lakes, with 86% and 80% compliance levels, respectively. The Ōhiwa Harbour and Waiotaha (64%) and East Coast (55%)

WMAs were the lowest; however, these results may be influenced by the smaller number and type of consents assessed within those areas.

Assessments and compliance grades by WMA

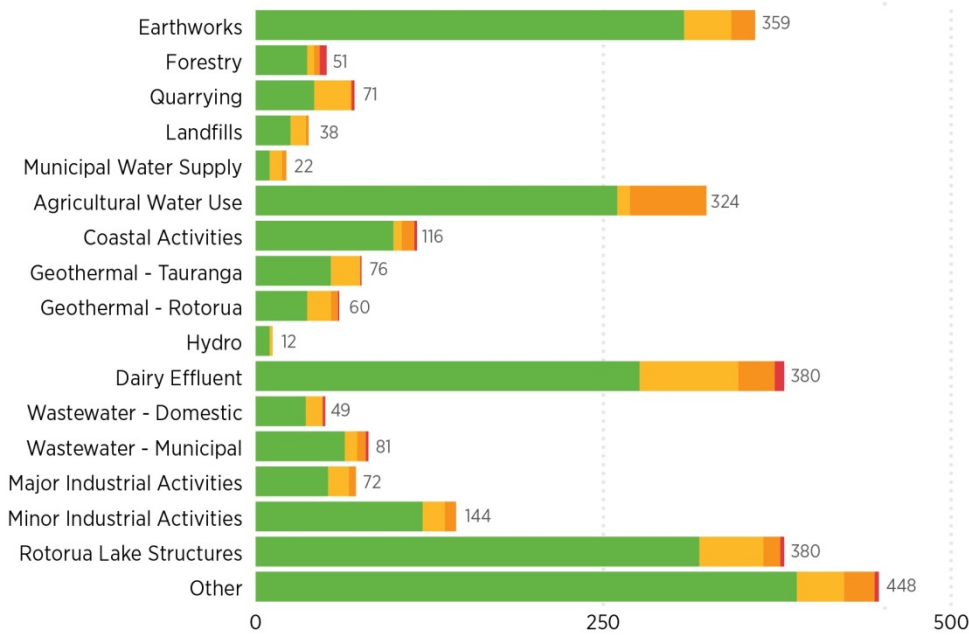


2014/2015 monitoring period
Compliance across the region

	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	5481	2147	2684	2138	343	175	28
Tauranga Harbour	1611	611	870	745	73	46	6
Kaituna Maketū & Pongakawa Waitahanui	761	357	407	322	40	40	5
Rotorua Lakes	1575	565	619	493	95	27	4
Tarawera	359	111	137	106	17	14	0
Rangitāiki	398	185	222	164	38	19	1
Whakatāne	358	151	192	152	32	6	2
Ōhiwa Harbour & Waiotaha	157	61	103	66	22	13	2
Wairoeka & Otara	173	70	85	63	13	5	4
East Coast	89	36	49	27	13	5	4

Table 2: Compliance Grades Assigned for Resource Consent Inspections Conducted in 2014/2015

Region wide assessments and performance by type



Throughout the reporting period, the most assessments were undertaken on earthworks, horticultural water abstraction, dairy effluent discharges and Rotorua lake structures. This reflects the number of consents held for these activities and the risks and/or public interest associated with these activities.

Compliance levels varied depending on the activity. Greater detail and discussion on the compliance results for these activities is provided in other sections of this report.

KEY CHALLENGES FOR COMPLIANCE ACROSS THE REGION

NON-CONSENTED COMPLIANCE

Regional plans set the foundation for managing environmental resources within the region, and detail what does and does not require a resource consent. When monitoring compliance with these plans, it is relatively easy to look at the data collected from monitoring resource consents. It is more challenging to monitor compliance with permitted activities, which do not require a resource consent but still need to meet certain requirements.

An example of this is the abstraction of freshwater, which is required to be under a certain rate and/or volume in order to be considered permitted. We work with the community to raise awareness and provide education about what can and can't be done without resource consent.

DISCUSSION

PERCEPTION OF COMPLIANCE

Although compliance monitoring is often associated with the "strong-arm" side of environmental management, in reality it is one of our most practical ways to interact directly with members of the public, and provide the assistance required to help consent holders meet their requirements. This is reflected in our preference to managing non-compliance through collaboration and education, which achieves long term improvements.

We believe that the positive compliance results at a region-wide level indicate that consent holders are generally engaged and educated when it comes to their responsibilities and requirements.

INDIRECT AND DIRECT RESULTS OF COMPLIANCE PERFORMANCE

The actual impact of non-compliance can be direct or indirect, depending on the nature of the fault. For example, if a consent holder does not provide the monitoring results relating to a discharge to water, the direct impact to the environment may not be any different. However, the indirect impact is that our ability to assess and manage environmental impacts is limited due to missing information.

Alternatively, if the same consent holder does not meet the quality limits associated with their discharge, there may be a direct impact on the environment, which requires attention.

Although the risk of a non-compliance having a direct impact on the environment is reflected in the compliance grade, the actual nature of that impact is not necessarily clear when compliance data is collated. In the future, non-compliances will be able to be identified by the type of condition which is not being met, and grouped across different activities (for example, different types of consented discharges to a waterway). This level of analysis will allow us to better understand the nature of environmental impacts, both as the result of an individual incident, and cumulatively from multiple consent holders.

THE IMPACT OF COMPLIANCE

Environmental compliance is a valuable tool to monitor and manage the environmental risks associated with particular activities. However, in the wider picture of determining environmental impact management, compliance is a piece of the puzzle, which must be considered alongside the cumulative impacts of:

- Resource use and discharges permitted under regional plans.
- Resource use and discharges permitted by resource consents.
- Population centres and urban growth.
- Long term historical land use and pollution.
- Broader environmental changes beyond the region, such as climate change.

Because of this, it is difficult to assume correlations between environmental compliance and environmental impact from the snapshot we currently have available.

In future reports, it will be a useful exercise to overlay trends in compliance with those identified through our water quality monitoring programme, particularly in regard to the key values identified through the freshwater futures project. We are hopeful that our abilities to undertake these studies will be also be greatly assisted by improved data availability, through the new ACCELA data management system.

LANDUSE AND SOIL DISTURBANCE

EARTHWORKS

WHAT IS INCLUDED IN THIS CATEGORY?

Earthworks consents authorise a range of soil disturbing activities. These include developing large urban subdivisions, re-contouring farmland to develop orchards, smaller earthworks on very steep land or near waterways, plus a variety of other activities that are not permitted by rules in the Regional Water and Land Plan.

There are over 250 current earthworks consents in the region. Almost half of these consents are located within the Tauranga Harbour WMA, which reflects the significant growth and development currently occurring in and around Tauranga.

WHY DO WE CONTROL THIS ACTIVITY?

Earthworks have the potential for significant impacts, such as erosion, disturbance of flora and fauna, disturbance or damage to historic heritage and sites of significance to tangata whenua, or discharge of sediments and dust. The risk of these impacts occurring increases on steep land, or on land nearby waterways. In addition, generally the larger the scale of the activity also increases the risk i.e. the more area exposed the higher the potential risk of sediment runoff or of dust production.

In order to minimise or manage any such impacts, earthworks consents require certain controls be in place. These include installation of appropriate erosion and sediment controls (such as sediment ponds, bunds and silt fences), progressive stabilisation of exposed areas and use of infrastructure to manage potential dust nuisance. In addition, it is common for large scale earthworks to be restricted to certain times of the year. For example, during September to May there is less risk of runoff to waterways.

Earthworks consents are issued for specific projects to be completed, rather than for ongoing activities.

HOW DO WE MONITOR THIS ACTIVITY?

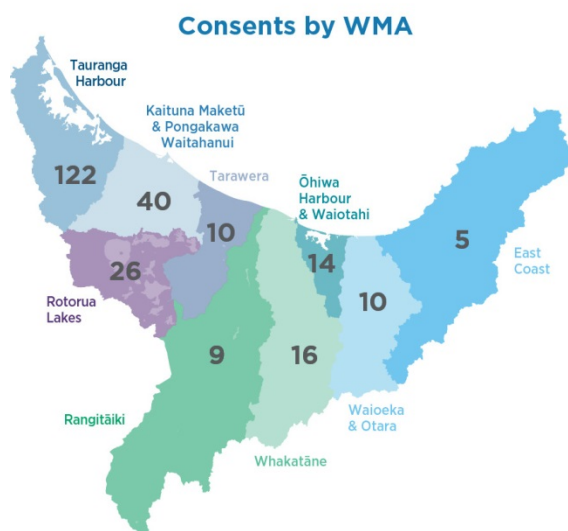
Earthworks consents are monitored at various stages of the works. At minimum, this generally involves a pre-construction meeting, regular inspections during the works, and a final site meeting at the completion of the work. The frequency of inspection depends on the scale and risk associated with a particular site.

EARTHWORKS

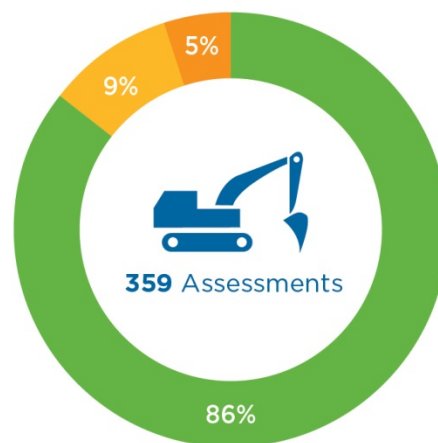
252 consents region wide

132 consents were assessed

359 assessments undertaken



Region wide Land and Soil Disturbance - Earthworks performance



Grade A Grade B Grade C Grade D

Landuse & Soil Disturbance - Earthworks

	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	252	132	359	308	34	17	0
Tauranga Harbour	122	73	191	175	8	8	0
Kaituna Maketū & Pongakawa Waitahanui	40	23	78	68	5	5	0
Rotorua Lakes	26	8	17	8	7	2	0
Tarawera	10	4	6	6	0	0	0
Rangitāiki	9	6	28	22	4	2	0
Whakatāne	16	9	13	12	1	0	0
Ōhiwa Harbour & Waiotahi	14	5	21	12	9	0	0
Waioeka & Otara	10	3	3	3	0	0	0
East Coast	5	1	2	2	0	0	0

Table 3: Compliance Grades Assigned to Earthworks Consents in 2014/2015 Period

Of the 254 active earthworks consents, only about half were being actively worked on during the reporting period. Three hundred and fifty nine assessments were carried out on 132 consented sites; 86% of these were graded as high compliance (grade A). Nine percent were graded as low risk non-compliance (grade B), with 5% moderate to high risk non-compliance (grade C). No major non-compliances (grade D) were identified.

The main types of non-compliances noted were:

- Lack of dust control.
- Stabilisation not carried out as per consent requirements.
- Erosion and sediment controls not installed and/or maintained correctly.
- Discharge quality from sediment control ponds not being monitored, or slightly exceeding quality limits.

KEY CHALLENGES AND ISSUES

- Due to significant suburban growth, particularly in the Tauranga area, suburban land development is being undertaken on more challenging sites, often where surrounding land has already been developed.
- Dust can be difficult to control, particularly during the equinox winds of late October through to early December.
- Maintenance of erosion and sediment controls is occasionally not well managed.



Image 1: Earthworks being undertaken for a residential subdivision in Ohope



Image 2: A sediment control device, used to trap excess sediment draining from an earthworks site

FORESTRY

WHAT IS INCLUDED IN THIS CATEGORY?

There are currently 45 forestry consents across the Bay of Plenty region. Twenty seven of those consents were assessed during the reporting period.

The consents are evenly spread throughout the region.

WHY DO WE CONTROL THIS ACTIVITY?

Forestry activities have the potential for a number of environmental impacts. The significant disturbance of the land when harvesting forestry stands, is similar to earthworks and can lead to erosion and sediment discharge offsite.

In addition, there is a risk of logging debris putting downstream infrastructure at risk if not managed well. One aspect of the staff audits includes checking that forestry operators are managing debris accumulation to a good standard.

HOW DO WE MONITOR THIS ACTIVITY?

The monitoring of active forestry sites varies depending on the works being undertaken, and the risks associated with the particular forest. Where earthworks are being undertaken to establish infrastructure such as roading or skid sites, staff inspect the sites on a frequent basis. However, during harvesting, the frequency of inspection is reduced. If trees are being harvested very near a waterway, or on steep erodible land, inspections are undertaken on a more frequent basis.

Frequency of inspection can also be influenced by the particular earthworks or harvesting operators. Some large companies in the Bay of Plenty have extremely robust Environmental Management Systems in place, demonstrating the skills, knowledge and training needed to maintain the expected environmental standards.

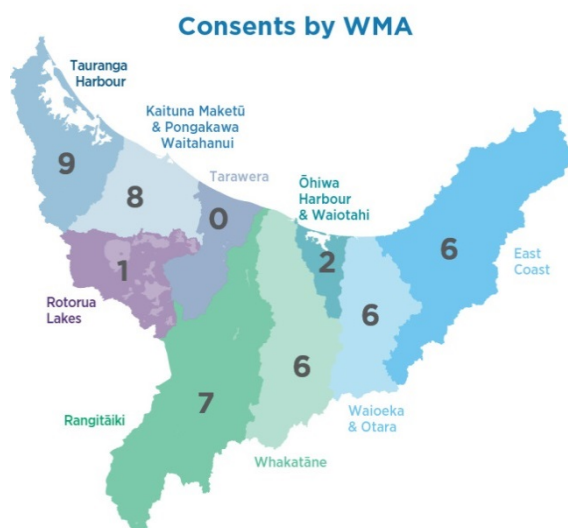
Bay of Plenty Regional Council does not monitor or regulate health and safety; this is managed by WorkSafe NZ, in cooperation with industry bodies.

FORESTRY

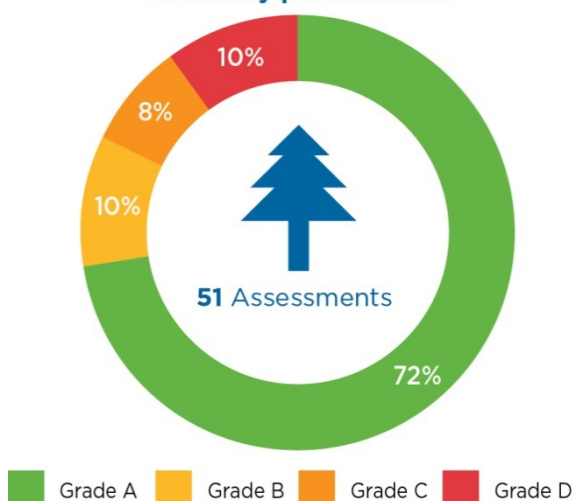
45 consents region wide

27 consents were assessed

51 assessments undertaken



Region wide Land and Soil Disturbance - Forestry performance



**Landuse & Soil Disturbance
- Forestry**

	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	45	27	51	37	5	4	5
Tauranga Harbour	9	4	7	7	0	0	0
Kaituna Maketū & Pongakawa Waitahanui	8	5	13	11	1	1	0
Rotorua Lakes	1	0	0	0	0	0	0
Tarawera	0	0	0	0	0	0	0
Rangitāiki	7	5	5	5	0	0	0
Whakatāne	6	2	6	6	0	0	0
Ōhiwa Harbour & Waiotahi	2	2	2	2	0	0	0
Waioeka & Otara	6	5	8	1	2	2	3
East Coast	6	4	10	5	2	1	2

Table 4: Compliance Grades Assigned to Forestry Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

- Managing steep erosion prone forests to minimise sediment discharges.
- The installation of infrastructure, including roading and pads, in first rotation forests.
- Balancing environmental protection with health and safety of forestry operations.
- Small block forests needing to be harvested while wood prices are low can mean there is less capital available to invest in appropriate harvesting technology.



Image 3: An aerial shot showing different stages of forestry development in the East Coast

QUARRIES

WHAT IS INCLUDED IN THIS CATEGORY?

There are 49 current quarry related consents across the Bay of Plenty region. Thirty four of these consents were assessed during the reporting period. Two thirds of the consents inspected were in the Eastern Bay of Plenty region.

The quarry category includes both rock and pumice quarries, as well as river bed gravel extraction.

WHY DO WE CONTROL THIS ACTIVITY?

Quarrying activities have the potential for a number of environmental impacts. The disturbance of the land when quarrying and installing infrastructure (such as roads or processing sites) can lead to significant impacts if not well managed, such as erosion, disturbance of flora and fauna, or discharge of sediments. Generally the larger the scale of the activity, the greater the environmental risk. As more area is exposed, the potential risk of sediment runoff or of dust production increases.

In order to minimise or manage any such impacts, quarrying consents require certain controls be in place. These include installation of appropriate erosion and sediment controls (such as sediment ponds, installation of bunds and silt fences), management of overburden areas, and infrastructure to manage any potential dust nuisance. Unlike earthworks consents, quarries are not restricted to operate within defined times of the year, therefore the site controls must be installed and maintained to a high standard throughout the year to reduce the risk of runoff affecting waterways. For some sites, this includes the use of chemical treatment of the quarry stormwater and process water.

The main risk around gravel extraction is removing too much gravel from the bed, or removing it from the wrong location, resulting in an increased risk of river bank erosion. In addition, there are risks associated with poor stockpile locations and with not leaving the extraction site relatively level i.e. no deep holes.

HOW DO WE MONITOR THIS ACTIVITY?

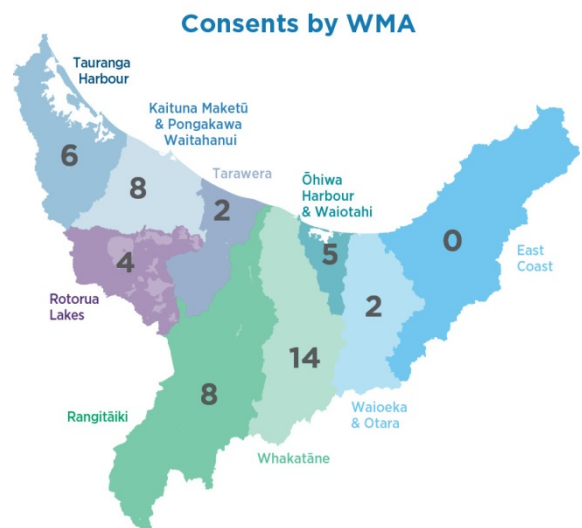
Operational/active commercial quarries are generally inspected on a six monthly basis. Smaller forestry and farm quarries are inspected less frequently. Gravel consents are only inspected during active extraction.

QUARRYING

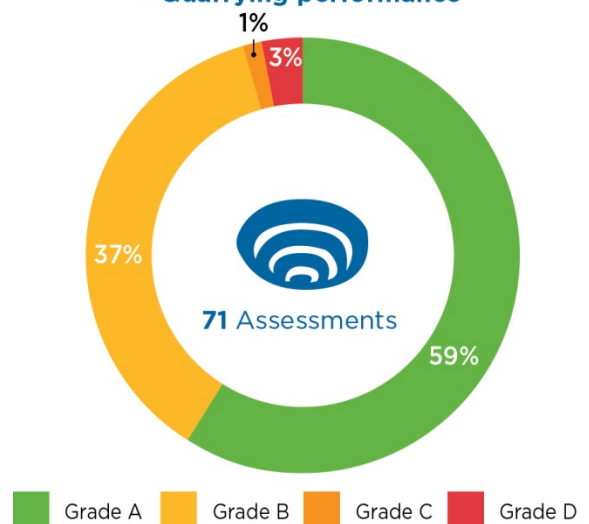
49 consents region wide

34 consents were assessed

71 assessments undertaken



Region wide Land and Soil Disturbance - Quarrying performance



2014/2015 COMPLIANCE PERFORMANCE

Landuse & Soil Disturbance - Quarrying	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	49	34	71	42	26	1	2
Tauranga Harbour	6	2	2	2	0	0	0
Kaituna Maketū & Pongakawa Waitahanui	8	4	4	4	0	0	0
Rotorua Lakes	4	1	3	0	3	0	0
Tarawera	2	2	3	3	0	0	0
Rangitāiki	8	8	15	9	5	0	1
Whakatāne	14	12	31	16	13	1	1
Ōhiwa Harbour & Waiotahi	5	3	8	5	3	0	0
Waioeka & Otara	2	2	5	3	2	0	0
East Coast	0	0	0	0	0	0	0

Table 5: Compliance Grades Assigned to Quarrying Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

- Quarrying often results in very large areas of land being exposed, increasing the volume of stormwater that requires treating.
- Often the nature of soils encountered during quarrying activities means the runoff can be difficult to treat to an acceptable standard, when relying on common sediment control techniques. Chemical treatment can be required.
- Quarry sites can change quite rapidly, which means adaptive management is required. For example, stormwater ponds may need to be shifted as work progresses.
- Dust from quarries, including at site access points, can be difficult to control. However, in most cases quarries are situated away from sensitive receptors.
- Gravel extraction will usually require contact from the consent holder to both the Compliance and the Rivers and Drainage teams. This can cause confusion for the consent holder.
- Compliance inspections for gravel extraction can be difficult to schedule, given the occasional nature of the activity i.e. extraction is usually only undertaken when there is a specific need for the product, such as resurfacing a forestry road.



Image 4: Rock and pumice quarry site

ROTORUA LAKE STRUCTURES

WHAT IS INCLUDED IN THIS CATEGORY?

Lake structures include any buildings (boat sheds, boat ports), structures (jetties, boat ramps, slipways, stairs, retaining walls), or moorings fixed to the lake bed of the Rotorua Lakes.

There are over 900 lake structure consents, which correspond to over 15% of all active consents in the Bay of Plenty. Nearly 350 lake structure consents were checked during the reporting period.

WHY DO WE CONTROL THIS ACTIVITY?

All lake structures within the Rotorua Lakes require resource consent in order to manage cultural and environmental impacts. As most structures can be accessed by the public, the structural integrity of the structure is also assessed.

HOW DO WE MONITOR THIS ACTIVITY?

Lake structures were monitored on a three yearly basis; therefore approximately one third of structures were monitored each year. As a result of the 2015/16 Compliance Policy review the frequency has now reduced to 10 yearly. However if a new structure is installed, monitoring at the time of installation is also carried out.

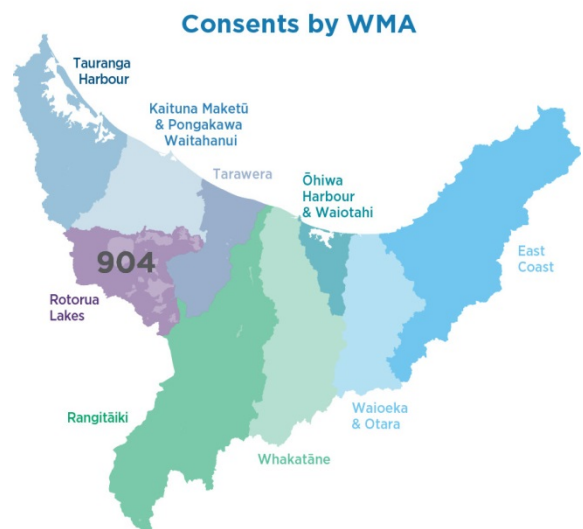
Monitoring involves accessing the structures by boat, inspecting the integrity of the structure, measuring the dimensions of the structure and assessing it against the consent conditions. Occasionally structures are found to have been modified to extend the footprint of the structure. These non-compliances are followed up with the consent holder, and generally result in either removal of the extension or addition or a change to the consent conditions being requested or applied for.

ROTORUA LAKE STRUCTURES

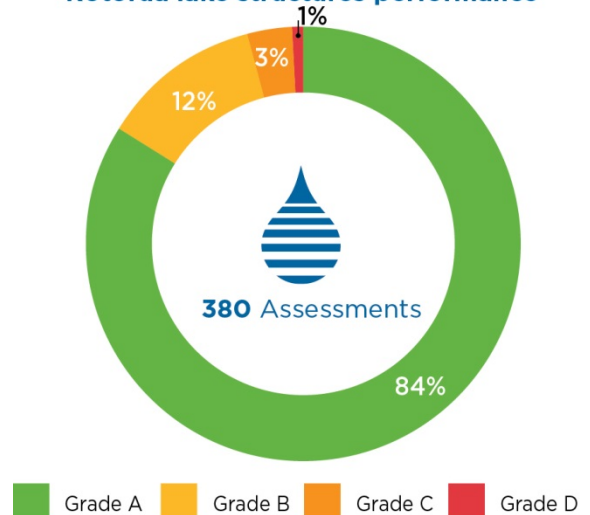
904 consents region wide

345 consents were assessed

380 assessments undertaken



Rotorua lake structures performance



2014/2015 COMPLIANCE PERFORMANCE

Rotorua Lake Structures	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
Rotorua Lakes	904	345	380	319	46	12	3

Table 6: Compliance Grades Assigned to Rotorua Lakes Structure Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

- It is often difficult to keep track of new structures, which means some of the compliance work is reactive.
- There are several agencies involved in the management of the Lakes, including Te Arawa Lakes Trust, Land Information New Zealand, Department of Conservation, Rotorua Lakes Council and the Bay of Plenty Regional Council. This requires good relationship management.
- Property boundaries often extend into the lake bed, which can generate confusion for landowners over what authorisation they require for a structure.
- Several pieces of legislation (including a Treaty Settlement) encompass the lake margins/lake bed, and their relationship with lake structures.



Image 5: Examples of well-maintained lake structures located in the Rotorua Lakes

CONTAMINATED LAND

HAIL (HAZARDOUS ACTIVITIES AND INDUSTRIES LIST)

The Regional Council is required to keep and maintain a register of sites that may be contaminated and pose a risk to human health or the environment in certain situations. Sites are included on the register if there has ever been an activity carried out on the site which is on the hazardous activities and industries list (HAIL) provided by the Ministry for the Environment (MfE).

The list is available on the MfE website and includes:

- Chemical manufacture, application and bulk storage.
- Electrical and electronic works, power generation and transmission.
- Explosives and ordnance production, storage and use.
- Metal extraction, refining and reprocessing, storage and use.
- Mineral extraction, refining and reprocessing, storage and use.
- Vehicle refuelling, service and repair.
- Cemeteries and waste recycling, treatment and disposal.
- Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.

During the 2014/2015 year about 3,000 historic or current kiwifruit orchard blocks in the Bay of Plenty were added to this register, primarily because of the use of persistent pesticides¹. As long as orchards remain in production landowners are not required to undertake any site investigation or soil testing. However, if there is a change in land use, such as converting an orchard into a residential subdivision, the site needs to be investigated.

Once the information on the HAIL register is confirmed, the record forms part of the Land Information Memorandum (LIM) for the site and is public information. Staff respond to many enquiries from prospective purchasers regarding what information we hold on a property's land use history and the potential for a soil contaminating activity to have been undertaken.

The register now contains over 6,000 entries including activities such as petrol stations, timber treatment sites, historic landfills, and methamphetamine (P) labs.

NATIONAL ENVIRONMENTAL STANDARD (NES)

In late 2011 a National Environmental Standard (NES) was introduced for "Assessing and Managing Contaminants in Soil to Protect Human Health". While the responsibility for administering this standard is held by the District and City Councils, the Regional Council is significantly involved with providing assistance and technical input, as the Territorial Authorities build up their knowledge and understanding in this area.

Under the NES, when a property on the HAIL (Hazardous Activities and Industries List) Register, held by the Regional Council, is to be subdivided or converted to a more sensitive land use, a site investigation must be carried out. The results of these investigations are often evaluated by Regional Council staff who then make a recommendation on whether or not they believe what is proposed is appropriate in terms of risks to human health and the environment.

¹ Persistent pesticides are identified by the United Nations Environment Programme as those that have a half-life in soil of six months or longer.

SOIL CADMIUM

Staff in the Pollution Prevention team are involved in a number of inter-regional and national groups, which aim to manage environmental issues appropriately and consistently between regions.

An example of this is the Cadmium Management Group. This group has been formed to manage the risks associated with increasing levels of cadmium in farmed soils. Members of the group include the Ministry for Primary Industries, the Ministry for the Environment, agriculture sector groups and regional councils.

Cadmium is a contaminant in phosphate rock and can accumulate in soil as a result of phosphate fertiliser application. The primary risks from high soil cadmium levels are to human health (through food), restrictions on future land use, and the potential risk to overseas market access for some produce. The Cadmium Management Group produced a strategy for long-term risk management of cadmium. A central part of the strategy is a 'tiered fertiliser management system' (TFMS) where, as levels of soil cadmium rise, increasingly stringent fertiliser management responses are required. Bay of Plenty soils associated with some land uses, particularly dairy and kiwifruit, often have elevated cadmium levels.

CONTAMINATED SITE CASE STUDIES

RESIDENTIAL PROPERTY, EDGE CUMBE

As part of an unrelated investigation, staff discovered elevated levels of metals in surface soils at a residential property in Edgecumbe. Further investigation found that the owner of the property had contaminated part of his section through poor practice over a long period of time. These included:

- Burning treated timber in an internal fire places, and outside.
- Placing contaminated ash from the internal fire place on to the ground at the rear of the property.
- Dumping dross from lead smelting of shot.

The property is now listed on the HAIL register as a confirmed contaminated site. In light of the implications of listing a residential property on the register as a confirmed contaminated site no enforcement action was taken. Staff are currently working with the owner to clean up portions of his section. He has been warned that continuation of these contaminating practices may result in enforcement action.

KOPEOPEO CANAL

The Kopeopeo Canal is part of the Rangitāiki Drainage Scheme and extends between the Rangitāiki and Whakatāne River. To ensure effective operation, the canal requires silt/sediments to be removed as part of regular maintenance and for flood mitigation purposes.

The canal has received contaminated stormwater over the years from a nearby industrial site where timber treatment was taking place. This led to the contamination of sediment in the canal, particularly of dioxin.



Image 6: Locals warning signs located near Kopeopeo Canal

The overall vision for the Kopeopeo Canal Remediation Project is:

“To safely remove and treat a legacy of industrial dioxin pollution, thereby restoring the mauri of the Kopeopeo Canal and the Whakatāne River and developing their full potential to contribute to the well-being of tangata whenua, the community and visitors for generations to come.”

The Kopeopeo Canal Remediation Project’s primary objectives are to address long-term health risk to the community associated with dioxin exposure, improve the quality of the aquatic habitat within the canal and wider drainage network and facilitate future drainage and flood relief within the Rangitāiki drainage scheme.

Remediation of the Kopeopeo Canal is expected to commence in the 2015/2016 financial year. The project aims to clean up to 40,000 cubic metres of dioxin contaminated sediment. Checking compliance with the consents for the Kopeopeo Canal Contamination Remediation Project will be a major task for the Pollution Prevention team.

The appointment of an Independent Auditor, as required by the consent conditions, will help ensure public confidence in the process is maintained.

During the 2014/2015 year an alternative remediation methodology was developed and a consent was granted to trial this methodology. This trial was due to be completed by the end of 2015.

WASTE

LANDFILLS AND TRANSFER STATIONS

WHAT IS INCLUDED IN THIS CATEGORY?

There are currently 26 landfill sites in the Bay of Plenty region, operating under 45 resource consents. Consented landfills range from the Rotorua municipal landfill, through to landfills associated with industry, for example those associated with the forest industry where wood waste is deposited. Some landfills are operational and others have closed.

Only three landfills in the region are currently licenced to accept material that is not cleanfill.

Transfer stations act as a collection, sorting and distribution centre for waste. The consents for these sites may have conditions around dust and odour control, the volume and type of waste received, operating hours, stormwater controls, maintenance, and signage. All of the domestic waste collected from the transfer stations in Tauranga and Whakatāne is transported out of the Bay of Plenty region to the Tirohia landfill in the Waikato.

WHY DO WE CONTROL THIS ACTIVITY?

Modern landfills are designed to minimise the discharge of contaminants into the environment, whereas older landfills were designed with few environmental safeguards.

Rubbish disposed of in a landfill breaks down to produce solid, liquid (leachate) and gaseous products. Contaminated stormwater runoff and leachate remain the two largest potential contaminants resulting from landfills. A number of early landfills had no liner so leachate was able to enter the ground water directly.

Resource consents are required for landfill sites for the discharge of waste on to or into land and the associated discharges to ground water, surface water and/or air.

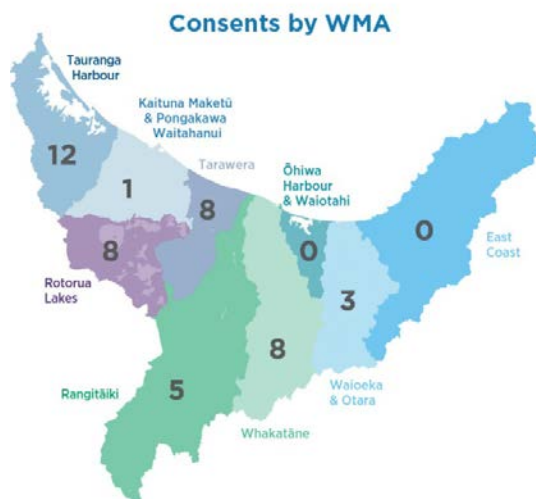
Some sites hold a consent for large scale earthworks and most hold a consent for the discharge of odorous gases and particulates (dust) into the air. Even once a landfill has ceased operating and has been decommissioned, a resource consent may still be required for any ongoing leachate discharge.

WASTE - LANDFILLS

45 consents region wide

29 consents were assessed

38 assessments undertaken



Region wide Waste - Landfill performance

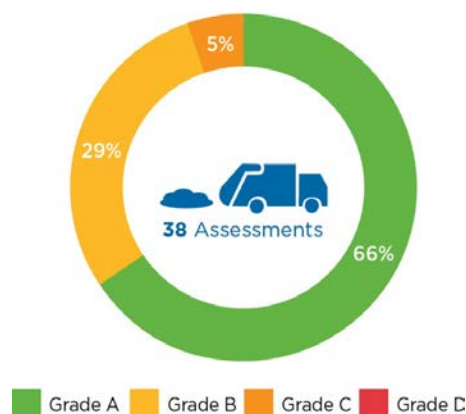


Image 7: The Rotorua Landfill

In the Bay of Plenty there is no requirement to obtain a resource consent from BOPRC for depositing material at cleanfill² sites, provided the permitted earthworks rules limiting volume and area exposed are met, although local bylaws may require consents from Territorial Authorities. The rationale for this is that these are not considered to produce significant leachate³ and so are unlikely to have an environmental effect.

The main environmental risks associated with transfer stations are typically around contamination of stormwater and the effects on air quality.

HOW DO WE MONITOR THIS ACTIVITY?

Landfill consents may include conditions relating to such things as water quality monitoring, leachate collection, contaminant limits, location of discharges, site rehabilitation and landscaping. Most consents require information to be supplied on a regular basis to the Regional Council. As a result of the 2015/16 Compliance Policy review the monitoring frequency is now twice a year for operating landfills, every five years for closed landfills, and once a year for transfer stations.

Waste - Landfills	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	45	29	38	25	11	2	0
Tauranga Harbour	12	5	7	5	2	0	0
Kaituna Maketū & Pongakawa Waitahanui	1	0	0	0	0	0	0
Rotorua Lakes	8	4	4	1	3	0	0
Tarawera	8	6	6	5	1	0	0
Rangitāiki	5	5	9	6	2	1	0
Whakatāne	8	8	16	12	3	1	0
Ōhiwa Harbour & Waiotahi	0	0	0	0	0	0	0
Waioeka & Otara	3	1	1	1	0	0	0
East Coast	0	0	0	0	0	0	0

Table 7: Compliance Grades Assigned to Landfill Consents in 2014/2015 Period

¹ **Cleanfill** – natural materials such as clay, soil, rock and such other materials as concrete, brick or demolition products that are free of:

(a) combustible or putrescible components (including green waste) apart from up to 10% by volume untreated timber in each load.

(b) hazardous substances or materials (such as municipal waste) likely to create leachate by means of biological or chemical breakdown.

(c) any products or materials derived from hazardous waste treatment, stabilisation or disposal processes.

² **Leachate** is the liquid discharging from a land disposal site that contains dissolved, suspended and/or microbiological contaminants resulting from the decomposition of solid waste. The contents of the leachate vary depending on the type and age of the landfill. It may contain very high levels of nutrients, heavy metals, organic compounds, and at times high levels of bacteria.

WASTE MINIMISATION

RURAL WASTE STUDY

In conjunction with Waikato Regional Council, the Bay of Plenty Regional Council surveyed rural properties in 2014 to discover what happens to their waste. The survey was conducted on 69 rural properties, recorded 2,564 tonnes of rural waste, and estimated that an average of 37 tonnes of waste was disposed of on each property annually. All rural Bay of Plenty properties surveyed buried, burned or bulk-stored some waste on site.

Depending on the farming operation, the wastes produced included scrap metal, treated timber and fence posts, plastic wraps and ties, animal welfare wastes (syringes and vials), crop netting, glass, batteries, construction and demolition wastes, and domestic refuse. Fifty percent of the rural properties surveyed had a burn pile or farm dump less than 40 meters from a water course or field drain and so could potentially impact the streams, rivers, and groundwater.

Some ways to reduce the impact of this waste are to:

- Educate rural landowners and communities about the level of risk related to current practices.
- Develop collaborative approaches to address issues.
- Raise awareness of current disposal and recycling options.
- Raise awareness and create opportunities to share best practice.



Image 8: An unauthorised waste pit located on a farm in the Bay of Plenty

WRAG FUND

The Waste Resources Advisory Group (WRAG) established a contestable fund to support local waste minimisation projects. In the 2014/2015 financial year, \$55,000 was distributed to successful applicants. Through this fund over 30 tonnes of waste has been diverted from landfill.

In Whakatāne, 6.5 tonnes of waste construction material has been collected from building sites, sorted and sold. In Tauranga, the Good Neighbours Charitable Trust has provided 74,000 free meals created from café and supermarket food that was previously bound for the skip bin. Rotorua District Council has provided worm farms to 70 families, Tauranga City Council has collected over 8 tonnes of coffee grounds from cafes and diverted this from landfill to a composting facility, and the Gourmet Night markets held in Tauranga trained 64 waste minimisation staff to spread a waste minimisation message to over 60,000 people attending various community events.

TYRES

In New Zealand, 3.9 million passenger tyres and 1.2 million truck and other tyres are discarded every year. Current options for the disposal or re-use of tyres are limited and illegal dumping is widespread.

As tyres break down, they slowly release contaminants that can build up in the soil, and also potentially affect groundwater. These contaminants are primarily zinc but also include cadmium, lead and polycyclic aromatic hydrocarbons (PAHs). Fire presents another risk.

The issue of used tyre disposal was highlighted in April 2015 when the Waikato Times reported that 150,000 car tyres from Hamilton were to be delivered to the Bay of Plenty. Two large tyre stockpiles were subsequently discovered, one at the Waihi Beach Quarry and another at the Kawerau District Council site on Spencer Road, Kawerau. The tyres at these sites equate to approximately 2,000 tonnes.

The Regional Council issued abatement notices requiring that no further tyres were to be deposited and that all the tyres were to be removed.

The management and enforcement of stockpiling of tyres in the Bay of Plenty region and nationwide, remains a real challenge for Regional Councils and Territorial Authorities across New Zealand. Councils are working on a co-ordinated approach to manage this issue.



Image 9: A PP Team Member investigating the tyre dump located in Kawerau

INDUSTRIAL ACTIVITIES

MAJOR INDUSTRIAL SITES

WHAT IS INCLUDED IN THIS CATEGORY?

Most major industrial sites in the Bay of Plenty are consented for a variety of activities. These include wastewater discharges to land and/or water, air discharges, water abstraction, land use (such as landfilling) and stormwater discharges.

The following sites are classified as Major Industrial:

- Asaelo Care
- Affco New Zealand Limited
- Ballance Agri-Nutrients Limited
- Carter Holt Harvey Pulp and Paper Limited
- Fonterra Cooperative Group Limited (Edgcumbe)
- Genera Limited
- Norske Skog Tasman
- Norske Skog Tasman and Carter Holt Harvey Joint Venture
- Whakatāne Mill Limited.

WHY DO WE CONTROL THIS ACTIVITY?

Effects from the activities undertaken on major industrial sites can be significant, given the nature of the activities being carried out and their proximity to sensitive environments.

All of the sites are near regionally significant water bodies, including Tauranga Harbour, the Kaituna River, the Tarawera River, the Rangitāiki River and the Whakatāne River.

Some of the processes carried out at these sites can result in particularly toxic discharges if not well managed. The effects from any unauthorised discharges can potentially impact the environment and human health.

HOW DO WE MONITOR THIS ACTIVITY?

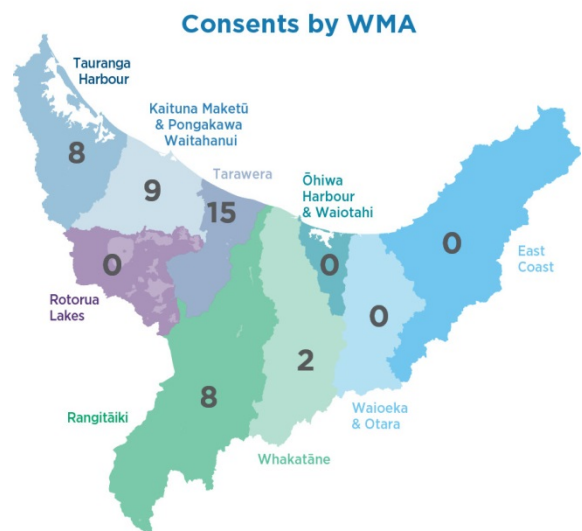
The consents relating to major industrial sites generally require regular self-reporting on environmental performance. These reports are audited by staff, on an ongoing basis, to ensure that sites comply with the limits and requirements set in their consents. Regular site visits are also undertaken at all of the sites.

In addition to the consent monitoring and auditing self-reporting, Council monitors the impacts of the industrial discharges through their monitoring network. This includes water quality sampling of receiving waters and ambient air monitoring around some of the sites.

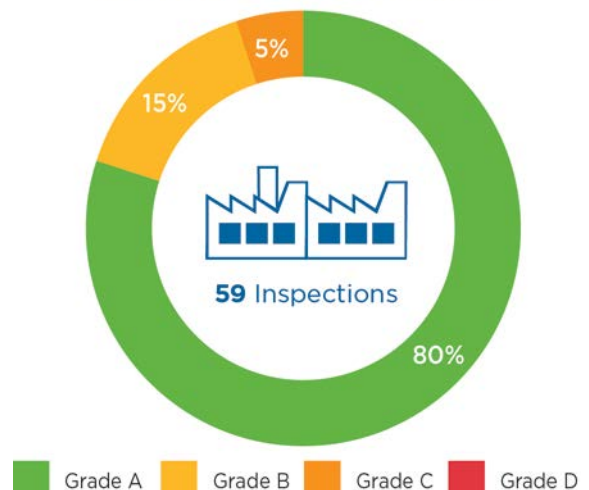
INDUSTRIAL ACTIVITIES - MAJOR

42 consents region wide

59 inspections undertaken



Region wide Industrial Activities - Major Industrial performance



2014/2015 COMPLIANCE PERFORMANCE

Industrial Activities - Major Industrial

Consent Holder	WMA	Consents	Inspections	GRADE			
				A	B	C	D
OVERALL		38	59	47	9	3	0
Affco New Zealand Ltd	Kaituna Maketū & Pongakawa Waitahanui	9	15	13	2	0	0
Ballance Agri-Nutrients Ltd	Tauranga Harbour	6	12	12	0	0	0
Carter Holt Harvey Ltd	Tarawera and Rangitāiki	4	5	5	0	0	0
Fonterra Cooperative Group Ltd (Edgecumbe)	Rangitāiki	7	14	8	4	2	0
Genera Limited	Tauranga Harbour	2	3	1	1	1	0
Norske Skog Tasman	Tarawera	4	6	5	1	0	0
Norske Skog Tasman & Carter Holt Harvey	Tarawera	4	3	2	1	0	0
Whakatane Mill Limited	Whakatāne	2	1	1	0	0	0

Table 8: Compliance Grades Assigned to Major Industrial Sites in 2014/2015 Period⁴

NON-COMPLIANCE DISCUSSION:

Norske Skog Tasman and Carter Holt Harvey Joint Venture received three infringement notices for elevated BOD₅ discharges to the Tarawera River in January 2015, when the dissolved oxygen in the River dropped below a specified limit. Council had been working with the Joint Venture during the previous year to address some concerns around the effects of the wastewater discharge on the Tarawera River.

Fonterra Limited was issued with three Abatement Notices for various discharges to waterways from their wastewater irrigation scheme and stormwater system.

Fonterra was subsequently prosecuted for six incidents that occurred in late 2014/early 2015. There were four discharges of whey to farm drains and waterways, one discharge of wastewater to the Rangitāiki River, and one further discharge of fermented whey to a roadside drain. None of these discharges were authorised by a resource consent.

Fonterra has now committed significant capital expenditure to upgrade the irrigation system and undertake extensive site audits of wastewater and stormwater systems at the Edgecumbe site.



Image 10: The discharge from the Norse Skog Tasman Mill to the Tarawera River



Image 11: The complex drainage system located at the Fonterra Plant in Edgecumbe

⁴ Note: Asaelo Care's four consents were most recently inspected directly prior to the reporting period. As with all the major industrial sites, the monitoring data submitted by this consent holder was actively reviewed throughout the 2014/2015 period however, this is not reflected in Table 9.

Genera Limited: During very strong winds experienced on 30 April 2015 there was an uncontrolled release of 640 kg of methyl bromide at the Port of Tauranga as a result of a number of covers being blown off log stacks being fumigated. WorkSafe New Zealand was informed of this incident and issued an enforcement order requiring that the emergency response plan be updated to address this possibility. Genera have since introduced a number of changes to their operating procedures as a result of this incident.

PORT OF TAURANGA

The Port of Tauranga (the Port) is a very significant contributor to the economy of the Bay of Plenty. As is expected, the Port, and businesses associated with the Port, carry out a range of activities which, at times, can result in discharges to the environment. Council officers undertake regular inspections to ensure they have appropriate controls in place.

The main discharges to the environment include:

- Dust
- Ship stack emissions
- Methyl bromide discharge to air
- Oil

DUST DISCHARGES

Dust is a longstanding issue which is related to the unloading of bulk cargo ships and vehicle movements, and has resulted in numerous complaints from the public. Products identified as causing issues are logs (bark and dirt mobilised during movement), palm kernel, cotton seed meal, soy flour, clinker and certain fertilisers.

The Port and stevedoring companies recently formed a working group to look at options to reduce dust discharges to air and land. The Port has also introduced a range of measures to reduce dust, including sealing an additional five hectares of their site at Sulphur Point and introducing a second machine for sweeping. All bark and debris that is collected on the hardstand areas that cannot be recycled is now disposed of at an authorised landfill.

SHIP SMOKE-STACK DISCHARGES

Discharges from smoke stacks on ships result in complaints to the Pollution Hotline and council staff. Although this is a permitted activity under the current Air Plan rules, black smoke and soot from berthed ships are a very visible air pollutant.

In some ports (such as Milford) ships are prevented from burning heavy fuel oil while berthed in port and instead use diesel generators to eliminate these more polluting emissions.

METHYL BROMIDE

Fumigation of products using methyl bromide is carried out on the Port by Genera Limited to kill unwanted pests and ensure that New Zealand meets its phytosanitary export requirements.

Genera use over 200 tonnes of methyl bromide a year in Tauranga, which represents about half of all methyl bromide used in New Zealand. The gas is odourless, invisible and very difficult to measure or detect. The bulk of the gas is used to fumigate logs under tarpaulins, destined for China or India.

One of the requirements of the new consent issued in May 2014 is for an audit of the fumigation operation. This is still in progress. Genera is also attempting to develop technology to recapture methyl bromide to meet the our consent requirements, and ahead of the 2020 timeframe set by the Environmental Protection Authority when no further discharge of methyl bromide to atmosphere will be permitted.

TAURANGA OIL SPILL

In April 2015 there was a significant discharge of oil into Tauranga Harbour from a Port wharf during bunkering (re-fuelling) of a vessel. The discharge entered the harbour where it ultimately washed up on the foreshore in various places.

This resulted in a large clean-up operation involving staff from Bay of Plenty Regional Council, Tauranga City Council, Ministry for Primary Industries, Envirowaste, Waikato Regional Council and volunteers from local iwi/hapū and the community.

As a result of this spill, abatement notices were issued to Mobil requiring an assessment of the bunkering pipe network that runs under the Port wharf from the holding tanks at the Mobil site in Totara Street to the various lateral pipes used for bunkering of fuel.

The Bay of Plenty Regional Council has commenced a prosecution against Mobil Oil New Zealand Limited in relation to the April 2015 oil spill.



Image 12: Oil on foreshore at Motuopuhi Island Tauranga Harbour near Turret Road mooring



Image 13: Bay of Plenty Regional Council staff scrubbing oil off rocks in Tauranga Harbour

SMALL SCALE INDUSTRIAL SITES

WHAT IS INCLUDED IN THIS CATEGORY?

In addition to the major industrial sites, resource consents are also issued for smaller scale industrial activities.

The majority of small scale industrial consents are held by businesses located within the Tauranga and Rotorua metropolitan areas, which is largely representative of the main industrial hubs in the region.

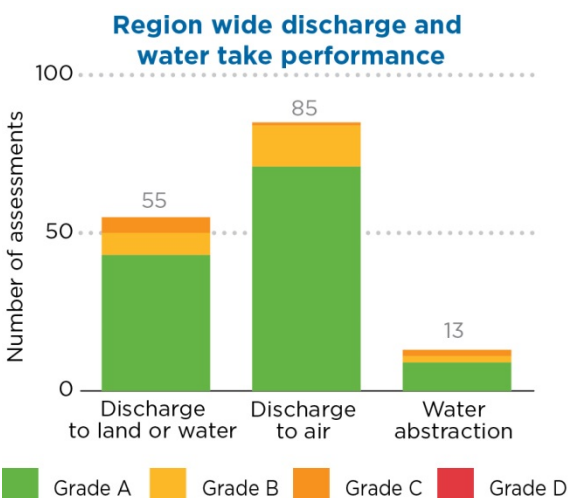
WHY DO WE CONTROL THIS ACTIVITY?

Similar to major industrial activities, the resource use and discharges associated with industrial activity have the potential to cause environmental impacts. Although smaller scale industrial activities are potentially of a lower risk, the cumulative impact of these activities can be significant.

HOW DO WE MONITOR THIS ACTIVITY?

Small scale industrial discharges and abstractions are inspected at least every five years. Medium level industrial discharges are visited annually.

In addition to individual consent inspections, BOPRC also undertakes an annual audit of an industrial area through the Industrial Pollution Prevention Programme. This audit focuses on reducing the risk of discharging contaminated stormwater, (further information on this is provided below).

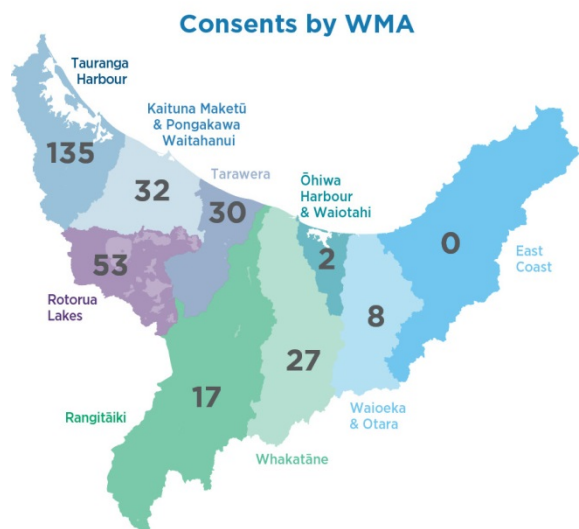


INDUSTRIAL ACTIVITIES - MINOR

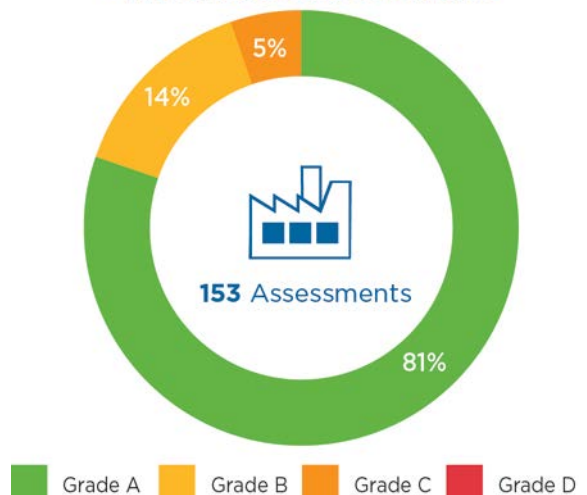
304 consents region wide

141 consents were assessed

153 total assessments



Region wide Industrial Activities - Minor Industrial performance



2014/2015 COMPLIANCE PERFORMANCE

Compliance performance of industrial consents was generally high, with 85% of medium and minor discharges found to be compliant. No major (grade D) non-compliances were identified.

Industrial Activities - Minor Industrial	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	304	141	153	123	22	8	0
Tauranga Harbour	135	56	60	54	3	3	0
Kaituna Maketū & Pongakawa Waitahanui	32	12	16	7	7	2	0
Rotorua Lakes	53	30	30	24	4	2	0
Tarawera	30	12	14	11	3	0	0
Rangitāiki	17	8	8	7	0	1	0
Whakatāne	27	16	17	13	4	0	0
Ōhiwa Harbour & Waiotahi	2	2	2	2	0	0	0
Waioeka & Otara	8	5	6	5	1	0	0
East Coast	0	0	0	0	0	0	0

Table 9: Compliance Grades Assigned to Minor Industrial Consents in 2014/2015 Period

INDUSTRIAL POLLUTION PREVENTION PROGRAMME (IP3)

Annual stormwater pollution prevention audits are undertaken in conjunction with pollution prevention officers from Tauranga City Council. In 2014/2015 the auditing process included undertaking a visual assessment of potential discharge issues in the Judea industrial estate in Tauranga. Over half of the properties were targeted for a full stormwater audit focussing on industrial processes, outdoor activities and stormwater drainage discharges.

It was concluded that the over-all risk of contaminant discharges from businesses operating in the targeted industrial estate was low. This is probably because high-risk premises have been audited in the past and made improvements, and also many now hold discharge consents. The main issue identified was outdoor vehicle washing, with soapy wash water discharging directly to the stormwater network.

All of the businesses audited were provided with recommendations for reducing the potential for contaminant discharges. Some businesses were required to implement remedial actions which in some cases required capital works or the purchase of specialist equipment, such as containment bunds for fuel storage.

WASTEWATER

MUNICIPAL WASTEWATER

WHAT IS INCLUDED IN THIS CATEGORY?

There are 16 municipal wastewater treatment plants (WWTPs) servicing 14 communities across the Bay of Plenty region. The treatment plants are run by the city or district councils, with the exception of the Kāingaroa Forest WWTP, which is operated by the community with assistance from Rotorua District Council.

A number of the region's WWTPs were built in the 1980s. The majority of these plants are based on oxidation pond designs, and have been modified over the years to allow for growing populations and changing attitudes to environmental impacts.

Newer plants, predominantly in the Western Bay of Plenty, use batch reactor plants, which are more complex to operate but are generally able to be built in a smaller footprint, and produce better quality treated effluent.

Both Rotorua and Tauranga have significantly larger scale activated sludge plants, which treat wastewater to advanced secondary treated quality.

WHY DO WE CONTROL THIS ACTIVITY?

Treated wastewater contains elevated levels of nutrients and bacteria, which have the potential to cause impacts to the environment and human health. Cultural impacts are also critical when considering the disposal of treated wastewater from a municipal plant.

In addition to the disposal of wastewater, consents are also issued to control discharges to air (primarily odour), and the disposal or further treatment of biosolids, through processes such as vermicomposting.

HOW DO WE MONITOR THIS ACTIVITY?

Bay of Plenty Regional Council inspects all major WWTPs on a six-monthly basis, while smaller/low risk plants are visited annually.

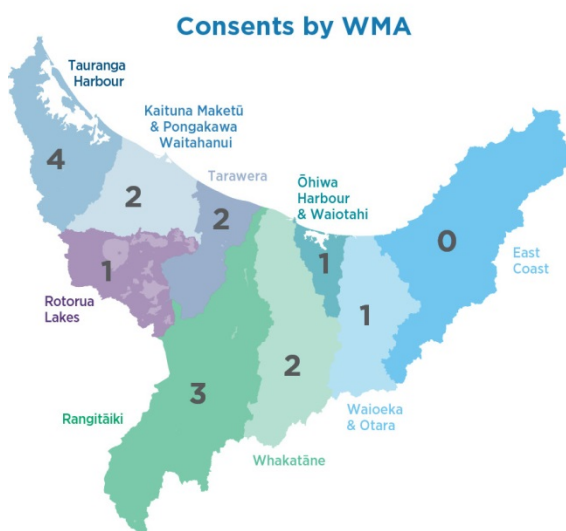
Compliance is also monitored through the review of monitoring results submitted by consent holders, and informally through ongoing work with consent holders on particular areas for improvement.

WASTEWATER - MUNICIPAL

16 Wastewater Treatment Plants

30 consents were assessed

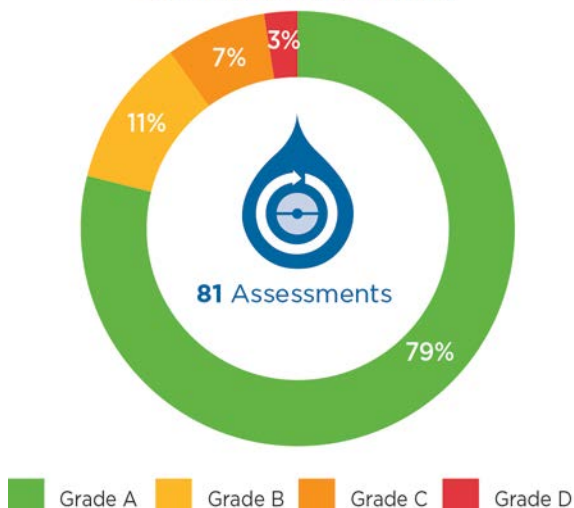
81 assessments undertaken



Number of sites and where they discharge to:



Region wide Wastewater - Municipal performance



2014/2015 COMPLIANCE PERFORMANCE

All 16 WWTPs were inspected at least once by the BOPRC pollution prevention team in 2014/2015. Some WWTPs with a history of compliance issues were visited multiple times, in order to follow up on actions required after earlier inspections.

Resource consent compliance performance in 2014/2015 was generally good, with 79% consents showing full compliance with resource consent conditions.

Non-compliances were largely related to late or absent reporting of monitoring required by consent conditions.

Wastewater - Municipal	#WWTP	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	16	30	81	64	9	6	2
Tauranga Harbour	4	14	42	37	1	2	2
Kaituna Maketū & Pongakawa Waitahanui	2	3	6	3	1	2	0
Rotorua Lakes	1	1	2	2	0	0	0
Tarawera	2	2	6	3	2	1	0
Rangitāiki	3	3	9	8	1	0	0
Whakatāne	2	4	8	8	0	0	0
Ōhiwa Harbour & Waiotahi	1	2	6	2	3	1	0
Waioeke & Otara	1	1	2	1	1	0	0
East Coast	0	0	0	0	0	0	0

Table 10: Compliance Grades Assigned to Municipal Wastewater Treatment Plants in 2014/2015 Period

KEY CHALLENGES AND ISSUES

Community Wastewater Schemes

- The future reticulation of a number of communities will result in either additional municipal/community WWTPs or increased flow to existing WWTPs.
- Some plants are showing significant signs of biosolids build up and require de-sludging in the near future (Kāingaroa, Ohope).

Ageing infrastructure and pre-RMA consents

- Older WWTPs are operating under long term resource consents granted before the introduction of the RMA.
- The pre-RMA consents expire in 2026.
- Some sites may face challenges obtaining new resource consents due to the ageing infrastructure, undesirable discharge options, and WWTP performance.
- Whakatāne District Council (WDC) has a strategy in place for identifying options for resolving these issues before 2026.



Figure 2: Ohope Wastewater Treatment Plant

DOMESTIC WASTEWATER

WHAT IS INCLUDED IN THIS CATEGORY?

Most on-site effluent treatment (OSET) systems in the Bay of Plenty can be installed without resource consent; however, a resource consent is required if:

- The wastewater volume exceeds 2000 litres per day.
- The septic tank system is in the Rotorua lake catchment.
- A septic tank system will not meet the current standards. For example, if there is insufficient space for a disposal field.
- An existing septic tank system is not upgraded to meet current standards or when a dwelling is expanded.
- The wastewater is not “domestic” wastewater. It may be from a rural business, tourist activity or campground.

There are currently 267 consented OSET systems in the Bay of Plenty region, the majority of which are domestic. Of those 267 consents, 192 are classified as “High Risk”, while 75 are classified as “Low Risk”. The risk classification takes into account the consented volume of wastewater, the location in relation to the Rotorua Lakes or designated maintenance zones, and the compliance history.

WHY DO WE CONTROL THIS ACTIVITY?

Poorly performing septic tank systems can pose a human health risk if wastewater ponds on the surface of the soil or is allowed to run off. In addition, wastewater can enter groundwater where it travels to the nearest water body. In the case of the Rotorua lake catchments, it then contributes to nutrients entering the lakes.

In other areas, particularly near surface water bodies, pathogens in wastewater may cause shellfish to become unfit for human consumption, and may also cause water quality to fall below a level suitable for swimming. These situations can result in human illness.

HOW DO WE MONITOR THIS ACTIVITY?

Territorial authorities check wastewater systems installed with new dwellings as part of the building compliance process to ensure they meet the permitted activity status.

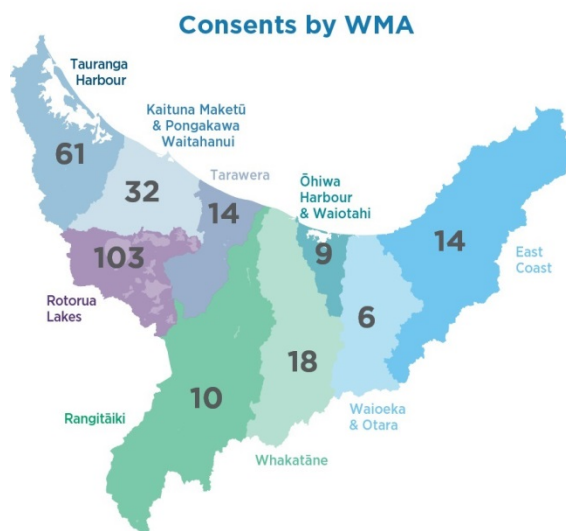
Where we receive a complaint about the performance of a wastewater system these are visited to determine if they can be substantiated.

WASTEWATER - DOMESTIC

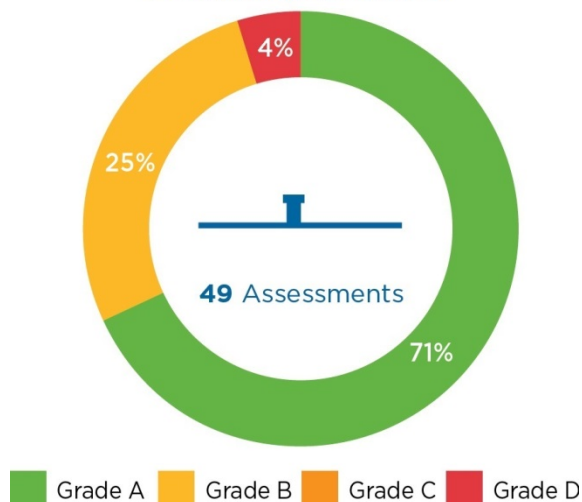
267 consents region wide

37 consents were assessed

49 assessments undertaken



Region wide Wastewater - Domestic performance



2014/2015 COMPLIANCE PERFORMANCE

Thirty-seven OSET systems were assessed during the 2014/2015 reporting period.

Compliance grades across the WMAs were largely consistent, with the majority of sites assessed as grade A. The exceptions to this is the Whakatāne WMA, in which four of the six assessments were graded B and the Kaituna Maketū WMA, where two of six assessments were graded D. Given the small sample size, this may not be indicative of these areas.

Wastewater - Domestic	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	267	37	49	35	12	0	2
Tauranga Harbour	61	4	7	7	0	0	0
Kaituna Maketū & Pongakawa Waitahanui	32	4	6	2	2	0	2
Rotorua Lakes	103	15	18	14	4	0	0
Tarawera	14	2	4	3	1	0	0
Rangitāiki	10	0	0	0	0	0	0
Whakatāne	18	5	6	2	4	0	0
Ōhiwa Harbour & Waiotahi	9	0	0	0	0	0	0
Waioeka & Otara	6	1	1	1	0	0	0
East Coast	14	6	7	6	1	0	0

Table 11: Compliance Grades Assigned to Domestic Wastewater Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

Maintenance Zones and Sewerage Reticulation

The On-site Effluent Treatment (OSET) Regional Plan identifies 'Maintenance Zones'. Many of these are close to surface water, or where there are water quality issues. For most maintenance zones, there is a date by which households need to upgrade to aerated systems, connect to reticulation (if available) or obtain resource consent.

Given the number of properties relying on a septic tank, and the likely condition and age of septic tanks, this will present a significant challenge for consenting and compliance monitoring. Staff are involved in consultation with District Councils and communities to help determine preferred outcomes, and cost effective wastewater solutions.

In some areas, District Councils are considering installing sewerage reticulation. In these areas, the Regional Council generally allows a lower standard OSET system to be installed for a short period. However, reticulation may not eventuate and there is a risk of compromising water quality in the event that it does not proceed, if these systems are not upgraded.

Western Bay of Plenty District Council is consulting the Te Puna and Ongare Point communities on sewerage reticulation options and expects to make a final decision on whether to proceed by the end of 2015. The Regional Council has agreed to part fund these sewerage schemes if they proceed. Rotorua Lakes Council is also consulting with some communities.

Marae On-site Effluent Treatment Planning and improvement

The BOPRC region has approximately 165 Marae, the majority of which rely on OSET systems for wastewater treatment. Depending on the size and amount of use a Marae receives, they can have uniquely challenging wastewater flows, for which conventional septic tanks or aerated wastewater treatment systems (AWTS) may not be well suited. Furthermore, the majority of existing OSETs at Marae are aging, and finance is often not readily available for maintenance or replacement.

DAIRY EFFLUENT

WHAT IS INCLUDED IN THIS CATEGORY?

Dairy farming is one of the largest contributors to the New Zealand economy, and is a key part of life in the Bay of Plenty region.

The effluent from dairy sheds is rich in nutrients and bacteria from animal faeces and urine but may also contain traces of cleaning detergent. The effluent is normally treated and disposed of by discharging effluent to pond soakage into the ground or irrigation on to pasture.

There are currently 698 resource consents for the discharge of dairy effluent to land in the Bay of Plenty region. Although these are spread across the whole region, the most significant concentrations of dairy farming are found in the Rangitāiki, Kaituna, Maketū and Pongakawa and Waitahe WMAs.

WHY DO WE CONTROL THIS ACTIVITY?

Many farms use a combination of two or more methods to manage their effluent. The irrigation of dairy effluent to land, if managed well, can increase pasture production and reduce fertiliser costs.

However, the discharge of dairy effluent can have significant impacts on the environment. Land disposal methods, such as effluent irrigation, can result in high loading rates if not managed properly. This can lead to nitrate contamination of groundwater and waterways (due to runoff). Pathogens entering waterways can make the water unsuitable for other downstream users.

Any discharge of dairy farm effluent to land or water in the Bay of Plenty region requires a resource consent.

HOW DO WE MONITOR THIS ACTIVITY?

Dairy sheds are inspected at different frequencies depending on the risk associated with the activity, taking into account the level of treatment, the point of discharge, and the compliance history. High risk farms are inspected annually. Medium and low risk farms are visited every two or three years respectively.

Staff inspect all aspects of the effluent treatment and/or disposal systems against the specific consent requirements during their visits. This includes inspecting effluent sumps, pipework and ponds, inspecting the location of stormwater diversion systems, where possible viewing the irrigation system, and checking for signs of seepage from effluent ponds into watercourses.

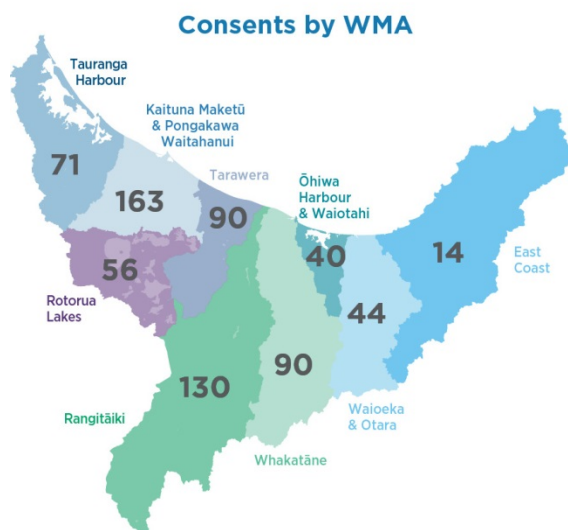
In addition, staff determine whether the property has feedpads/standoff pads, and if so, check where the runoff from those facilities goes.

DAIRY EFFLUENT

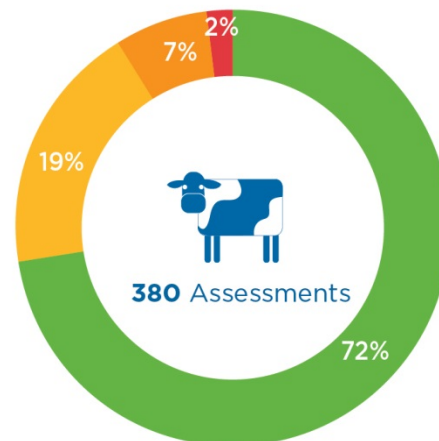
698 consents region wide

293 consents were assessed

380 assessments undertaken



Region wide Dairy Effluent performance



Grade A Grade B Grade C Grade D

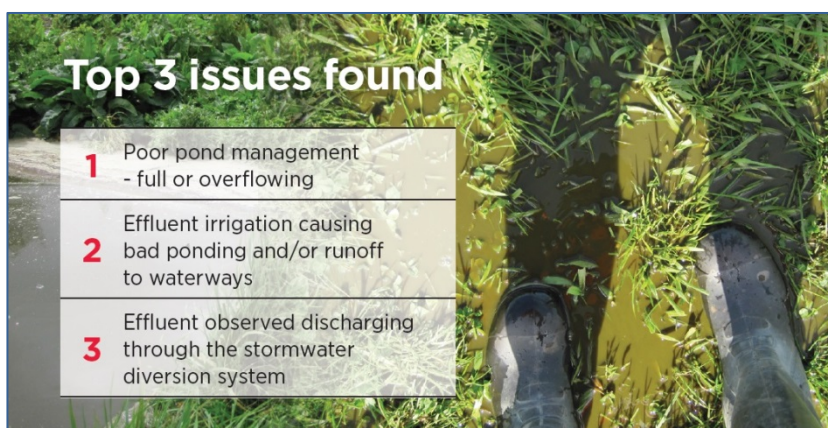
2014/2015 COMPLIANCE PERFORMANCE

Staff monitored over 290 dairy discharge consents during the 2014/15 survey. Seventy four percent of farms checked complied with their consent conditions at their first visit.

Subsequent visits for sites rated high-risk or major non-compliance were carried out until full compliance was achieved.

Compliance levels with dairy consents were generally good. Over 70% of consents were fully compliant, and the majority of non-compliances were considered to be low risk (B Grade).

The most common issues leading to serious non-compliance resulted from poor effluent pond management, ponding or runoff from effluent irrigation, or effluent being discharged via stormwater drainage systems.



Dairy Effluent

	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	698	293	380	276	71	26	7
Tauranga Harbour	71	30	43	30	8	3	2
Kaituna Maketū & Pongakawa Waitahanui	163	74	97	67	20	9	1
Rotorua Lakes	56	26	31	23	6	2	0
Tarawera	90	32	40	32	6	2	0
Rangitāiki	130	43	56	41	11	4	0
Whakatāne	90	34	39	33	5	0	1
Ōhiwa Harbour & Waiotahi	40	26	35	26	4	4	1
Waioeka & Otara	44	20	24	18	5	1	0
East Coast	14	8	15	6	6	1	2

Table 12: Compliance Grades Assigned to Dairy Effluent Discharge Consents in 2014/2015 Period

BAY OF PLENTY DAIRY STAKEHOLDERS GROUP

This Stakeholders Group was formed almost a decade ago following a period of poor compliance by farmers with dairy effluent consents. At that stage the focus of the Stakeholders Group was on improving consent compliance, and ensuring consistency with interpretation of effluent consent conditions. The Group was made up of representatives from the various dairy companies, DairyNZ, Federated Farmers and staff from the Regional Council's Pollution Prevention and Consents teams.

The Stakeholders group has been successful in improving compliance with dairy effluent consents. Over the last five years, the focus of the group has shifted towards other environmental issues that are relevant to the Bay of Plenty dairy farming community. Specifically, nutrient issues in the Rotorua Lakes, land use practises, and water abstraction across the Bay of Plenty. In the last year or so, the Group has placed a stronger focus on the impacts of the NPS for Freshwater Management.

The Stakeholders Group continues to be a valuable conduit for discussions on everything dairy related.

HYDROELECTRICITY SCHEMES

WHAT IS INCLUDED IN THIS CATEGORY?

The following entities hold consents relating directly to the damming of water for the generation of hydro power.

- Trustpower Limited
 - Power Scheme, Lower Mangapapa
 - Opuiaki Stream Dam, Opuiaki Stream
 - Tauwharawhara Stream
 - Ngatuhua Stream
 - Awakotuku Stream
 - Mangaonui Stream
 - Omanawa Dam, Omanawa River
 - Ruakaka Dam, Ruakaka Stream
 - Mangapapa Dam, Mangapapa River
 - Scotts Dry Gully
 - Ruahihi/McLaren Falls, Power Scheme
 - Wheao Hydro Electric, Power Scheme
 - Matahina Hydroelectric Power Station
- Nova Energy Limited
 - Aniwhenua Powerhouse, Lake Aniwhenua
- Ngatuhua Lodge Outdoor Education Society Incorporated
- G Mock, Ngamuwahine
- K and N Price and N and W Gedye (Parapara Stream)
- Karaponga Power Limited

These consents cover three different WMAs: Rangitāiki, Tarawera and Tauranga Harbour.

WHY DO WE CONTROL THIS ACTIVITY?

The associated resource consents authorise activities such as damming, diverting and discharging water to generate electricity. Consent conditions relate to matters such as the volume of water, water levels, in addition to the inspection and maintenance of warning signs, safety booms, intake screens, water levels, fish passes and ladders, vegetation clearance, notification, record keeping, and reporting.

HOW DO WE MONITOR THIS ACTIVITY?

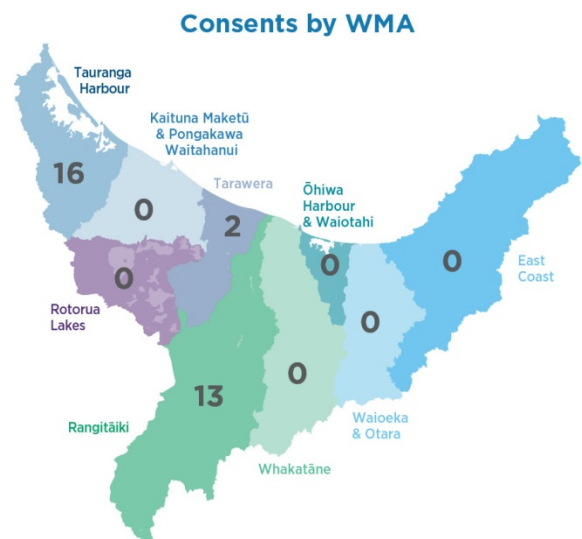
All hydro dams with significant water resource impacts are monitored on a yearly basis and reported on a three yearly cycle. All other dams are monitored and reported on a five yearly cycle. Each site is given an overall compliance rating which takes into account the site's performance over the whole reporting period.

HYDRO

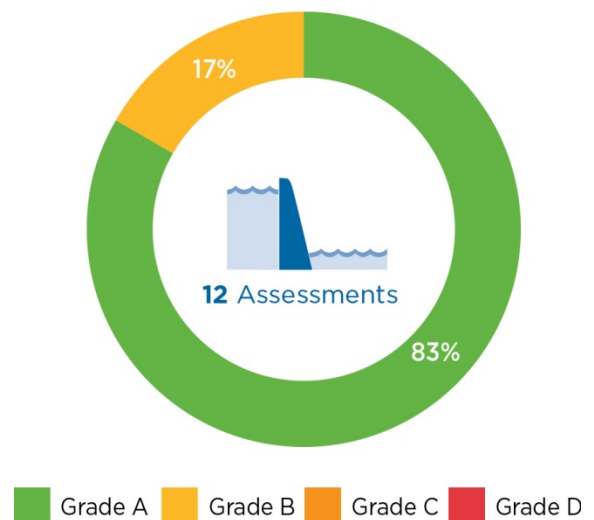
31 consents region wide

10 consents were assessed

12 assessments undertaken



Region wide Hydro performance



2014/2015 COMPLIANCE PERFORMANCE

Compliance performance for the ten consents over the seven hydro schemes was good. Only the Matahina Dam and Pokairoa Schemes had minor (grade B) non-compliances. Both of these non-compliances were rectified through follow-ups.

Hydro	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
Matahina Hydroelectric Power Station (Trustpower Ltd)	3	3	4	3	1	0	0
Aniwhenua Powerhouse (Nova Energy)	1	1	2	1	1	0	0
Karaponga Stream (Karaponga Power Ltd)	2	2	2	2	0	0	0
Mangapapa Power Scheme (Trustpower Ltd)	1	1	1	1	0	0	0
Ngatuhua Stream (Ngatuhua Lodge Outdoor Education Society)	1	1	1	1	0	0	0
Ruahihi/McLaren Falls, Power Scheme (Trustpower Ltd).	1	1	1	1	0	0	0
Ngamuwahine River (G. Mock)	1	1	1	1	0	0	0

Table 13: Compliance Grades Assigned to Hydroelectricity Consents in 2014/2015 Period

GEOHERMAL RESOURCE USE

Bay of Plenty Regional Council is responsible for managing the use of all geothermal fluid in the Bay of Plenty under the Resource Management Act 1991. Temperatures over 30°C are classified as geothermal/warm water. We undertake monitoring to ensure that the systems are being managed, maintained and operated appropriately and sustainably for present and future generations.

There are currently 299 resource consents relating to geothermal resource use in the BOPRC region. As can be expected, given the nature of the resource, the majority of these consents are located in the Rotorua Lakes and Tauranga Harbour WMAs. However, there are also several very large commercial abstractors located within the Tarawera WMA.

The Kawerau field is used to supply energy to the pulp and paper industry and into the national grid.

HOW DO WE MONITOR THIS ACTIVITY?

With the exception of the large commercial/industrial abstraction in Kawerau, most geothermal bores are physically monitored once every three years and compliance returns (water and temperature measurements) are assessed annually upon receipt. New abstractions are monitored at the time the consent is granted.

The maintenance and functionality of the well heads, discharge points, pipework insulation, pressure gauges, water meters and isolation valves is assessed and evaluated against consent conditions.

If practicable, temperature and rate of flow measurements are taken at the abstraction and discharge points. The maximum daily, weekly and annual abstraction and discharge volumes are estimated and assessed against consent conditions.

Site inspections for the Kawerau field are undertaken at least annually. In addition there is a considerable amount of regular reporting of the Kawerau field performance which requires review by staff and a Peer Review Panel.

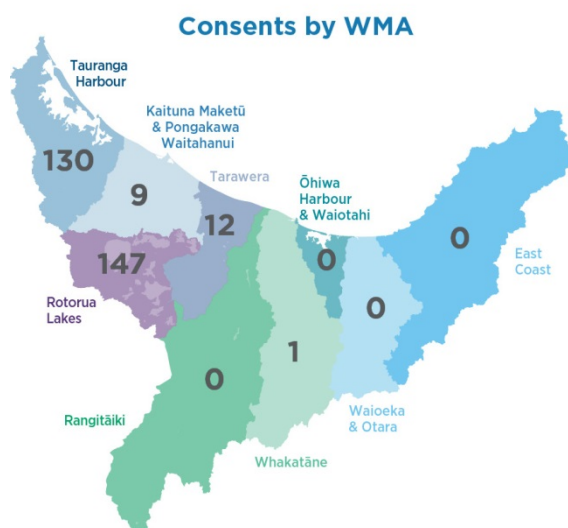
Non-compliances with the above are followed up with the consent holder, and generally result in either some form of education, enforcement action or change of consent conditions.

GEOHERMAL

299 consents region wide

122 consents were assessed

136 assessments undertaken



ROTORUA GEOTHERMAL FIELD

WHAT IS INCLUDED IN THIS CATEGORY?

The Rotorua Geothermal Field (RGF) lies beneath Rotorua and the southern margin of Lake Rotorua. The Rotorua geothermal resource has significant social, cultural and economic value, and is recognised nationally and internationally.

The field is unique in that it lies beneath a major regional city, which has grown up and around the geothermal activity. The present state of the field is a combination of the human activity drawing on this resource, and the intrinsic variability of geothermal systems.

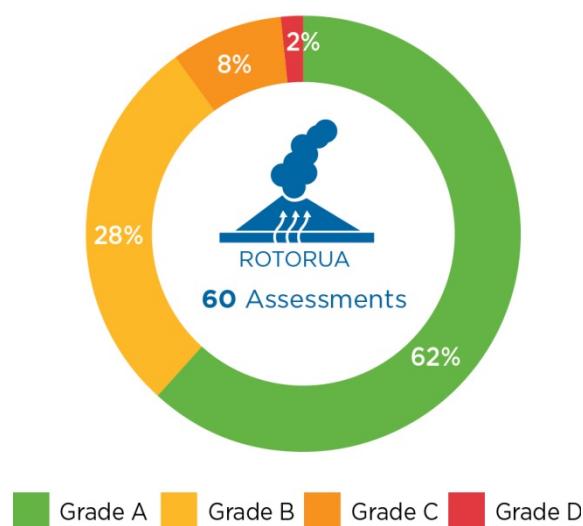
The main two types of heat extraction from the Rotorua field, is either through using a down hole heat exchanger (used mostly in heating buildings), or by direct use of the geothermal fluids, for example, use in pools.

WHY DO WE CONTROL THIS ACTIVITY?

Historic extraction demands on the Rotorua geothermal field had significant adverse effects on the geothermal resource, particularly on geothermal surface features and the amount of geothermal fluid in the field reservoir. As such, resource consent is required for:

- Interference with the natural geothermal fluid outflow from a geothermal surface feature.
- Interference or destruction of a geothermal surface feature.
- Placement or deposition of any substance into or under any geothermal surface feature.
- Abstraction of geothermal water.

Geothermal - Rotorua performance



2014/2015 COMPLIANCE PERFORMANCE

Assessment of geothermal abstractors identified a moderate level of compliance (62% full compliance) with the majority of low level compliances (28%) due to non-submission of water and temperature measurement records.

The serious non-compliance matters related to reticulation systems needing urgent maintenance due to leaking pipes; abstracting more volume than the consent authorises; and discharging spent fluid to either sewer or stormwater system, instead of to a reinjection bore. In addition, one consent holder was found to be abstracting heat through a heat exchanger, when their consent had expired several years earlier.

Geothermal - Rotorua	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
Rotorua Lakes	147	60	60	37	17	5	1

Table 14: Compliance Grades Assigned to Rotorua Geothermal Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

Geothermal well safety in the Rotorua Geothermal Field

A recent investigation into the design and condition of geothermal bores in the RGF found some significant concerns relating to the safety of bores. The investigation looked at over 100 wells across 53 sites, and found all wells to be non-compliant with modern safety standards. Bay of Plenty Regional Council is now working closely with consent holders and industry groups to bring these wells up to an acceptable standard.

Additionally, BOPRC has engaged experts to get some robust independent information on the issue, and is working with the Rotorua Lakes Council on their bore safety and gas bylaw review.



Image 14: A well-configured geothermal water bore in Rotorua

TAURANGA GEOTHERMAL SYSTEM

WHAT IS INCLUDED IN THIS CATEGORY?

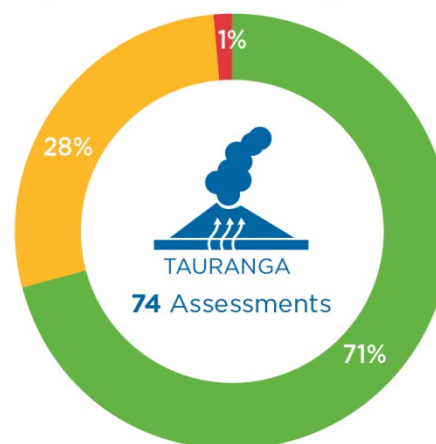
The Tauranga Geothermal System (TGS) is a low-temperature geothermal system (between 30°C and 70°C) which runs from Bowentown to Maketū in the western Bay of Plenty, as well as in suburbs such as Ōmokoroa, Te Puna, Otumoetai, Matua and Welcome Bay on the Tauranga Harbour margin.

All geothermal water, heat or energy takes from the Tauranga Geothermal System requires resource consent, regardless of the abstraction rate or daily volume.

WHY DO WE CONTROL THIS ACTIVITY?

The system has cooler temperatures compared with other geothermal systems in the region and if overused is more sensitive to permanent cooling. The geothermal fluid is heated by warm rocks. If too much geothermal fluid is taken, cool water replaces it, and it could take many years to regenerate.

Geothermal - Tauranga performance (Tauranga Harbour and Kaituna Maketū & Pongakawa Waitahanui)



Grade A Grade B Grade C Grade D

2014/2015 COMPLIANCE PERFORMANCE

Assessment of geothermal abstractors identified a high level of compliance (71% full compliance) with the majority of low level compliances (28%) due to non-submission of water and temperature measurement records. Education was provided to all those abstractors given a low level non-compliance rating. One site was given a rating of significant non-compliance as the consent holder it was found to be abstracting up to eight times over the consented daily volume. A change in consent conditions was applied for as a result.

Geothermal - Tauranga	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
Tauranga Harbour	130	60	74	52	21	0	1
Kaituna Maketū & Pongakawa Waitahanui	9	2	2	2	0	0	0

Table 15: Compliance Grades Assigned to Tauranga Geothermal Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

Unauthorised Geothermal Takes in Tauranga Geothermal System

There is likely to be a number of unauthorised uses of geothermal water from the TGS, which means our understanding of the rate of resource use may be inaccurate. To better understand the resource use, BOPRC is undertaking a detailed survey of geothermal use in the Tauranga geothermal area.

If the resource is being over-used, actions undertaken by BOPRC may include:

- Raising awareness of the value and vulnerabilities of the resource to residents.
- Taking precautionary approaches to the granting of further allocation.

KAWERAU GEOTHERMAL FIELD

WHAT IS INCLUDED IN THIS CATEGORY?

Large scale commercial abstraction and reinjection by a number of major users on the geothermal field: Mighty River Power Limited (MRP), Ngāti Tuwharetoa Geothermal Assets Limited (NTGA), Geothermal Developments Ltd (GDL) and Te Ahi o Māui Partnership Limited (TAOM). There are a small number of minor abstractions with surface water discharges.

WHY DO WE CONTROL THIS ACTIVITY?

The Kawerau Geothermal field is categorised as Geothermal Management Group 4, which is a high temperature (>70°C) geothermal system available for sustainable use and development. The development of the field must be controlled in order to ensure the long term sustainability of the resource. The adverse effects of the use of the geothermal water, heat and energy can be avoided, remedied or mitigated in this field.

HOW DO WE MONITOR THIS ACTIVITY?

Most of the monitoring is conducted by the consent holders as part of the requirements of their consents to abstract and reinject geothermal fluid. Each of the consent holders collects information on the abstraction and reinjection volumes on a daily basis. Production and injection well performance is closely monitored. There are dedicated geothermal and ground water monitoring wells spread throughout the field which are used to monitor pressure, temperature and any changes in fluid chemistry within the field. Monitoring results are reported to Council either monthly, quarterly or annually depending on the consent requirements.

A Peer Review Panel of geothermal experts has been engaged to review monitoring reports and advise the Council of any issues that may require further investigation. Additional monitoring is conducted to assess the effects of the activity on the field by changes in geothermal vegetation, surface features, subsidence (by benchmarking) and micro seismicity.

2014/2015 COMPLIANCE PERFORMANCE

The compliance overall is high. The new consents issued over the last three years to all four major users have aligned consent conditions and monitoring requirements. There have been no instances of non-compliance in relation to consented abstraction and reinjection. There have been a number of instances of elevated mercury discharged over consented limit to the Tarawera River by NTGA. However, this has been identified as an issue with the detectable limits in the laboratory versus the limits set by the consent. This is currently being addressed in the re-consenting of the NTGA river discharge.



Image 15: The Geothermal Cooling Channel from the NTGA Plant in Kawerau



Image 16: The discharge stack from the Mighty River Power geothermal plant in Kawerau

KEY CHALLENGES AND ISSUES

- Multiple commercial users on one geothermal field make it one of the most complex fields to manage in the world.
- There is no overarching System Management Plan in place, so no clear set of principles by which the system is managed.
- Commercial sensitivity of information. Users do not want to share information with other users because of the relative cost of obtaining the information.
- Not all the allocated take is being used, so we don't know what the actual effects are on the field if all of the consented abstraction is used. There are proposed field development with Te Ahi o Māui building a power station and drilling new production and injection wells. NTGA and MRP have also indicated that they will be undertaking further development in the near future.
- Large scale industry is sited directly above the geothermal field that may be negatively impacted if there was an increase of subsidence, tilt or seismic activity on the land, as a result of the consented activity.
- Ngāti Tūwharetoa Settlement Trust wants exclusive kaitiaki rights over the geothermal resource through statutory acknowledgments.

WATER ABSTRACTION

MUNICIPAL WATER SUPPLY

WHAT IS INCLUDED IN THIS CATEGORY?

There are currently 64 municipal water sources with resource consent in the Bay of Plenty. The majority of these schemes are managed by city or district councils, although a significant number are independent community schemes, operating in rural parts of the region.

WHY DO WE CONTROL THIS ACTIVITY?

Bay of Plenty Regional Council is responsible for managing the abstraction and use of all fresh water under the RMA. Resource consents are required for any abstraction above a particular threshold (which may change, according to the water source). These consents allow BOPRC to monitor the amount of demand being placed on the resource, and ensure water resources are not over allocated so are available for as many users as possible. They also ensure that minimum water levels are maintained to prevent significant social, cultural and environmental effect

Bay of Plenty Regional Council does not control or monitor the quality of water abstracted for municipal supply; this is administered by the Department of Health.

HOW DO WE MONITOR THIS ACTIVITY?

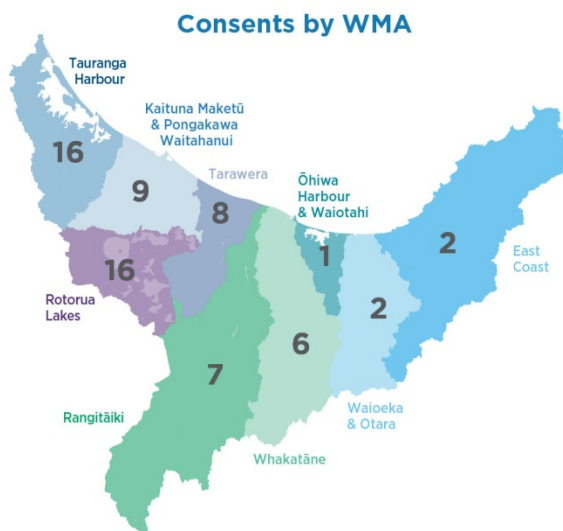
Municipal abstractions are inspected once every five years. Ongoing compliance is largely monitored by auditing the water abstraction records, submitted by the consent holders.

MUNICIPAL WATER SUPPLY

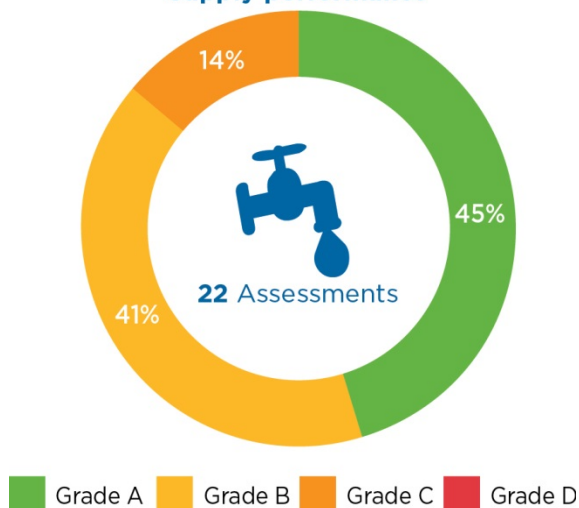
67 consents region wide

22 consents were assessed

22 assessments undertaken



Region wide Municipal Water Supply performance



2014/2015 COMPLIANCE PERFORMANCE

During 2014/2015, 22 of 67 municipal abstraction consents were inspected. Compliance with the consents was generally poor, with only 45% of consents found to be compliant.

The remaining 55% of assessments were identified as low risk (grade B) to moderate (grade C) non-compliance.

Municipal drinking water was generally better managed by district/city councils, with 53% of consents fully compliant.

Community schemes had significantly lower levels of compliance, however only a small number were assessed during this reporting period.

All of the non-compliances were due to a failure to submit water abstraction records and meter verification, which is a requirement for all municipal abstraction consents.

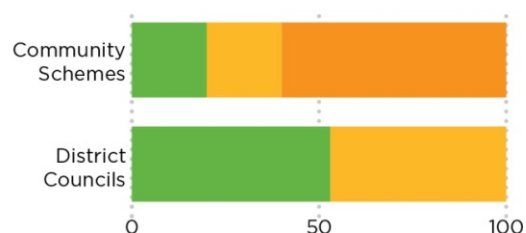


Image 17: The Tautau Stream Intake, which supplies drinking water to Tauranga City

Municipal Water Supply - by T/A

	Consents Assessed	Total Assessments	GRADE			
			A	B	C	D
OVERALL	22	22	10	9	3	0
Western BOP District Council	2	2	0	2	0	0
Whakatāne District Council	10	10	4	6	0	0
Rotorua District Council	5	5	5	0	0	0
Ōpōtiki District Council	0	0	0	0	0	0
Tauranga City Council	0	0	0	0	0	0
Community Schemes	5	5	1	1	3	0

Table 16: Compliance Grades Assigned to Territorial Authority Municipal Water Abstraction Consents in 2014/2015 Period

AGRICULTURAL/HORTICULTURAL WATER USE

WHAT IS INCLUDED IN THIS CATEGORY?

There are currently 919 resource consents granted for water abstraction associated with agriculture and horticulture in the Bay of Plenty region.

Approximately 17% of consents are for pastoral farming, mainly for pasture irrigation, and a small number for dairy shed water use. The remaining 83% of the consents are for the irrigation and frost protection of kiwifruit, avocados and other horticultural crops.

Thirty one percent of the water abstracted for primary production is from surface water (rivers/streams/lakes). The remaining 69% is from groundwater (shallow and deep aquifers).

Warm water abstraction is addressed in the geothermal section of this report.

WHY DO WE CONTROL THIS ACTIVITY?

Consents are required for the take (abstraction) and use of water. This ensures water resources are not over allocated and are available for as many users as possible. This process also ensures that water levels are maintained to prevent significant environmental, social or cultural effects. If less than 15 m³ is taken per day it can usually be done without consent, depending on the water source.

The consents set limits on the rate of take and the daily volume, weekly volume and/or annual volume of water that can be taken. This ensures that water is being used efficiently.

HOW DO WE MONITOR THIS ACTIVITY?

On-site monitoring varies depending on the rate of take.

Properties taking less than 5 L/s are visited every three years, while takes over 5 L/s are only visited every five years. The

higher frequency of visits for lower rates of takes is because these are not required to comply with the National Water Regulations. These regulations require people taking more than 5 L/s to install an accurate water meter, keep daily water use records and supply these to Regional Council on an annual basis.

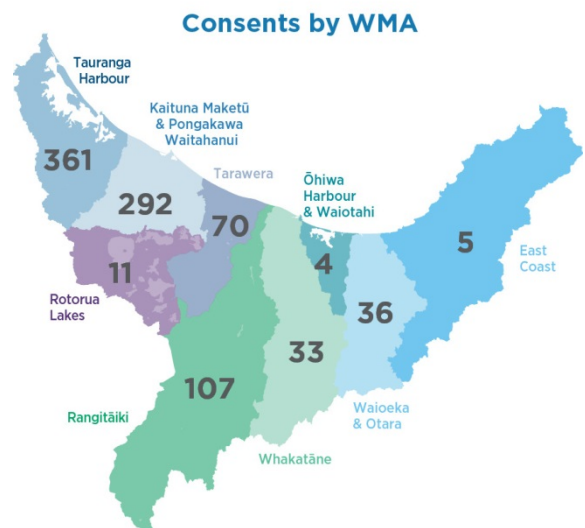
Bay of Plenty Regional Council staff check that water meters have been installed correctly, and verified as accurate, and compare water use records to the figures and limits in the resource consents.

AGRICULTURAL/HORTICULTURAL WATER USE

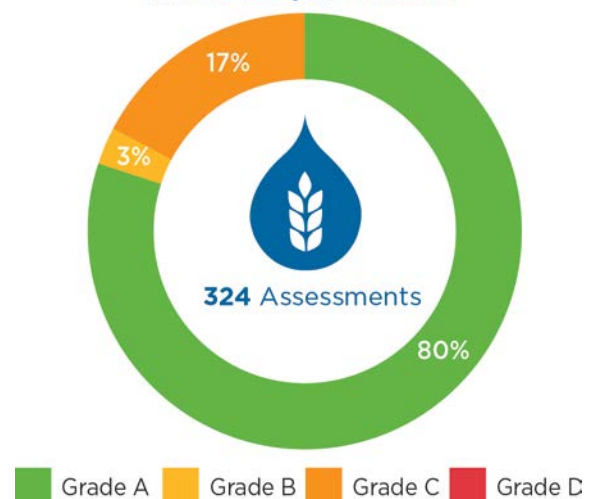
919 consents region wide

297 consents were assessed

324 assessments undertaken



Regional Agricultural/Horticultural Water Use performance



2014/2015 COMPLIANCE PERFORMANCE

Two hundred and ninety seven consents were inspected during the 2014/2015 year, which is 32% of all agricultural/horticultural water abstraction consents.

Agricultural/Horticultural Water Use	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	919	297	324	260	9	55	0
Tauranga Harbour	361	120	143	116	7	20	0
Kaituna Maketū & Pongakawa Waitahanui	292	98	99	83	1	15	0
Rotorua Lakes	11	7	7	7	0	0	0
Tarawera	70	24	26	18	1	7	0
Rangitāiki	107	28	28	20	0	8	0
Whakatāne	33	18	19	15	0	4	0
Ōhiwa Harbour & Waiotahi	4	0	0	0	0	0	0
Waioeka & Otara	36	2	2	1	0	1	0
East Coast	5	0	0	0	0	0	0

Table 17: Compliance Grades Assigned to Agricultural/Horticultural Water Abstraction Consents in 2014/2015 Period

KEY CHALLENGES AND ISSUES

Issues with data submission and verification

- Over 70% of water use records were submitted manually in 2014/2015. This means considerable time is needed to enter the data into our systems so that it can be analysed. This has improved significantly from the 2013/2014 year, when 90% of records were supplied manually.
- A significant number of consent holders do not supply the records on time.
- The number of consented water takes required to supply records will increase as takes >5 L/s come under the Water Regulations in November 2016.

The Pollution Prevention team has worked closely with industry representatives to ensure the legislative requirements are communicated and understood.

The team is also working on a range of strategies to enable more reliable and practical submission of data, including the use of telemetry, and is developing a dedicated app to allow water users to submit their records from their smart phone.

Water quantity challenges

Similar to other regions within New Zealand, one of the most significant issues relating to freshwater in the Bay of Plenty region is the increasing demand and decreasing availability of freshwater resources.



Image 18: A well configured groundwater abstraction bore, fitted with a water meter on the horizontal section of pipe.

While the freshwater futures programme begins to gain some momentum in the Rangitāiki and Kaituna Maketū and Pongakawa Waitahanui WMAs, a draft plan change has been drafted to address some of the region-wide issues relating to water quantity. In particular, this plan change aims to address the following issues:

- Confirming the existing limits to irrigation.
- Reducing the amount of groundwater permitted to be abstracted without consent.
- Fixing existing unconsented and/or unauthorised water takes by dairy farmers and irrigators.
- Increased requirements for water users to meter and report water use.
- Increased efficiency requirements and better opportunities to transfer water to other users.

This will result in more robust data relating to water abstraction across the region.

As a result of tightening the allowance for permitted water takes without a consent, it is likely that the plan change will result in an increase in the number of water abstraction consents within the region.

COASTAL ACTIVITIES

WHAT IS INCLUDED IN THIS CATEGORY?

The Bay of Plenty coastline extends east from Orokawa Bay (east of Waihi) toward East Cape ending near Lottin Point. Along the coast there are two large harbours Tauranga and Ōhiwa, a number of estuaries and eight large river mouths.

The section focuses on the coastal marine area (CMA), which starts at the high tide mark and extends 12 nautical miles off the coast.

Various activities in the CMA require a resource consent including coastal structures, dredging, mangrove removal and aquaculture.

WHY DO WE CONTROL ACTIVITIES IN THE COASTAL MARINE AREA?

The Bay of Plenty is a hotspot for marine biodiversity in New Zealand and has a wide range of coastal habitats including estuaries, brackish water lagoons, open sandy beaches, offshore islands and an active volcano.

Coastal areas can often include sensitive environments under threat such as conservation areas, animal habitats, landscape vegetation and culturally significant areas. The coastal marine area also has significant recreational and historic heritage values.

Nearly all of the coastal marine area in our region is not owned by any individual or organisation.

Activities in the CMA have the potential to discharge contaminants, disturb natural processes, disturb or damage ecosystems, native plants and animals or areas of historic heritage, cause erosion, prevent public use of (or access to) an area, or have an adverse effect on values and resources of significance to tangata whenua.

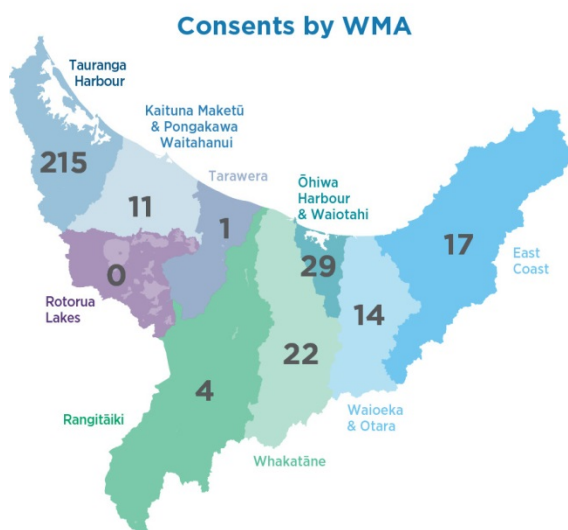
On occasion, structures within the CMA can be deemed not fit for purpose, for example the Tay Street surf reef. This artificially constructed reef was not performing as expected and the reef is currently being removed from the seabed in stages.

COASTAL ACTIVITIES

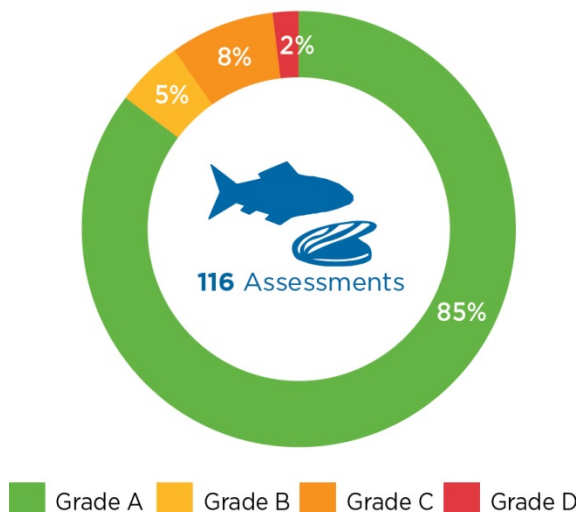
313 consents region wide

74 consents were assessed

116 assessments undertaken



Region wide Coastal Activities performance



HOW DO WE MONITOR THIS ACTIVITY?

Each type of activity is monitored differently. Structures in the CMA are monitored on a ten yearly basis. If a new structure is installed, checks at the time of installation are also carried out. Any non-compliance is followed up with the consent holder, and generally results in either removal of all or part of the structure, or a change to the consent.

Dredging activity is monitored annually with a site visit to the operational area. Information submitted by the consent holder is assessed to ensure the dredged material is relocated to the correct areas, as specified in the consent, and in the correct quantities and specification.

Monitoring of aquaculture operations is carried out annually and limited to an assessment of the structure and any discharge occurring during harvesting.

2014/2015 COMPLIANCE PERFORMANCE

Coastal Activities	Total Consents	Consents Assessed	Total Assessments	GRADE			
				A	B	C	D
OVERALL	313	74	116	99	6	9	2
Tauranga Harbour	215	55	86	83	3	0	0
Kaituna Maketū & Pongakawa Waitahanui	11	4	6	5	0	0	1
Rotorua Lakes	0	0	0	0	0	0	0
Tarawera	1	0	0	0	0	0	0
Rangitāiki	4	0	0	0	0	0	0
Whakatāne	22	3	2	2	0	0	0
Ōhiwa Harbour & Waiotahi	29	8	16	5	2	8	1
Waioeka & Otara	14	2	3	3	0	0	0
East Coast	17	2	3	1	1	1	0

KEY CHALLENGES AND ISSUES

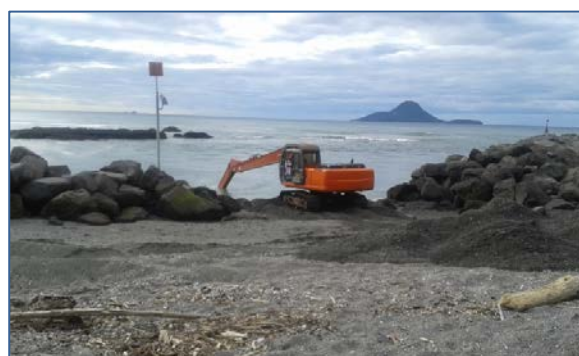
Complaint response in the coastal area can include the removal of stranded vehicles on beaches, removal of dead livestock and the investigation and clean-up of pollutant and/or sediment discharges.

There was a significant oil spill at the Port of Tauranga in April 2015. This is described more fully in the 'Port of Tauranga' section.

Aquaculture

Eastern Sea Farms limited was granted resource consent to establish an offshore mussel farm in 2008. The marine farm occupies 3800 ha of the coastal marine area off the coast of Ōpōtiki. Initial trials have been very promising and work is underway to commercialise the venture.

The consent allows for staged development of the marine farm and will require ongoing monitoring and reporting.



Ōpōtiki Harbour entrance

Ōpōtiki District Council holds a resource consent to create a new Ōpōtiki Harbour entrance. These works involve cutting a new entrance through existing sand dunes, construction of a harbour entrance structure, capital and maintenance dredging of the river channel and extensive ecological restoration and mitigation works. The new harbour entrance will provide an all-weather entrance to Ōpōtiki Harbour. Access is currently restricted due to the shallow river bed and sand-bar.

The consent requirements are complex and will require considerable resource from the Pollution Prevention team as the project progresses.

MV Rena grounding

Complaints are still occasionally generated related to the MV Rena grounding on Otaiti (Astrolabe Reef) which occurred in October 2011. These are mostly related to plastic beads deposited on to coastal areas. There will be considerable resource required to monitor compliance if consents are granted to leave part of the wreck on the reef as any consent will be subject to a comprehensive suite of monitoring and reporting requirements.

COMPLAINT AND INCIDENT RESPONSE

WHAT IS INCLUDED IN THIS CATEGORY?

This section provides a summary of complaints received, and incidents responded to, during the reporting period.

HOW DO WE MONITOR THIS ACTIVITY?

The majority of complaints and incidents are logged through Council's Pollution Hotline. The Hotline is manned 24/7, with all calls answered by Council staff during working hours, and by an afterhours security firm outside of business hours. Complaints are passed on to the appropriate Pollution Prevention staff to respond.

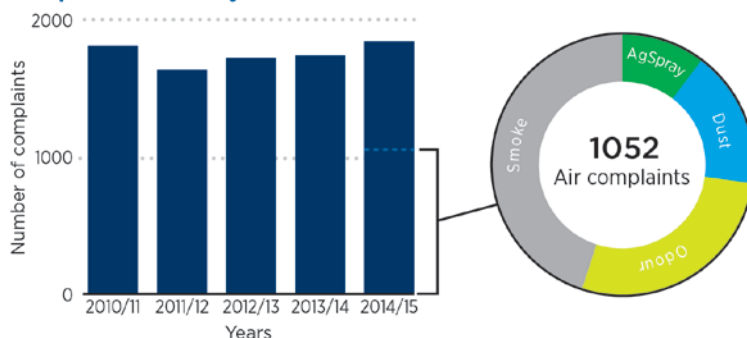
Response times are dictated by the urgency of the complaint/incident. Often the caller is contacted by the responder to obtain further details. In some cases, the complaint is able to be addressed through telephone communications, for example, no site visit is necessary. However, in most cases a site visit is required.

Urgent incidents, such as the discharge of toxic contaminants into waterways, are usually responded to within an hour.

2014/2015 COMPLAINT/INCIDENT SUMMARY

During the period, 1843 complaints/incidents were logged, of which 57% were air related. Smoke related complaints continue to dominate, making up 25% of all complaints logged. The total number of complaints received during the reporting period increased by 6% compared to the 2013/2014 period.

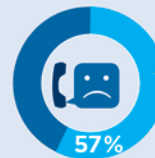
Complaints summary



Complaints and enforcement 1 July 2014 - 30 June 2015



1843
complaints
(most in 5 years)



1052
air related



Of air related
complaints, over
40%
relate to
smoke



112
Abatement
notices
issued

50 Infringement notices
issued worth
\$32,150



9 cases sentenced
involving eight
separate parties,
resulting in almost
\$485,000 in fines
being awarded

REGULATORY ENFORCEMENT

WHAT IS INCLUDED IN THIS CATEGORY?

This section summarises the formal enforcement action undertaken during the 2014/2015 period. The forms of enforcement action reported on are:

- Abatement Notices
- Enforcement Orders
- Infringement Notices
- Prosecutions initiated/sentenced

2014/2015 ENFORCEMENT SUMMARY

ABATEMENT NOTICES

Abatement notices are formal instructions. They are a direction to either cease doing something, take action to address an environmental effect, or to comply with consent conditions. During the reporting period, 112 abatement notices were issued.

INFRINGEMENT NOTICES

Infringement notices (fines) are issued for serious non-compliance offences that don't warrant prosecution. The fines are set by the Government and range from \$300 to \$1,000 depending on the offence.

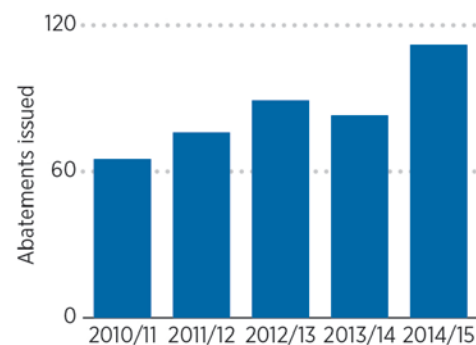
PROSECUTIONS

Prosecutions are reserved for more serious offending. This can be for offences where significant environmental effects have resulted, or for where repeated serious non-compliance has occurred. The maximum penalties are two years imprisonment and up to \$300,000 fine for individuals, or up to \$600,000 for corporates.

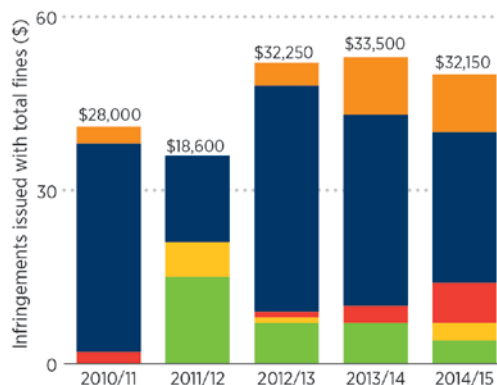
Bay of Plenty Regional Council considers any serious non-compliance matters through an Enforcement Decision Group (EDG). The EDG is made up of senior staff within the Pollution Prevention team and is designed to provide robust assessments of each case.

Not all cases going through the EDG process result in a recommendation to proceed with a prosecution. Many result in other forms of enforcement, such as issuing formal warnings, or issuing abatement and/or infringement notices. Where a case is recommended for prosecution, it is signed off by a Council General Manager, before being forwarded for legal review.

Abatement notices issued



Infringement notices issued



KEY:

■ Breach of AN	Relates to cases where abatement notices have been breached by the recipient
■ s.15	Relates to restrictions with discharging contaminants to the air, water and land
■ s.14	Relates to restrictions with water e.g. water abstractions, damming or diverting water, etc
■ s.13	Relates to restrictions within beds of rivers or lakes e.g. structures, disturbing stream or lake bed, etc
■ s.12	Relates to restrictions within the Coastal Marine Area e.g. coastal structures, disturbing sea bed, etc
■ s.9	Relates to restrictions of Land Use e.g. earthworks, forestry, etc

Prosecutions which resulted in conviction and sentencing between 1 July 2014 and 30 June 2015*



AREA: Ōhiwa
OFFENCE DATE(S): February to May 2013
PENALTY: \$52,487 fine and \$58,017 costs awarded for remedial stream bank repairs
NATURE OF OFFENCE: Unauthorised works in and around the bed of the Nukuhou River, and for breaching an abatement notice.



AREA: Tauriko
OFFENCE DATE(S): September 2014
PENALTY: \$28,500 fine for contractor and \$29,925 fine for company
NATURE OF OFFENCE: Unauthorised discharges of sediment laden water to the Kopurereroa Stream.



AREA: Ōpōtiki
OFFENCE DATE(S): September 2013
PENALTY: \$15,000 costs plus \$5000 shared by three environmental groups
NATURE OF OFFENCE: Discharge of demolition waste to land. Waste included asbestos.



AREA: Rangitaiki Plains
OFFENCE DATE(S): September 2014 to March 2015
PENALTY: \$101,250*
NATURE OF OFFENCE: Four separate unauthorised discharges of milk processing wastewater to land where it entered waterways.



AREA: Mamaku
OFFENCE DATE(S): November 2013
PENALTY: \$49,875 fine
NATURE OF OFFENCE: Two separate unauthorised discharges of dairy effluent and a breach of abatement notice.



AREA: Edgecumbe
OFFENCE DATE(S): March 2015
PENALTY: \$36,450*
NATURE OF OFFENCE: Unauthorised discharge of cream processing wastewater to the Rangitaiki River.



AREA: Tauriko
OFFENCE DATE(S): December 2013
PENALTY: \$75,000 fine
NATURE OF OFFENCE: Unauthorised discharges of sediment laden water to the Kopurereroa Stream.



AREA: Edgecumbe
OFFENCE DATE(S): April 2015
PENALTY: \$36,450*
NATURE OF OFFENCE: Unauthorised discharge of ethanol plant wastewater to a drain.



AREA: Mount Maunganui
OFFENCE DATE(S): May 2014
PENALTY: \$60,000 fine
NATURE OF OFFENCE: Unauthorised discharge of sulphur dioxide gas from an industrial site.

* Sentencing took place on 27 July 2015, but has been included in this report.