Tasman Resource Management Plan

Efficiency and Effectiveness Evaluation

Chapter 33:

Discharges to Land and Fresh Water

Final report date: 20 August 2020

Lead author: Greg Mason (Inform Planning Ltd)

Co-author: Lisa McGlinchey

Reviewed by: Barry Johnson

Note: *This report does not include consideration of the latest requirements in the National Policy Statement for Freshwater Management, National Environmental Standard for Freshwater, or National Regulations for Stock Exclusion gazetted in August 2020.*

Acronyms

ARM	Avoid-Remedy-Mitigate
DOC	Department of Conservation
GIS	Geographic Information System
HSNO	Hazardous Substances and New Organisms Act 1996
HSW	Health and Safety at Work Act 2015
LiDAR	Light Detection and Ranging - technology that provides detailed contour data
MagiQ-BI/NCS	Two related Council information systems - used to manage data, including for resource consents and service requests, including complaints.
NCC	Nelson City Council
NES	National Environmental Standards
NES-CS	National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health
NPS	National Policy Statement
NPS-FM	National Policy Statement for Freshwater Management
NES-PF	National Environmental Standards for Plantation Forestry
NPStds	National Planning Standards
NTLDM	Nelson Tasman Land Development Manual
NZCPS	New Zealand Coastal Policy Statement
PC##	Plan Change ##, e.g. Plan Change 66
RMA	Resource Management Act
RPS	Tasman Regional Policy Statement
SDWDA	Special Domestic Wastewater Disposal Area
SMP	Site Management Plan
SwAMP	Stormwater Activity Management Plan 2018
TDC	Tasman District Council
TEP	Tasman Environment Plan
TRMP	Tasman Resource Management Plan
WCO	Water Conservation Order
WwAMP	Wastewater Activity Management Plan 2018
WwMA	Wastewater Management Area

Contents

Executive Summary

This report reviews the efficiency and effectiveness of the provisions in Chapter 33 – Discharges to Land and Fresh Water - in the Tasman Resource Management Plan (TRMP). It concludes the provisions in this chapter and their implementation through rules and non-regulatory methods largely require full review or update as part of the Tasman Environmental Plan (TEP) review process. The key reasons for this are to fully implement the National Policy Statement for Freshwater Management, and improve integrated management of waterbodies and their margins, including alignment across the district and regional plans.

Intent of Chapter 33

This chapter addresses five broad issues: 1. effects of point-source and diffuse contaminant discharges to land and water; 2. emergency or accidental discharges of contaminants; 3. the capacity of urban stormwater networks and the effects of contaminants discharged in stormwater; 4. effects of onsite disposal of domestic wastewater; and 5. management of contaminated sites.

Achievement of Objectives

Contaminant Discharges

Chapter 33 regulates a range of contaminant discharges that can have an impact on water quality. Assessment of effects through the resource consent process has enabled Council to control the impacts of discharges on water quality in many instances, typically in relation to point source (i.e. end of pipe) discharges. Over 1100 consents have been processed by Council under Chapter 33 provisions over the past ten years, ranging from discharges from individual sites, to discharges from large rural subdivisions.

Key shortcomings with the Chapter include the challenge of managing non-point source discharges, the lack of provisions addressing tangata whenua interests in water management, the lack of policies addressing the effects of discharges to land (as opposed to water), and the need to update the schedules relating to water body uses and values (Schedules 30A & B) and water classifications and standards (Schedules 36A & B). Overall, this objective is considered to be 'partially achieved'.

The objective and policies relating to management of land and water use in the Waimea Water Management Zones have only relatively recently been made operative in the TRMP (2015). The objective has therefore been assessed as 'not achieved' due to the fact there has been insufficient time to fully implement the relevant provisions.

Nevertheless, there are shortcomings in the Chapter provisions that need to be addressed as part of the TRMP review. For instance, Schedules 31E 'Requirements for Irrigation and Nutrient Management Plans' and 31 F 'Nutrient Allowances' are incomplete and there is as yet no regulatory requirement for consent applicants to provide a nutrient management plan.

Accidental or Emergency Discharges

The objective addressing contamination from emergency discharges or accidental spills is considered to be 'on track to achieve'. The policies in this section are concerned with contingency planning for accidental or emergency discharges, particularly of hazardous substances. The requirement for

contingency plans and environmental monitoring is a normal requirement of resource consents issued by the Council and there are clear triggers for contingency plans in relevant rules.

The requirement for councils to control hazardous substances was removed from the RMA in 2017 to avoid duplication with similar regulation under the HSNO and HSW Acts. The hazardous substances provisions in the TRMP therefore need to be updated to ensure they focus on relevant environmental matters not covered by the other legislation. As a result, hazardous substance policies in other chapters of the TRMP may be better integrated into the discharges chapter.

Stormwater Discharges

The Chapter 33 discharge provisions have been applied to a large number of consent applications in both urban and rural settings, from individual sites to large greenfield subdivisions. A range of measures have been applied to ensure stormwater is discharged in a way that avoids inundation and contamination, including low impact design options. Ongoing work by Council to increase capacity of the stormwater network has helped reduce the risk of stormwater inundation in localised areas.

To date, discharges from the urban stormwater network managed by TDC have largely been operating without a resource consent. This has meant that the significant volume of stormwater discharged from the network has not been assessed for compliance against the TRMP. A comprehensive application has since been publicly notified and is currently awaiting a decision.

Council's approach to stormwater management has evolved over the past 10 years, from generic engineering solutions to a more holistic catchment management approach aimed at addressing issues related to stormwater networks and discharges in specific areas. The TRMP review will need to ensure the stormwater provisions reflect these changes. Overall, the stormwater objective has been 'partially achieved'.

On-Site Disposal of Domestic Wastewater

This objective and related policies are focused on discharges from on-site disposal systems, such as septic tanks, not on the use and performance of the public wastewater system managed by TDC. With this in mind, the wastewater provisions for Wastewater Management Areas (WwMAs) are considered to be effective, in particular because the development is less dense and the sites rely on sources of water other than ground water (i.e. water tanks), which reduces the risks of drinking water becoming contaminated.

In contrast, the Special Domestic Wastewater Discharge Areas (SDWDAs) have not been as successful. The more intensive residential development associated with these areas has increased the risk of wastewater discharges contaminating groundwater. In particular, the permitted activity rule that enables the discharge of domestic wastewater into land in a SDWDA is too lenient. Consequently, this objective is considered to be 'partially achieved'.

Contaminated Site Management

The 2011 NES for Assessing and Managing Contaminants in Soils to Protect Human Health (NES-CS) has introduced a robust consenting system for identifying land that may be contaminated, and requiring consent for activities on that land that may impact on human health.

TDC has received over 50 applications thus far for a range of activities undertaken on contaminated land under the NES-CS, which has enabled soil monitoring and site investigation to be undertaken to ensure the works carried out will protect human and environmental health.

The Chapter provisions relating to contaminated sites could be strengthened by providing greater policy guidance to support implementation of the NES-CS regulations around human health. As well, the policies addressing environmental impacts could be more detailed and directive. Provisions for contaminated sites are spread out between Chapters 5, 16, 18 and 33 and this needs to be consolidated. Overall, this objective is considered to be 'on track to achieve'.

Implementation of National Instruments

Chapter 33 provisions need to be updated to give effect to two key national planning instruments. The NPS-FM sets clear directives for Council to maintain and improve freshwater quality and in particular to control land uses, including urban development, vegetation removal, and plantation forestry to reduce sediment loads and discharge of contaminants.

In support, the NZCPS requires council to "Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment". This includes impacts of activities that degrade freshwater quality 'upstream' of the coast, such as point and non-point discharges (e.g. sediment, nutrients and contaminant discharges).

The close connection between land use activities and effects on fresh and coastal water quality requires stronger integration between regional and district provisions in the TRMP. Giving full effect to the NPS-FM and NZCPS will assist with achieving this as both these national directives require councils to manage activities and their effects in an integrated way.

Recommendations

The following recommendations provide a summarised assessment of the effectiveness and efficiency of the specific Chapter 33 provisions. They consider the need for change in the objective and policy framework and intend to inform the review of the TRMP. Refer to the body of this report for full analysis and detailed information from which these recommendations are drawn.

The recommendations provide an initial step in the plan review process. Subsequent information, including from iwi, political and public input, new information and legislative change will affect final proposals.

General

Overall, the policy framework in Chapter 27 would be significantly strengthened by giving effect to national directives and to improve integrated management of waterbodies and their margins, including alignment across the district and regional plans.

Key recommendations for the TRMP's overall freshwater framework

- Give full effect to the national guidance, particularly the National Policy Statement for Freshwater Management and the NZ Coastal Policy Statement.
- Review the TRMP chapters dealing with freshwater so that water quality (Chapter 33) and quantity (Chapter 30) issues, and effects on instream, ecological and other values (Chapters 27 and 8), can be managed in a more integrated way. In doing so, simplify and rationalise the freshwater policies.
- Provide stronger integration between Regional and District Plan chapters to enable more effective management of land use activities that impact upon freshwater bodies, the coast and their margins, including effects of diffuse discharges on water quality.
- Ensure the effects of climate change are taken into account in the TRMP's water management provisions, including waterbody resilience to drought and flooding.
- Strengthen the provisions relating to the relationship of Māori with waterbodies (including aquifers and wetlands) and reflect mātauranga Māori in TRMP provisions; include relevant provisions from iwi management and environmental plans, statutory acknowledgments in Treaty settlement legislation, and objectives and policies in the NPS-FM and NZCPS.
- Strengthen the TRMP rules so that they require or incentivise restoration and enhancement of waterbodies through the resource consent process.
- Review and relocate Schedules 30A and 30B to include a full set of uses and values for the Districts waterbodies, including wetlands.

Key recommendations for Chapter 33

- The chapter is focused on effects of discharges to water and should be updated to provide supporting objectives and policies addressing discharges to land.
- Consider including a general permitted activity rule for small scale contaminant discharges similar to air discharges (Rule 36.3.2.1).

- Review all hazardous substance provisions in the TRMP to:
  - Avoid duplication with HSNO and HSW Act requirements;
  - Ensure consistency with the NPS-FM; and
  - Ensure integration and avoid duplication between Regional and District Plan provisions.
- Consider having all TRMP hazardous substance provisions in the Contaminant Discharges chapter, with accidental and emergency discharges being one part of that section.
- Update the water classes and standards in Schedules 36A and 36B in accordance with the national objectives framework requirements of the NPS-FM.
- Review stormwater management policies and rules, with consideration for improved articulation of volume/flow issues and catchment-based considerations.
- Review terminology used in chapter (and TRMP generally) to ensure consistency and accuracy, e.g. stormwater vs floodwater vs drainage water; clarify the distinction between these. Consider referring instead to primary, secondary or tertiary flows, and overland flow or subsurface drainage (or similar).
- Review rules for stormwater to improve efficiency, i.e. the TRMP includes rules for stormwater discharges, diversion of flood water, and redirecting flood water; clarify the distinction between consented activities and consolidate rules where possible.
- Review stormwater policies to ensure they:
  - reference best practice for stormwater discharges (best practice is currently not mentioned);
  - address the contaminant effects of stormwater runoff from roads; and
  - avoid duplication between TRMP chapters, especially 5, 6 and 7.
- Review need for the distinction between Wastewater Management Areas (WwMAs) and Special Domestic Wastewater Disposal Areas (SDWDA). Review the boundaries of these areas and provisions, including the permitted activity rules allowing discharges to land, with a view to more rigorously avoiding effects of discharges, particularly the risk of contaminating groundwater.
- Include policies and rules addressing composting toilets and human manure systems, as the TRMP is currently silent on these forms of domestic waste disposal.
- Review wastewater discharge rules that include a date-based component, as it allows for the use of old systems which are likely to pose a higher risk to water quality.
- Review the Chapter's contaminated site provisions to:
  - Give full effect to the NES for Contaminated Soils[1] (NES-CS); and
  - Ensure the environmental impacts of contaminated sites are fully addressed in policies and rules (the NES focuses solely on human health); and
  - Ensure integration / avoid duplication with other TRMP provisions for contaminated sites (e.g. Chapters 5, 16 and 18).

[1] The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

Specific Objective and Policy Recommendations

The recommendations in Table 11 to Table5 provide a summarised assessment of the effectiveness and efficiency of the specific Chapter 33 provisions. It considers if there is a need for change in the objective and policy framework and is intended to inform the review of the TRMP. The recommendations are categorised into:

- **Review:** includes partial or whole-scale review of the intent, scope and language used in the provision
- **Retain (with updates)**: retention of the intent of the provision, but update of the scope and/or language used in the provision
- **Retain (unchanged)**: retention of the provision largely as is. May include some minor update to language as needed.
- **Remove**: provision is considered unnecessary and should be removed from the policy set. (Note provisions that should be removed from the chapter policy set, but relocated to another policy set elsewhere in the TRMP are assigned to the 'review' category)

Figure 1 provides a visual summary of the recommended changes for Chapter 33.

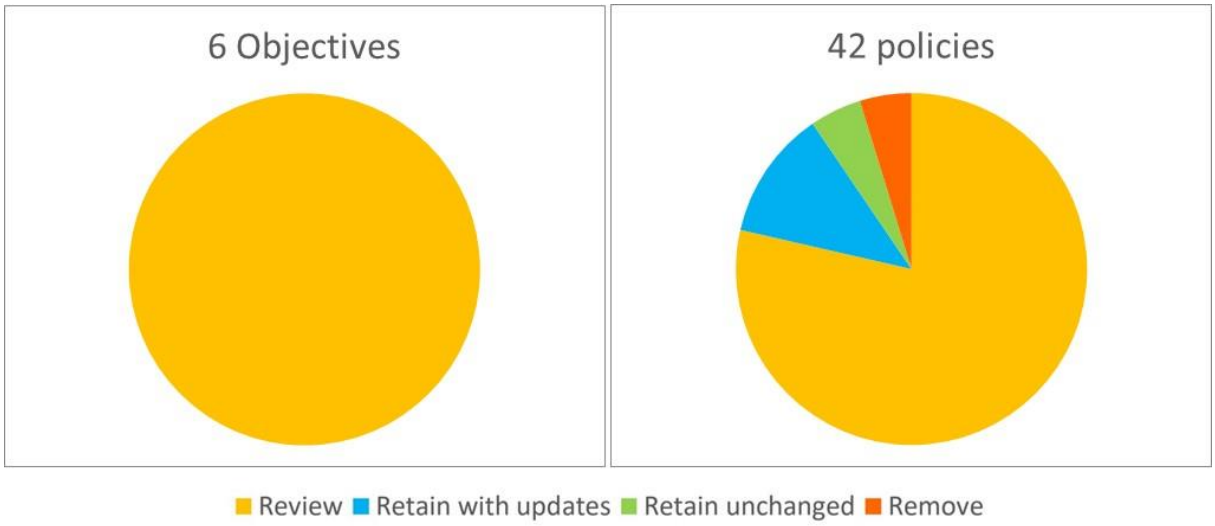


Figure 1: Visual summary of recommended change to provisions in Chapter 33

Contaminant Discharges

Table 1: Summary of Provision Specific Recommendations – Contaminant Discharges

No.	Objective set	Recommendations
Objective 33.1.2.1	***The discharge of contaminants in such a way that avoids, remedies or mitigates adverse effects while:*** ***(a) maintaining existing water quality; and*** ***(b) enhancing water quality where existing quality is degraded for natural and human uses or values.***	• Review • The objective is solely focused on water quality. It should to be reviewed to ensure consistency with the objectives in the NPS-FM. • Additional objectives should be considered for inclusion that address: 1) discharges to land; 2) the interface between land and freshwater (particularly regarding diffuse discharges); and 3) the interface between fresh and coastal water ('ki uta ki tai'). • The ARM terminology needs updating to provide direction and certainty.
Objective 33.1.2.2	***The management of land and water use in the Waimea Water Management Zones to maintain, and where it is degraded to improve, water quality to meet the management objectives specified in Schedule 30B.***	• Review • Ensure consistency with the NPS-FM and update language accordingly, e.g. by referring to freshwater management units rather than water management zones. • Consider rewording to make intention of objective clearer, e.g. what aspects of land and water use need managing? Policy 33.1.3.8 provides relevant detail. • Remove reference to Waimea to extend application to all FMUs and update reference to Schedule 30B to reflect any amendments.
Policy 33.1.3.1	*To recognise and provide for the uses and values of water through a system of classification that establishes the water quality standards required to protect the water quality needs of those uses and values.*	• Review • To give effect to the water quality requirements of the NPS-FM, as developed through the national objectives framework. • Update the water classifications set out in Schedules 36A and B in accordance with the NPS-FM uses, values and attributes. • Ensure rules clearly implement the schedules and enable improvement to existing water quality where required.
Policy 33.1.3.2	*To avoid, remedy or mitigate the adverse effects of discharges of contaminants so that both individually and cumulatively with the effects of other contaminant discharges, they enable the relevant water quality classification standards to be complied with.*	
Policy 33.1.3.3	*To seek to improve water quality where existing water quality is lower than the requirements of any water classification or water conservation order.*	

No.	Objective set	Recommendations
Policy 33.1.3.4	*To ensure that water quality is not degraded where the existing water quality is the same or higher than the relevant water classification or any water conservation order.*	• Consider having a separate policy(ies) to ensure consistency with water conservation orders. • Include an appropriate polic(ies) covering contaminant discharges to land.
Policy 33.1.3.5	*To ensure that existing water quality is not degraded after reasonable mixing as a result of any discharge of contaminants into water and to take into account the following criteria when determining what constitutes reasonable mixing:* *(a) The depth, width and flow characteristics of the receiving water body, including the nature and extent of mixing which may occur and the assimilative capacity of the water.* *(b) The extent of the mixing zone and the likely adverse effects on aquatic life or ecosystems within the mixing zone.* *(c) The characteristics of the discharge, including the presence of toxic constituents.* *(d) The community (public) uses and values of the water or any mixing zone, including those specified in the Plan, any water conservation order or water classification for any water body.*	• Retain with updates • 'After reasonable mixing' is a consideration required under the RMA (e.g. s107) and the policy provides useful interpretation of what that means in practice. • Policy wording could be reviewed to ensure it is consistent with the NPS-FM and case law about reasonable mixing.
Policy 33.1.3.6	*To take into account the following factors in determining the significance of actual or likely adverse effects on the receiving water of or from contaminant discharges:* *(a) Any water classification given in any schedule to Chapter 36 or water conservation order.* *(b) Existing water quality of the receiving water.* *(c) The significance or sensitivity of the aquatic life or ecosystem.* *(d) The extent of the water body adversely affected.* *(e) The magnitude, time of year, frequency and duration of the adverse effect, including any cumulative effects as a result of the discharge.* *(f) The range and intensity of uses and values of the water body.* *(g) The conflicts between uses and values of the water body.* *(h) The nature of the risks of the adverse effect.* *(i) Any relevant national or international water quality guidelines or standards, or water conservation order.*	• Review • Ensure the policy is consistent with (and does not duplicate) the requirements set out in Schedule 36D 'Assessment Criteria for Discharges'.
Policy 33.1.3.7	*To ensure the loss of nutrients and sediment to water is minimised through:* *(a) working with industry and landowners to develop good industry practices that maximise nutrient use efficiency and minimise nutrient run-off and leaching;*	• **Review** policy wording for clarity and to avoid duplication with related provisions from other Chapters, e.g. 12 'Land Disturbance', 27 'Beds & Surfaces of Rivers & Lakes' & 30 'Freshwater'.

No.	Objective set	Recommendations
	(b) requiring through conditions on consent or plan rules that activities that discharge nutrients, or take and use water for irrigation, or are land disturbances, are carried out with good industry practice.	• The issue of nutrient and sediment discharge to water is an important one, but is not clearly or sufficiently addressed in the policy (or TRMP generally). • Either reword (a) to require best practice to be followed; or relocate (a) to Methods section, e.g. 33.1.20.2 'Education and Advocacy'. • Review wording of (b) to more clearly articulate the actions required to address nutrient and sediment discharges. This may require multiple policies. • Ensure these matters are captured in appropriate rule sets (e.g. fertiliser use is currently treated as a cross-boundary issue rather than as a contaminant).
Policy 33.1.3.8	*To reduce the risks of existing land use and land use intensification in the Waimea Plains having adverse effects on water quality, especially the effects of nitrate leaching and losses on groundwater quality for drinking, and on the aquatic ecosystems in Neimann, Pearl and O'Connor creeks by:* *(a) developing water quality limits in accordance with Policy 33.1.3.10 to meet the objectives in Schedule 30B for water quality while recognising that existing water quality does not enable the achievement of some of those management objectives.* *(b) developing Irrigation and Nutrient Management Plans to be specified in Schedule 31E with appropriate leaching limits as necessary and adoption of good industry practice where this is available in consultation with industry groups and landowners;* *(c) recognising that further land use intensification will not increase until the Lee Valley Community Dam is in operation and therefore:* *(i) recognising that further details about nutrient leaching limits and industry good practice are in development and will be added to the Plan through a subsequent Plan change;* *(ii) carrying out further investigation to provide more clarity about historic land use effects and the likely impact of nutrient losses on the coastal springs and groundwater under existing land use and land use intensification;*	• Review • The policy is very detailed and covers a range of matters. It should be reviewed with a view to separating out the matters into more focused and succinct policies. • In doing so, consider whether the policies should be expanded to apply to areas other than the Waimea Plains, for example referring to water management zones where nitrate freshwater objectives are not being met , or whether a separate objective/ policy framework(s) should be developed for other areas within FMU chapters under the NPStds. • Distinguish between nutrients from sediment (phosphorous) and those from inputs to land. • Update schedules that are currently incomplete or out of date, e.g. Schedules 30B, 31E & 31F. • Ensure rules fully implement policies and schedules, e.g. the rules governing fertiliser do not refer to this policy or Schedule 31F regarding nutrient management.

No.	Objective set	Recommendations
	(iii) carrying out further investigation to determine the necessary water quality limits, and measures required to meet them; *(iv) working with the primary industry sector to:* *develop acceptable management practices including, as necessary, nitrogen leaching rates for land use activities in the Waimea plains and to review the Plan to include them as discharge or land use conditions via a Plan change prior to 1 November 2020* *develop industry good practice that mitigates nitrogen leaching for different land uses, land management regimes and soil types* *provide support to farmers to prepare on-farm Irrigation and Nutrient Management Plans;* *(d) amending the Plan prior to 1 November 2020 to develop Schedule 31E and Schedule 31F as necessary and to include water quality limits and nutrient limits or allowances that reflect the outcomes of (a), (b) and (c).*	• Relocate non-regulatory aspects of the policy to the Methods section, e.g. (c) (iv). • Remove (d) as it will soon be out of date.
Policy 33.1.3.9	*In setting water quality limits and adopting management methods under policy 33.1.3.8, to consider economic, social and cultural implications of those limits or other methods, including any implications for the ongoing production of food on the high productive value land of the Waimea Plains and for the ongoing achievement of objectives 7.1.2.1 to 17.1.2.3.*	• Remove • This is a process policy. It has been superseded by the NPS-FM and repeats requirements of s32 analysis under the RMA.
Policy 33.1.3.10	*In establishing water quality limits to safeguard the critical values and achieve the management objectives set out in Schedule 30B, to consider for future inclusion in the Plan in accordance with Policy 33.1.3.8(d) the following parameters (together with any additional parameters agreed between the Waimea Plains Freshwater and Land Advisory Group and Tasman District Council):* *(a) Ammonia* *(b) Cyanobacteria (Phormidium)* *(c) Deposited sediment* *(d) Dissolved inorganic nitrogen* *(e) Dissolved oxygen* *(f) Dissolved reactive phosphorus* *(g) Macro-invertebrates* *(h) Macrophyte coverage* *(i) Microbial levels* *(j) Nitrogen toxicity* *(k) Periphyton coverage and biomass* *(l) pH* *(m) Suspended sediment* *(n) Temperature*	**Remove** This is a process policy. It has been superseded by NPS-FM national objectives framework and related uses, values and attributes.

No.	Objective set	Recommendations
	(o) Nitrate-nitrogen and phosphorus	
Policy 33.1.3.11	*To avoid, remedy or mitigate the adverse effects of non-point source contamination arising from land use and discharge activities by a mixture of methods, including regulation of discharge activities, particularly through advocacy of best management practices, and to review the mixture of methods used if environmental monitoring shows that water quality standards are not being maintained.*	• Review • The policy wording is unclear, refers to both regulatory and non-regulatory implementation, and does not provide guidance for consent decisions. • It should be expanded to identify and address the effects of non-point source contamination. Associated rules should also be developed to ensure activities causing non-point source discharges are regulated. • Also consider whether an additional policy is required for point source discharges, as there are currently none in this section.
Policy 33.1.3.12	*To seek to improve water quality by appropriate riparian and coastal land management.*	• Review • Retain intention, but make clearer – what are appropriate land management practices? • The policy is more relevant to Chapter 8 'Margins of Rivers, Lakes, Wetlands and the Coast' and should be reviewed alongside related provisions there.
Policy 33.1.3.13	*To promote and encourage discharge of wastes to land or constructed wetlands in preference to discharge to water where:* *(a) discharge to land or constructed wetlands has less actual or potential adverse environmental effects than discharge to water;* *(b) land disposal system design and operation is such that adverse effects on the environment, including soil and surface and groundwater quality are avoided, remedied or mitigated; and* *(c) the discharge to land is the best practicable option.*	• Retain with updates • Retain intent, but strengthen wording to provide greater direction, e.g. 'Promote and encourage' could be 'Require and support'... • Consider amending the related rule sets to incentivise land-based discharges by making it easier to do so, i.e. providing a more permissive activity status.
Policy 33.1.3.14	*To improve water quality where disease-causing organisms, dissolved oxygen, fine sediment or nutrient levels degrade water quality:* *(a) below water quality standards specified in a water conservation order;* *(b) below microbiological standards for stock-drinking water;* *(c) below the action level microbiological standard for contact recreation in rivers and lakes having value for contact recreation;* *(d) causing nuisance algal growth.*	• Review • Consider rewording to make intent clearer and ensure the policy is consistent with the NPS-FM requirements for water quality. • Ensure rules enable enhancement of water quality through contaminant discharges. • Note: consent staff report that the policy is useful for requiring riparian planting as a condition of resource consent. It could

No.	Objective set	Recommendations
		be amended to make this connection more explicit.
Policy 33.1.3.15	*To help guide decisions for priority where action (including enforcement action or other action by Council) is needed under Policy 33.1.3.14, the Council will take into account:* *(a) the relative significance of instream values of a water body to the community, particularly in relation to the uses and values given in Schedule 30A, and opportunities for contact recreation;* *(b) the extent and severity of the adverse effects of contaminant discharges on a water body, especially if it is likely to lead to long-term changes to the water quality, bed substrate or aquatic ecosystems of the water body;* *(c) the extent to which amenity values, stock water supplies, edible fish, shellfish or aquatic plants and other mahinga kai, and indigenous species are being adversely affected by contaminant discharges;* *(d) the extent to which the Clean Streams Accord target date of 2012 is relevant and appropriate;* *(e) the risks for water quality arising from intensive farm management systems.*	• Review • This appears to be a process policy. • Consider rewording and including it in Schedule 36D Assessment Criteria for Discharges. Alternatively, make the policy intent clearer, including the relationship with Policy 33.1.3.14. • Remove or amend out-of-date references, e.g. to the clean streams accord. • Include reference to Schedule 30B (as well Schedule 30A) and update both schedules to give effect to the NPS-FM.
Policy 33.1.3.16	*1. When considering any application for a discharge, the consent authority must have regard to the following matters:* *(a) the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and* *(b) the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.* *2. When considering any application for a discharge, the consent authority must have regards to the following matters:* *(a) the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their contact with fresh water; and* *(b) the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their contact with fresh water resulting from the discharge would be avoided.* *3. This policy applies to the following discharges (including a diffuse discharge by any person or animal):*	• Retain with updates • Amend wording to also refer to discharges to land. • Review the need for points 4 and 5 and remove duplication.

No.	Objective set	Recommendations
	(a) a new discharge; or *(b) a change or increase in any discharge –* *of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.* *4. Paragraph 1 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2011 took effect on 1 July 2011.* *5. Paragraph 2 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2014 takes effect.*	
District Plan Contaminant Discharge Provisions		
Policy 6.8.3.18	*Richmond* *To manage existing industrial activities in the Beach Road area that do not meet the Mixed Business Zone objectives for clean industry by:* *(iii) requiring a higher level of performance for the management of contaminant discharges to water, and storage and use of hazardous substances.*	• Retain with updates • Retain and update if necessary in light of possible zoning changes (discussed in Chapter 6 'Urban Environment Effects' evaluation report). • Ensure this is implemented through the relevant regional rule sets.
Policy 6.9.3.9	*Motueka* *To avoid the adverse effects of industrial and commercial activities on the Riwaka/Motueka groundwater resource.*	• Retain with updates • The intention of the policy is appropriate and the use of 'avoid' provides strong direction. • The wording could be expanded to identify the main activities and effects in question. • Ensure this is implemented through the relevant regional rule sets.

Accidental or Emergency Discharges

Table 2: Summary of Provision-Specific Recommendations – Accidental or Emergency Discharges

No.	Objective set	Recommendations
Objective 33.2.3	***The avoidance, remediation or mitigation of the adverse effects resulting from emergency discharges or accidental spills.***	• Review • Clarify intent of objective by providing more detail about the adverse effects it seeks to address. • Provide stronger direction by updating ARM terminology.

No.	Objective set	Recommendations
Policy 33.2.3.1	*To promote and advocate development of site contingency plans to avoid, remedy or mitigate the likely adverse effects of any emergency discharges or other accidental spills.*	• **Review** alongside other TRMP policies addressing contingency planning to avoid duplication (e.g. 5.5.3.6). • Ensure stronger direction is provided, e.g. to 'require' development of site contingency plans, rather than to 'promote and advocate'. • Consider need for policy and/or rule to include 'minimum five' requirements of plans: eg site as-built plans for stormwater, visual marking of stormwater system features, suitable spill containment systems, relevant spill plans and spill kits onsite, and appropriate staff training in implementation of spill plans and use of kits.
Policy 33.2.3.2	*To ensure that land use and discharge activities are carried out, having regard to contingency planning measures appropriate to the nature and scale of any discharge and risk to the environment for any accidental discharge of any contaminant that may result in connection with the activity.*	• **Review** – retain intent, but provide more detail about relevant land use and discharge activities, and the associated risk, that the policy seeks to address. This may require more than one policy. • Provide stronger direction, e.g. 'having regard to' contingency planning measures could be 'in accordance with'...

Stormwater Discharges

Table 3: Summary of Provision Specific Recommendations – Stormwater Discharges

No.	Objective set	Recommendations
Objective 33.3.2	***Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse effects of downstream stormwater inundation, erosion and water contamination.***	• Review • Provide stronger direction by updating ARM terminology. • Retain reference to inundation, erosion and water contamination, and consider broadening to include effects on habitats. • Remove reference to 'downstream stormwater', as backwater effects can occur upstream, e.g. where a stream is so full the stormwater discharge backs up the pipe and into someone's property.
Policy 33.3.3.1	*To require all owners, particularly the Council as stormwater asset manager, of all or part of any stormwater network to avoid, remedy or mitigate adverse effects of stormwater discharges.*	• Review • This is a very general policy and does not provide strong implementation guidance. • What actions are required to ensure owners / Council avoid, remedy or mitigate adverse effects? Needs to be more focused and directive.

No.	Objective set	Recommendations
Policy 33.3.3.2	*To advocate works to restore and protect stream or coastal habitats and improve and protect water quality affected by stormwater and drainage water discharges.*	• Review • The policy addresses two matters, restoration of stream and coastal habitats (which is not obviously tied to stormwater) and protecting water quality affected by discharges. • Stormwater rules do not require or support stream or coastal habitat improvements associated with stormwater drainage activities. Reference to coastal habitats is especially weak. Review in context of Chapter 8 and 27 regarding habitat restoration and protection • The policy should be reviewed to more clearly link the matters with stormwater discharges, provide greater direction about the actions to be taken, clarify the distinction between stormwater and drainage water, and ensure the policy can be implemented through rules. • The policy will also need to give effect to the water quality requirements NPS-FM.
Policy 33.3.3.3	*To manage the adverse effects of stormwater flow, including primary and secondary flowpaths, and the potential for flooding and inundation.*	• Review • Greater guidance could be provided re what is meant by 'to manage the adverse effects'. • Language in policies and rules needs reviewing for consistency (e.g. primary flowpaths is not mentioned in rules).
Policy 33.3.3.4	*To avoid, remedy or mitigate the potential for flooding, erosion and sedimentation arising from stormwater run-off.*	• Review • Largely repeats the objective without adding further guidance.
Policy 33.3.3.5	*To avoid, remedy or mitigate the adverse effects of stormwater on water quality and the potential for contamination.*	• Review • Largely repeats the objective without adding further guidance.
Policy 33.3.3.6	*To maintain or enhance stormwater infiltration to enhance groundwater recharge.*	• Retain with updates • This is a useful policy that could be expanded to provide more detail around maintaining or enhancing stormwater infiltration. • Ensure rules specify infiltration as a means of recharging groundwater (currently they do not). Consider linkages with the NTLDM[2].
Policy 33.3.3.7	*To require owners of all or part of any stormwater drainage network to*	• Review • Repetitive and should be reviewed alongside Policy 33.3.3.1 above.

[2] Nelson Tasman Land Development Manual

No.	Objective set	Recommendations
	avoid, remedy or mitigate any adverse effects of stormwater discharges.	
Policy 33.3.3.8	*To encourage an integrated whole-catchment approach to the management and discharge of stormwater.*	• Review • Consider replacing Policy 33.3.3.8 with the wording of 7.2.3.10[3], as it is more clearly written and reduces repetition.
Policy 33.3.3.9	*To require the use of low impact design in the management of stormwater discharges in any new development, where practicable.*	• Retain • Consider replacing Policy 33.3.3.9 with the wording of 7.2.3.10, as it is more clearly written and reduces repetition. • Improve internal consistency as the strength of the policy wording does not follow through to rules (there is only one mention of LID in stormwater rules, as a matter to consider). Consider linkages with the NTLDM.
Policy 33.3.3.10	*To encourage the restoration and rehabilitation of stormwater drainage networks where natural drainage networks have been significantly modified.*	• Retain • Consider strengthening the policy, e.g. by replacing 'To encourage...' with 'To require...' or similar. Clarify wording that this is promoting reversion of modified drainage systems back to natural based systems (eg daylighting of reticulation)
Policy 33.3.3.11	*To take into account the long-term management of stormwater drainage in consideration of land development, including subdivision and land-use changes.*	• Review • The intention of the policy is not clear. Is it something to be addressed through the resource consent process or directed at 'bigger' decision-making processes, such as zone changes, new zones and stormwater drainage infrastructure networks within urban settings? • If the former, provide greater guidance around what considerations of long-term management are required; if the latter, consider moving to the Methods section as a non-regulatory method (or remove) and reword to make intent clear such as promoting or requiring the use of catchment based structure planning. • Refer wording used in Policy 7.2.3.10.
District Plan Stormwater Provisions		
Policy 5.1.3.8	*Development must ensure that the effects of land use or subdivision activities on stormwater flows and contamination risks are appropriately managed so that the adverse*	• [Note: this recommendation is from the Chapter 5 evaluation report: • Retain with updates • This policy is generally appropriate, but ought to be located in the Regional Plan with other policies on

[3] Policy 7.2.3.10: "To use a whole-catchment approach to the management of stormwater, and to apply low impact design to address the stormwater effects and changes in drainage patterns arising from rural land development".

No.	Objective set	Recommendations
	environmental effects are no more than minor.	Stormwater Discharges; terminology will need to be updated.] • In addition, consider linkages with the NTLDM.
Policy 6.1.3.1	*To encourage subdivision and development to incorporate sustainable urban design principles by:* *(h) managing stormwater run-off on site where possible, and ensuring off-site stormwater run-off does not increase flood risk nor adversely affect water quality in waterways and the coastal marine area for aquatic ecosystems and recreation;...*	• Retain with updates • Consider removing reference to 'for aquatic ecosystems and recreation' as there are other uses and values that may also benefit from protection of water quality, and instead add reference to "or habitats" after water quality as stormwater flows.
Policy 6.2.3.6	*To avoid, remedy, or mitigate the adverse effects of urban growth on natural stormwater drainage processes within catchments and infrastructure services.*	• Review • Provide greater direction by replacing ARM terminology. • Reword to provide greater distinction between effects on natural stormwater drainage and infrastructure services.
Policy 6.2.3.7	*To identify and designate principal stormwater flow routes in urban catchments prior to development and after consultation with affected landowners.*	• **Retain with updates** – reword to ensure consistent use of terminology - ie primary flow paths is defined principal stormwater flow routes is not. Consider overlap with Policy 33.3.3.11.
Policy 6.3.3.6	*To allow development to occur only where adequate provision is made for:* *(a) control of sediment discharges;* *(b) control of stormwater discharges to avoid adverse downstream erosion or flooding effects;* *(c) protection of fresh water and coastal water quality, including through source control techniques, stream management, and where necessary, stormwater treatment, including aquifers and karst drainage systems and caves;* *(e) maintenance of natural, cultural and intrinsic values of aquatic systems, including aquifers and karst drainage systems and caves;* *(g) the use of Low Impact Design solutions for the management of stormwater run-off where practicable.*	• Retain with updates • Consider removing 'where necessary' from (c) and 'where practicable' from (g), as they are unnecessary (the policy is not requiring these measures to be used in all situations, it is seeking 'adequate provision'). Add consideration of upstream effects in (b)
Policy 6.3.3.7	*To require developers to adopt appropriate management methods to avoid or mitigate the adverse effects of stormwater run-off.*	• Review • The policy lacks detail around 'appropriate management methods'.
Policy 6.8.3.5	*Richmond*	• Retain

No.	Objective set	Recommendations
	In the north-east Richmond Residential and Rural Residential Serviced zones, to utilise as far as practicable natural watercourses in an unenclosed and natural state for stormwater disposal.	• Policy 6.8.3.24 also mentions 'waterway networks that ensure effective stormwater management, but Policy 6.8.3.5 is more specific to the stated NE Richmond zones.
Policy 6.8.3.22	*Richmond* *To manage the cumulative effects of contaminated stormwater runoff from hard-surfaced areas and potential hazardous substance spills from adversely affecting the Waimea Inlet through the establishment of dedicated stormwater treatment areas and provision of on-site interceptor traps.*	• Retain with updates • The intention of the policy remains valid, but it could be reworded for clarity. Clarify the distinction between provision of land area for stormwater treatment, and the subsequent provision of specific treatment devices.
Policy 6.8.3.27C	*Richmond Intensive Development Area* *In the Richmond Intensive Development Area:* *(c) to manage development so that stormwater does not cause flooding or contribute to any damage caused by flooding.*	• Retain
Policy 7.2.3.10	*To use a whole-catchment approach to the management of stormwater, and to apply low impact design to address the stormwater effects and changes in drainage patterns arising from rural land development.*	• Review • Consider replacing Policy 33.3.3.8 & 9 with 7.2.3.10 as it includes the same information but is more clearly written. • Make the wording of 7.2.3.10 broader by referring to urban as well as rural land development or duplicate in an urban policy set. • Consider adding the word integrated, i.e. 'an *integrated* whole catchment approach' in reference to integrated catchment management. • Consider removing 7.2.3.10 from Chapter 7 to avoid duplication. • Consider overlap with Policy 33.3.3.11.
Policy 7.4.3.13	*To ensure the maintenance or enhancement of natural drainage features within rural catchments, and to avoid, remedy, or mitigate any adverse effects of stormwater run-off.*	• Review • This applies specifically to rural stormwater and complements the general stormwater policy proposed above. • ARM terminology needs updating.

On-site Disposal of Domestic Wastewater

Table 4: Summary of Provision Specific Recommendations – On-site Disposal of Domestic Wastewater

No.	Objective set	Recommendations
Objective 33.4.2	***On-site disposal of domestic wastewater, which avoids, remedies or mitigates adverse effects on groundwater or surface water quality, habitats, human health and amenity values.***	• Review • The objective identifies the main effects to be addressed, but the generic ARM terminology provides little direction. • Consider additional objectives addressing different aspects of wastewater discharges, e.g. one that seeks wastewater systems and discharges that are compatible with the site or area's characteristics.
Policy 33.4.3.1	*To ensure householders are aware of the potential adverse effects that may be created by discharges from on-site wastewater disposal systems, and of methods of avoiding, remedying or mitigating them.*	• Review • As written, this appears to be a non-regulatory method better suited to the Methods of Implementation section, e.g. 33.4.20.2 'Education and Advocacy'. • Either relocate there or amend wording to specify an action required by householders and/or methods to be used in avoiding, remedying or mitigating effects.
Policy 33.4.3.2	*To ensure that the adverse effects, particularly the cumulative adverse effects, of on-site disposal of domestic wastewater on water quality and aquatic habitats, including coastal water, and on human health or amenity in the Wastewater Management Area are avoided, remedied or mitigated by:* *(a) controlling the use of on-site systems in areas where there are significant limitations to sustainable on-site disposal of domestic wastewater including:* *(i) low or very low permeability clay soils;* *(ii) rapidly draining coastal soils;* *(iii) areas of high groundwater tables;* *(iv) steeply sloping sites, especially on south-facing slopes;* *(v) unstable terrain;* *(vi) proximity to surface water bodies;* *(vii) high density of existing and new on-site systems and the cumulative impact of such discharges in terrain that has significant limitations to on-site disposal;* *(b) requiring comprehensive site and soil assessments to identify any site limitations;* *(c) requiring a high level of performance for design, construction, installation, operation*	• Review • Waste Management Areas (WwMA) have worked well and the policy includes useful detail. • Retain intent but review WwMA boundaries/reference to see if it could be expanded to cover additional areas such as groundwater protection areas. • Consider transferring some of the detail in the policy to the relevant rules / matters for consideration in consents.

No.	Objective set	Recommendations
	and maintenance for new on-site disposal systems; *(d) ensuring adequate buffers between disposal fields, water bodies, and the coast, especially Waimea and Mapua Inlets;* *(e) reducing the risk to human health arising from pathogens in the wastewater entering into water;* *(f) ensuring the net nitrogen losses from land in the Wastewater Management Area to be subdivided do not result in adverse effects on aquatic habitats as a result of discharges of domestic wastewater;* *(g) ensuring stormwater management accounts for potential effects on on-site disposal fields;* *(h) ensuring that the potential adverse effects, especially cumulative effects of further residential development, are taken into account in considering any application to subdivide land in the Wastewater Management Area.*	
Policy 33.4.3.3	*To require regular programmed maintenance of on-site wastewater treatment and disposal systems to minimise risk of system failure and reduce risk of adverse environmental effects.*	• Retain with updates • Consider identifying relevant adverse environmental effects in the policy (e.g. 'including contamination of surface or groundwater...' and ensure a clear method for implementation
Policy 33.4.3.4	*To encourage consideration of wastewater treatment systems that service a cluster of households (subject to any site limitations) to:* *(a) take advantage of opportunities for high technology advanced wastewater treatment solutions at cluster scales;* *(b) reduce risks of system failure and cumulative adverse effects of single on-site systems;* *(c) enable Council to develop effective and cost-efficient systems for monitoring on-site wastewater systems.*	• Review • This policy has been problematic to implement in practice. While treatment systems serving a cluster of households could work in some situations, consent staff advise that it has not worked so far. • Reconsider whether or not (and in what situations) this policy may be effective and amend (or remove) as necessary. For example this could be reworded to enable cluster systems only where an appropriate legal instrument is in place to ensure ongoing maintenance, operation and upgrade (as required) of systems funded by the benefiting properties as per intent of policy 33.4.3.5
Policy 33.4.3.5	*To ensure that legal, practical, financial and enforceable responsibility is established for the operation and maintenance of any on-site wastewater treatment and disposal system, especially where such systems service a cluster of dwellings, taking into account*	• Review • Review in conjunction with policy 33.4.3.4. Note that the policy contains more detail than the single restricted discretionary activity rule that implements it (36.1.4.2(8)).

No.	Objective set	Recommendations
	both day-to- day operation and maintenance of such systems as well as provision for depreciation and replacement of equipment and of systems.	
Policy 33.4.3.6	*To avoid, remedy or mitigate the adverse effects of discharges of domestic wastewater, including cumulative effects, particularly those in the Special Domestic Wastewater Disposal Areas.*	• Review • The policy lacks detail and direction (e.g. the generic ARM terminology). The policy should be expanded to identify the relevant effects and the means by which discharges should be carried out to ensure effects are avoided. This may require multiple policies. • In addition, consider adding an overarching policy for SDWDAs similar to the one for WDAs above (33.4.3.2) if these are retained as distinct management areas.
District Plan Wastewater Discharge Provisions		
Policy 5.1.3.6	*To limit the use of on-site domestic wastewater disposal systems in the Special Domestic Wastewater Disposal Areas (SDWDAs).*	• [Note: this recommendation is modified from the Chapter 5 evaluation report] • Review • A policy covering this topic should be relocated to the discharge chapter. Also, discharges in the SDWDAs are a permitted activity and therefore is in conflict with this policy. Either the policy or rule needs reframing.
Policy 5.1.3.7	*To require developers to show in an SDWDA how a transition from on-site disposal to a community disposal or reticulated scheme will be made where Council has resolved to construct such a scheme within five years of the application being made.*	• [Note: this recommendation is from the Chapter 5 evaluation report] • Review • A policy covering this topic should be relocated to the discharge chapter. Also, this functions more as a rule, and makes assumptions on the provision of infrastructure by the Council.
Policy 6.3.3.8	*To consider options for treatment in all or parts of the Special Domestic Wastewater Disposal Areas where there are:* *(a) significant actual or potential adverse effects from on-site domestic wastewater systems on receiving water quality, habitats, human health and amenity values; or* *(b) site limitations which may create increased risk of adverse effects either by individual systems or cumulatively.*	• Retain with updates • Clarify intent of this policy and what is meant by 'options'. Provide stronger direction if increased treatment levels are required in these areas. Consider strengthening the requirement for treatment of domestic wastewater, e.g. rather than 'To consider...' make it 'To require...' (or similar). • Points (a) and (b) suggest that wastewater disposal in these situations is likely to have a notable impact, which implies that increased

No.	Objective set	Recommendations
		treatment should be mandatory rather than optional.
Policy 6.13.3.15	*Settlements Adjoining National Parks* *To establish higher performance standards for the use of on-site disposal of domestic wastewater in the Marahau Special Domestic Wastewater Disposal Area.*	• [Note: this recommendation is consistent with, but modifies, the recommendation in the Chapter 6 report] • Review • To avoid duplication, consider rewording by removing reference to the specific location and simply refer to SDWDAs in general. The policy could then be removed from Chapter 6 and included in the Discharge Chapter.
Policy 6.21.3.1	*Tasman* *To remedy the existing effluent overflow and groundwater contamination problems.*	• Review • The policy has been achieved in so far as the Wastewater Management Area applies to the settlement. Identify whether the stated problems still exist: if so, retain this policy; if not; remove policy. • If retaining, consider adding details about appropriate remedies.
Policy 6.21.3.4	*Tasman* *To establish higher performance standards for the use of on-site disposal of domestic wastewater in the Tasman Special Domestic Wastewater Disposal Area.*	• [Note comment from Chapter 6 Evaluation Report: the reference to SDWDA is incorrect, as a Wastewater Management Area (WwMA) applies to Tasman] • Review • To avoid duplication, consider rewording by removing reference to the specific location and simply refer to SDWDAs in general. • The policy could then be removed from Chapter 6 and included in the Discharge Chapter.
Policy 6.22.3.1	*Upper Moutere (Sarau)* *To establish higher performance standards for the use of on-site disposal of domestic wastewater in the Upper Moutere Special Domestic Wastewater Disposal Area.*	• Review • To avoid duplication, consider rewording by removing reference to the specific location and simply refer to SDWDAs in general. The policy could then be removed from Chapter 6 and included in the Discharge Chapter.

Contaminated Site Management

Table 5: Summary of Provision Specific Recommendations – Contaminated Site Management

No.	Objective set	Recommendations
Obj. 33.5.2	***To avoid, remedy or mitigate the adverse effects of contaminated sites on human health and the environment.***	• Review • Consider having dual objectives relating to human health (in accordance with the NES) and effects on the environment. • Provide stronger direction on the goals of contaminated site management, e.g. by replacing ARM terminology with 'avoid'.
Policy 33.5.3.1	*To avoid, remedy or mitigate the adverse effects of contaminated sites by investigating or encouraging landowners to investigate sites on the site contamination register, particularly where:* *(a) there is a risk of a high level of contamination; or* *(b) there is a high level of risk to human health; or* *(c) there is a high level of risk of contamination of water resources;* *in order to:* *(i) confirm whether any site is a contaminated site; and* *(ii) define its location and extent; and* *(iii) assess the contaminant effects and risks; and* *(iv) assess the options for remediation, enforcement of liable parties or other actions, including adding the site to the Chemical Hazard Area.*	• Review • The policy focuses on identification of contaminated sites more than the actions needed to avoid, remedy or mitigate adverse effects. Consider separating the policy out into multiple policies addressing both identification, remediation and use of contaminated sites.
Policy 33.5.3.2	*To maintain accurate and timely information about the contamination status of land, in order to:* *(a) assist in decisions regarding the monitoring, investigation and remediation options for such land; and* *(b) respond to queries about contamination status of specific locations; and* *(c) encourage landowners of sites with a history of using, storing or manufacturing hazardous substances to advise the Council so that the site can be included on the site contamination register and investigated and assessed for the presence or absence of contaminants on the site.*	• Review • Consider relocating to the Methods section, e.g. 33.5.20.2 'Investigation and Monitoring', as this policy directs Council in respect of holding good information about contaminated sites. • Consider options for strengthening requirements – eg to change encourage to require in (c). • Note: some of this is already covered in the Methods section.
Policy 33.5.3.3	*To facilitate the assessment and remediation of contaminated sites by providing appropriate incentives or other resources.*	• Review • Consider relocating to the Methods section, e.g. 33.5.20.3 'Education and

No.	Objective set	Recommendations
		Advocacy'. 'Other resources' could be explained further. • Note: some of this is already covered in the Methods section.
Policy 33.5.3.4	*To require liable parties to undertake such assessments and remediation.*	• Review • Make intent of this policy clearer. It reads as part of Policy 33.5.3.3, but addresses a different aspect (i.e. compliance).
Policy 33.5.3.5	*No Policy - deleted in PC38, operative 2013*	• NA
Policy 33.5.3.6	*To avoid, remedy or mitigate the adverse effects of the discharge of contaminants from contaminated sites.*	• Review • The effect of discharges from contaminated sites could be better described and related to both human health and the environment. • Provide stronger direction on the policy's intent, e.g. by replacing ARM terminology with 'avoid'.
Policy 33.5.3.7	*To avoid, remedy or mitigate the adverse effects of the use of contaminated sites where the level of hazardous substances poses or is likely to pose a risk to human health or the environment.*	• Review • This high level policy provides little detail or direction on the effects or actions to be taken. This should be expanded in the policy or separated out into multiple policies addressing human health and environmental impacts, and reflecting as needed the requirements of the NES-CS.
Policy 33.5.3.8	*No Policy - deleted in PC38, operative 2013*	• NA
Policy 33.5.3.9	*To have regard to Ministry for the Environment guidelines for collecting and managing contaminated site information.*	• Review • Consider relocating to the Methods section, e.g. 33.5.20.2 'Investigation and Monitoring'.

1. Purpose Statement

The purpose of this evaluation of the TRMP is to determine the effectiveness and efficiency of the provisions contained within it. It helps us understand if the TRMP provisions are doing what they're meant to do.

This evaluation process is a fundamental step in the policy review cycle and a requirement of the Resource Management Act. It informs good quality plan-making and helps maintain confidence and integrity in the process.

The results of this evaluation will inform the review of the Tasman Resource Management Plan.

What do the terms mean?

Effectiveness: "*assess the contribution ... provisions make towards achieving the objectives and how sucessful they are likely to be in solving the problem they were designed to address"*

Efficiency: *"measures whether the provisions will be likely to achieve the objectives at the lowest <u>total</u> cost to all members of society, or achieves the highest net benefit to all of the society"*

(Ministry for the Environment s.32 Guidance)

Key Evaluation Questions

What we need to keep in mind

- ✓ Are we focused on the right issues?
- ✓ Have we done what we said we'd do?
- ✓ Have we achieved what we said we'd achieve?
- ✓ How do we know our actions led to the outcome observed?
- ✓ Have we achieved that outcome at reasonable cost (could we have achieved it more cheaply)? (Enfocus, 2008)

2. Scope

2.1 Regional Plan Provisions Reviewed

Part 6 of the TRMP deals with discharges and is made up of the following chapters:

- Chapter 33 Discharges to Land and Fresh Water;
- Chapter 34 Discharges to Air
- Chapter 35 Discharges to the Coastal Marine Area; and
- Chapter 36 Rules for Contaminant Discharges

This report addresses Chapter 33, the first in Part 6, and which is concerned with the following broad issues:

1. **Contaminant discharges:** Effects of point-source and diffuse discharges on natural and human values of water need to be controlled, including nutrient, pathological, chemical or sediment levels in water bodies.
2. **Accidental or emergency discharges:** Emergency or accidental discharges of contaminants, especially hazardous substances have the potential to cause significant adverse effects on the environment.
3. **Stormwater discharges:** (a) Capacity in urban stormwater networks is limited (or exceeded); (b) contaminants in stormwater can have significant impacts on receiving environments; and (c) lack of information on the state of the existing stormwater network, and degree and impact of stormwater contamination.
4. **Onsite disposal of domestic wastewater:** Inappropriate design, poor installation practices, inadequate system maintenance and increasing density of on-site domestic wastewater disposal systems cause a variety of adverse effects in parts of the District.
5. **Contaminated site management:** Ongoing contamination from contaminated sites and limited information on these sites, including the nature of the risk they pose.

Six objectives and 40 policies have been adopted in addressing the Chapter issues, as shown in Table 6 below. There are also a number of related discharge provisions in the district plan chapters of the TRMP, which are shown red in the table. These provisions have been assessed alongside the regional plan discharge provisions as part of the Chapter 33 review.

Table 6: Scope of the Evaluation

Chapter 33	Objective	Policies
33.1 Contaminant Discharges	33.1.2.1 – 33.1.2.2	35.1.3.1 – 35.1.3.16 6.8.3.18; 6.9.3.9
33.2 Accidental or Emergency Discharges	33.2.3	33.2.3.1 - 33.2.3.2
33.3 Stormwater Discharges	33.3.2	33.3.3.1 – 33.3.3.11 6.1.3.1; 6.2.3.6; 6.2.3.7; 6.3.3.6; 6.3.3.7; 6.8.3.5; 6.8.3.22; 6.8.3.27C; 7.2.3.10; 7.4.3.13
33.4 On-site Disposal of Domestic Wastewater	33.4.2	33.4.3.1 – 33.4.3.6 6.3.3.8; 6.13.3.15; 6.21.3.1; 6.21.3.4; 6.22.3.1

Chapter 33	Objective	Policies
33.5 Contaminated Site Management	33.5.2	33.5.3.1 – 33.5.3.4 33.5.3.6 - 33.5.3.7 33.5.3.9

Each issue topic has one objective (except Contaminant Discharges which has two) and from two to 16 related policies. The majority of the policies in the chapter apply to contaminant discharges and stormwater discharges (27 in total).

Regulatory methods adopted in the TRMP to implement the policies include:

- TRMP rules (set out in Chapter 36) relating to (a) the discharge of contaminants into water and onto land; (b) the discharge of stormwater, including stormwater planning for urban development; (c) the discharge of wastewater from on-site domestic disposals systems; (d) identifying Special Domestic Wastewater Disposal Areas and Wastewater Management Areas on the planning maps; (e) discharge of contaminants from contaminated sites; (f) the management of hazardous substances; and (g) site management and contingency planning.
- Classification of the District's water bodies.
- Implementation and enforcement of the National Environmental Standard on Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES-CS).

In support of the chapter's objective, a number of non-regulatory methods are set out, including:

- Education and advocacy on industry codes of practice and provision of information and advice concerning sustainable practices, including best practicable options for contaminant discharges and riparian and coastal land management to improve or maintain water quality.
- Consultation with iwi and the community in identifying priority rivers for addressing water quality degradation.
- Provision of waste collection and storage services, stormwater infrastructure and sewerage reticulation.
- Council funding to support riparian land management works to improve water quality.
- Investigation and monitoring of surface and ground water quality, and the effects of land use activities on water quality.
- Development and maintenance of a Site Contamination Register.
- Provision of advice and financial assistance for investigation, assessment and remediation of contaminated sites.

The environmental outcomes sought from implementation of the chapter rules and methods are:

1. Discharges of contaminants that avoid, remedy or mitigate adverse effects.
2. Water quality maintained or enhanced for all water bodies of the District.

2.2 Timeframe of Evaluation

The evaluation was conducted from July 2019 to June 2020.

2.3 Summary of Methodology

Broadly, the methodology of this evaluation follows the Plan Outcomes Evaluation process. Plan Outcome Evaluation involves:

1. An examination of the outcomes being sought – what are the objectives trying to achieve?
2. Tracking how the plan has been designed to affect the outcomes – do the intentions in the objectives get carried through to the rules and methods? Are the provisions efficient?
3. Assessing if the provisions have been implemented – what evidence is there that the provisions are being applied to relevant activities?
4. Assessing relevant environmental trends and 'on the ground' data to conclude if the Plan has been successful in achieving its intentions. This includes consideration of the external factor influences such as legislative changes, national policy statements, case law, significant economic changes, demographics etc.

Throughout the evaluation, there is an emphasis on attributing the activities enabled or controlled by the TRMP to observed outcomes. However, attributing outcomes to the TRMP must always be viewed in the wider context of changes. These are noted where known, but it is beyond the scope of this evaluation to capture all of the changes and influences that affect outcomes in our communities and environment.

Limitations with the Plan Outcome Evaluation approach also arise where environmental outcome data is poor, or where there are multiple factors driving outcomes. Time, resourcing and quality of data also affects the comprehensiveness of the evaluation.

To address some of these limitations, the evaluation process has included a 'rapid assessment' technique. The technique draws on the combined knowledge and expertise of local TDC staff, residents, community leaders, and topic experts to create an understanding of plan implementation, efficiency and outcomes. The rapid assessment outputs are supplemented with:

- environmental data or expert reports where available
- Council data (e.g. water quality information, flow monitoring data, consenting and compliance database information, models, monitoring reports required by consent condition)
- mapping and imagery (e.g. GIS, aerial imagery, LiDAR)
- information or reports prepared during plan change processes (e.g. s.32 Reports, Issues and Options papers, technical reports, submissions, community meetings)

The data sources that have been used for evaluating Chapter 33 are shown in Table 7 below:

Table 7: Information Sources Used in Evaluation

Data source/s	Details and Notes
Rapid Assessment	• Meeting with policy staff on 22nd November 2019 • Meeting with monitoring staff on 6th December 2019 • Workshop with council staff on 12th December 2019 • Meeting with consent staff on 19th February 2020
Councillor input	• Workshop undertaken on the 8th July 2020
External reports	• Legal report for s35 review, Tasman Law, June 2019 • Iwi management plans

Data source/s	Details and Notes
	• Gibbs & Woodward, 2018. Waimea and Moutere Sediment Sources by Land Use. • Ministry for the Environment & Stats NZ. 2020. *New Zealand's Environmental Reporting Series: Our freshwater 2020* • Ministry for the Environment. 2017. *A Guide to the National Policy Statement for Freshwater Management 2014 (as amended 2017)* • Ministry for the Environment. 2012. *Users' Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*. Wellington • Ministry for Primary Industries. 2018. *Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017: User Guide* • MfE & MPI. 2017. *National Environmental Standards for Plantation Forestry: Overview of the Regulations*
Council reports	• TRMP Policy Mapping (Leusink-Sladen, 2019) • Easton, J. & James, T. 2010. *Impact of discharges from stormwater systems on streams and estuary margins in Richmond*. Report REP10-07-07 • James, T. & McCallum, J. 2015. *State of the Environment Report: River Water Quality in Tasman District 2015* • McCallum, J. & James, T. 2018. *The Health of Freshwater Fish Communities in Tasman District 2018* • Stage 2 of TRPS Efficiency and Effectiveness Review: Statutory Obligations (Mason, 2019)
Council records (MagicBR/NCS/databases)	• MagiQ BI – Resource consents data

2.4 Summary of Consultation

The following consultation has been undertaken during the preparation of this evaluation.

2.4.1 Tasman District Councillors

A workshop with elected Councillors was held on 8th July 2020 discussing key issues and recommendations identified for this chapter and other related freshwater chapters.

No additional issues were raised by Councillors at this workshop. However Councillor feedback noted that for issues where there were environmental concerns, there is typically a community need driving the activity creating the concern, and that these drivers should also be identified. The report has been reviewed to reflect this feedback.

Further specific Councillor feedback queried the need to include reference to disease-causing organisms from dogs and their effect on water quality and swimability (this issue includes dog access to rivers and runoff from stormwater containing dog faeces). A summary paragraph on this issue has been included in section 3.3.2 of this report.

2.4.2 Tasman Environmental Policy Iwi Working Group

The iwi of Te Tau Ihu, as tāngata whenua, have a unique relationship with Tasman District Council. There are a number of legislative requirements which oblige us to engage more collaboratively with iwi and Māori - including provisions in the Resource Management Act, Local Government Act and Treaty of Waitangi settlement legislation. To support this a separate section 35 report with a focus on iwi/Māori provisions has been prepared. Please refer to that report for a record of consultation undertaken.

3. Effectiveness and Efficiency Evaluation

3.1 Context

The primary legislation affecting Chapter 33 is the Resource Management Act (RMA). The purpose of this Act is to promote the sustainable management of natural and physical resources (s5, RMA). The definition of natural and physical resources specifically includes land and water (s2). Moreover, one of the key requirements of sustainable management is safeguarding the life-supporting capacity of water, soil, and ecosystems s5(2)(b).

Several matters of national importance under the RMA (set out in s6), which all councils must 'recognise and provide for', relate directly to the issues addressed in the chapter:

- *s6(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.*
- *s6(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
- *s6(g) the protection of protected customary rights.*

In support, the council must 'have particular regard to' several relevant matters in s7 of the RMA:

- *s7(a) kaitiakitanga.*
- *s7(d) intrinsic values of ecosystems.*
- *s7(f) maintenance and enhancement of the quality of the environment.*
- *s7(h) the protection of the habitat of trout and salmon.*
- *s7(i) the effects of climate change:*

Section 30(1) sets out the functions of a regional council for the purpose of giving effect to the RMA and includes:

(c) the control of the use of land for the purpose of—

(ii) the maintenance and enhancement of the quality of water in water bodies and coastal water;

(iiia) the maintenance and enhancement of ecosystems in water bodies and coastal water.

(ca) the investigation of land for the purposes of identifying and monitoring contaminated land.

(f) the control of discharges of contaminants into or onto land, air, or water and discharges of water into water.

3.1.1 Legislation Changes

Resource Legislation Amendment Act 2017

RMA s69 has been amended so that Schedule 3 'Water Quality Classes' no longer applies to fresh water.

Schedule 3 of the RMA contains water quality classes and standards that a council may use to set rules in a regional plan, as directed through s69. These classes and standards have been used in the TRMP (Schedules 36A and B) to help assess the effects of contaminant discharges on freshwater bodies.

The intent of the amendment was to clarify that the 'national objectives framework' introduced in the National Policy Statement for Freshwater Management 2014 (NPS-FM) applies instead of Schedule 3. The NPS-FM established a process to guide council decision-making on fresh water. It includes updated water quality standards that councils can use in planning decisions, which supersede those set in Schedule 3 of the RMA.[4]

The explicit function for councils to control hazardous substances has been removed from RMA ss30 & 31.

Some existing RMA controls on hazardous substances duplicate or increase those in place under the Hazardous Substances and New Organisms Act 1996 (HSNO), which regulates the management, disposal, classification, packaging and transport of hazardous substances, and the Health and Safety at Work Act 2015 (HSW), which establishes workplace controls for hazardous substances.

The intention is that in most cases HSNO and HSW controls will be adequate to avoid, remedy or mitigate adverse environmental effects (including potential effects) of hazardous substances.

However, Councils still have a broad function of achieving integrated management, and may use this function to place extra controls on hazardous substance use under the RMA, if existing HSNO or HSW controls are not adequate to address the environmental effects of hazardous substances in any particular case (including managing the risk of potential effects on the local environment).

Areas where the RMA may still be applied to hazardous substances include:[5]

- Managing the establishment of hazardous substances/facilities adjacent to and within sensitive environments to ensure acceptable levels of risk of off-site adverse effects.
- Avoiding location of activities which use hazardous substances in areas subject to natural hazards.
- Managing discharges of hazardous substances/contaminants to land, water and air.
- Controlling hazardous substances that are not covered by HSNO (as the RMA definition is broader and encompasses a wider range of substances and hazardous properties, than under HSNO).

[4] Note that RMA Schedule 3 still applies to management of coastal water. Consequently, the classes and standards set out in TRMP Schedule 30C 'Water Classification for the Coastal Marine Area' remain valid.

[5] From the Quality Planning website. 2019. *Hazardous Substances Under the RMA*. https://www.qualityplanning.org.nz/node/695

RMA Amendment: Protected Customary Marine Title Areas

A new matter of national importance, s6(g) "The protection of protected customary rights", was added to the RMA following the enactment of the Marine and Coastal Area (Takutai Moana) Act (MACA) in 2011.[6] RMA ss61(2A) and 66(2A) were also amended to require regional councils to be 'recognise and provide for' relevant matters relating to customary marine title areas in regional policy statements and plans.

RMA S85A was amended so that plans must not permit activities that would have a 'more than minor' adverse effect on a recognised customary activity. Additionally, RMA S104(3)(c) was amended to restrict councils from granting a resource consent that would impact on wāhi tapu or cause 'more than minor' adverse effects on the exercise of a protected customary right (without written approval from the customary rights group).

Nine applications in the Tasman District have been made under MACA to have customary marine rights formally recognised. Decisions on these applications are pending. The effects of discharges on approved customary marine title areas may need to be included as a consideration under the TRMP provisions.

3.1.2 National Directives

National Policy Statements (NPS) are instruments issued under the RMA. They state objectives and policies for matters of national significance, which the TRMP is required to 'give effect to' (i.e. implement).

Two NPS are relevant to Chapter 33 Discharges to Land and Freshwater, the NPS for Freshwater Management (NPS-FM) and the NZ Coastal Policy Statement (NZCPS) (in so far as discharges to land and freshwater can have a 'downstream' impact on coastal water quality).

National Environment Standards (NES) are regulations issued under the RMA. They prescribe standards for environmental matters, which must be enforced by councils, although in some circumstances councils can impose stricter or more lenient standards where specified by an NES.

Two NES that have implications for contaminant discharges under Chapter 33 are the NES for Contaminated Soils and the NES for Plantation Forestry. A third NES for Freshwater (NES-FW) is anticipated in mid 2020.

National Policy Statement for Freshwater Management 2014, updated 2017 (NPS-FM)

The NPS-FM prioritises the health and well-being of water bodies as the ultimate goal in freshwater management ('Te Mana o Te Wai'). It recognises that the ability of water to provide for human needs (health, economic development) is dependent upon it being healthy. This requires consideration of water quality, water flows/levels and habitat elements.

The NPS-FM requires TDC to manage freshwater through identified 'freshwater management units' (currently called Water Management Areas in the TRMP) and establish freshwater objectives and set water quality and quantity limits for all freshwater management units in the District. In doing so, the Council must have regard to (amongst other relevant matters): the reasonably foreseeable impacts of climate change; the connection between water bodies; and the connections between freshwater

[6] MACA also repealed the earlier Resource Management (Foreshore and Seabed) Amendment Act 2004.

bodies and coastal water. Methods (including rules) to avoid over-allocation (of both quantity and quality) must be established to ensure the objectives are achieved.

The NPS-FM also seeks to improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment. Every regional council is required to recognise the interactions between fresh water, land, associated ecosystems and the coastal environment ki uta ki tai (from the mountains to the sea). The NPS-FM also directs regional councils to manage fresh water and land use development in whole catchments in an integrated way.

The NPS-FM 2014 requires objectives, policies, methods and rules in the TRMP that:[7]

- 'Consider and recognise'[8] Te Mana o Te Wai, including the connection between the health of water, the broader environment, and people.
- Engage with iwi and hapū and the wider community to consider and recognise Te Mana o te Wai in decision making for freshwater.
- Safeguard fresh water's life-supporting capacity, ecosystem processes and indigenous species, and protect the significant values of wetlands and outstanding freshwater bodies.
- Safeguard the health of people who come into contact with the water and improve water quality so it is suitable for primary contact more often.
- Establish freshwater management units (FMU) covering all waterbodies in the District; establish freshwater objectives and set of freshwater quality and quantity limits for all FMUs, and maintain or improve the overall quality of fresh water within a FMU.
- Follow a specific process (the national objectives framework) for identifying the values that tangata whenua and communities have for water.
- Set limits on resource use (e.g. how much water can be taken or how much of a contaminant can be discharged) to meet limits over time and ensure they continue to be met.
- Establish and operate a freshwater accounting system to improve information on freshwater takes and sources of freshwater contaminants.

Proposed 2020 amendments to the NPS-FM are likely to strengthen requirements further, with policies that require freshwater management to give effect to Te Mana O Te Wai.

NZ Coastal Policy Statement 2010 (NZCPS)

The NZCPS sets out general objectives and policies for the sustainable management of New Zealand's coastal environment. The TRMP was notified prior to the current NZCPS and for that reason only partially gives effect to its objectives and policies.

There are a number of corresponding objectives and policies in the NZCPS that are relevant to contaminant discharges and that need to be given effect to in the TRMP. In particular, the NZCPS requires councils to recognise the importance of the coastal environment for communities' economic, social and cultural wellbeing, while at the same time preserving and restoring natural character, enhancing coastal water quality, and reducing the impacts of contaminant discharges and

[7] For the full text of the NPS-FM see https://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014-amended-2017

[8] This will be elevated to 'give effect to' in the revised NPS-FM in 2020.

sedimentation. Upholding the principles of The Treaty of Waitangi and ensuring Māori are able to fulfill their kaitiaki and customary roles is also an important requirement.

Relevant objectives and policies in the NZCPS 2010 that must be given effect to are shown in Table 8 below:[9]

Table 8: NZCPS Provisions Relevant to Chapter 33

NZCPS Objectives	
1.	To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, including maintaining and enhancing coastal water quality.
3.	To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment.
6.	To enable people and communities to provide for their social, economic, and cultural wellbeing, recognising that the protection of the values of the coastal environment does not preclude use and development in appropriate places and forms, and within appropriate limits.
NZCPS Policies	
2.	*The Treaty of Waitangi, tangata whenua and Māori heritage*, in taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environment.
21.	*Enhancement of Water Quality*, which involves improving coastal water quality in areas where it has deteriorated to the extent it is having a significant adverse impact.
22.	*Sedimentation*, which seeks to reduce sedimentation levels and impacts on the coast through controls on subdivision, use and development and vegetation removal (including harvesting plantation forestry).
23.	*Discharge of Contaminants*, which seeks to manage effects of discharges to water in the coastal environment, including sewage, stormwater, and discharges from ports and other marine facilities.

National Environment Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 (NES-CS)[10]

The NES-CS came into effect on 1st January 2012. It provides a nationally consistent set of planning controls and soil contaminant values, and ensures that land affected by contaminants in soil is appropriately identified and assessed before it is developed.

Under the NESCS, land is considered to be potentially contaminated if an activity or industry on the Hazardous Activities or Industries List (HAIL) has been, is, or is more likely than not to have been undertaken on that land. Common past activities and industries that have led to the creation of contaminated sites in New Zealand are the manufacture and use of pesticides, the production of gas and coal products, the production, storage and use of petroleum products, mining, timber treatment, and sheep-dipping.

[9] NZCPS provisions are paraphrased here; for the full text see https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/coastal-management/nz-coastal-policy-statement-2010.pdf

[10] For further details see Ministry for the Environment. 2012. *Users' Guide: National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health*. Wellington: Ministry for the Environment; https://www.mfe.govt.nz/publications/rma-land-hazards/users-guide-national-environmental-standard-assessing-and-managing

Regional councils are required to investigate land for the purposes of identifying and monitoring contaminated land. To fulfil this function, most councils (including TDC) maintain a contaminated sites database. The Council has undertaken a plan change (no. 38, discussed below) to implement the requirements of the NES-CS.

The NES-CS applies to adverse effects of contaminants in soil on human health arising from subdivision, land-use change, soil disturbance, soil sampling, and removing fuel storage systems. It does not apply to effects of contaminants on the environment. Councils may impose additional controls under the RMA to address any potential or actual effects on the environment.

National Environmental Standard for Plantation Forestry 2018 (NES-PF)[11]

The Plantation Forestry NES (NES-PF) came into effect on 1 May 2018. Its objectives are to: 1) maintain or improve the environmental outcomes associated with plantation forestry activities nationally; and 2) increase certainty and efficiency in the management of plantation forestry activities.

The regulations apply to any forest larger than one hectare that has been planted specifically for commercial purposes and harvest. Most forestry activities are permitted by the NES-PF as long as forestry companies meet specific conditions to prevent significant adverse environmental effects. If the permitted activity conditions cannot be met an application for resource consent to undertake the activity is required. Relevant conditions in the NES-PF are:

For afforestation: provision of setbacks for tree planting from rivers, lakes, wetlands, coastal areas and significant natural areas, to provide a buffer between forestry activity and these areas to help avoid erosion of stream banks (amongst other effects).

For harvesting: provision of a harvest plan to council if requested identifying environmental risks, including erosion susceptibility and mitigation measures to be used.

For earthworks: installation and maintenance of stormwater and sediment control measures.

The NES-PF generally takes precedence over rules in regional and district plans. However, Regulation 6 of the NES-PF allows more stringent plan rules to prevail over the NES-PF in certain circumstances. These circumstances are limited to when plan rules:

- Give effect to an objective developed to give effect to the NPS-FM and any of policies 11 [indigenous biodiversity], 13 [natural character], 15 [natural features and landscapes], and 22 [sediment] of the NZCPS; and
- Manage specific unique and sensitive environments identified in a regional policy statement, regional plan, or district plan (including karst geology and areas with separation point granite soils), and certain sources of human drinking water supply.

3.1.3 Water Conservation Orders

Water conservation orders (WCOs) may be applied over any waterbody, including aquifers. A water conservation order may provide for protection of the habitat of terrestrial and aquatic organisms,

[11] For further details see MfE & MPI (2017). *National Environmental Standards for Plantation Forestry: Ov*erview of the Regulations; https://www.mfe.govt.nz/publications/rma/national-environmental-standards-plantation-forestry-overview-of-regulations; **and** MPI (2018). *Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017: User Guide*; https://www.mpi.govt.nz/growing-and-harvesting/forestry/national-environmental- standards-for-plantation-forestry/nes-pf-guidance/

scientific and ecological values, natural characteristics of that water body or recreational, historical and cultural purposes (among other things).

A WCO can prohibit or restrict a regional council issuing new water and discharge permits, although it cannot affect existing permits or land uses directly. Regional policy statements, regional plans and district plans cannot be inconsistent with the provisions of a WCO.

There are two WCOs in Tasman District and the outstanding wild and scenic characteristics of both of these water bodies are recognised in the WCOs:

- Buller River[12] and listed tributaries.
- Motueka River[13] and listed tributaries.

A third WCO is in progress for Te Waikoropupū Springs and the Arthur Marble Aquifer[14]

3.1.4 Treaty Settlement Legislation

Four pieces of Treaty settlement legislation relate to the nine iwi within Tasman District:

1. Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, and Te Ātiawa o Te Waka-a-Māui Claims Settlement Act 2014
2. Ngāti Apa ki te Rā Tō, Ngāti Kuia, and Rangitāne o Wairau Claims Settlement Act 2014
3. Ngati Toa Rangatira Claims Settlement Act 2014
4. Ngāi Tahu Claims Settlement Act 1998

Treaty settlement legislation includes statutory acknowledgements by the Crown of statements of association by relevant iwi of their particular cultural, spiritual, historical and traditional associations with statutory areas; statements of coastal values made by relevant iwi and their particular values relating to coastal statutory areas; and Deeds of Recognition which acknowledge sites with which iwi have a special relationship (e.g. Ngati Tama's relationship with Waikoropupū Springs).

The statutory acknowledgement associations include reference to iwi beliefs around water and its valued place in the Māori world view, historic relationships with specific areas in Tasman (e.g. ara/ancient trails, urupa, kainga, mahinga kai, mahinga harakeke and cultivation sites) and treasured fish, bird and plant species that where important to their tūpuna (ancestors).

3.1.5 Relevant Plan Changes

The TRMP has had a constant programme of rolling reviews (variations and plan changes) since it was first notified. The changes have been introduced to address unintended outcomes, new issues, new priorities and legislative requirements. The plan changes relevant to this topic are outlined in Table 9 below.

Where a plan change has been recently introduced (i.e. <3 years) its impact will be difficult to determine with any accuracy as:

- there may have been limited uptake of the plan provisions (i.e. not many activities undertaken that trigger the new rule set) and/or
- the impact of existing use rights and previously consented activities continue

[12] Water Conservation (Buller River) Order 2001, http://www.legislation.govt.nz/regulation/public
[13] Water Conservation (Motueka River) Order 2004, ibid.
[14] Currently in an Environment Court inquiry process

- the impacts may not be highly visible until there is a cumulative uptake of the provision (e.g water permit renewals to include new provisions).

For those reasons, the implementation of plan changes less than 3 years old (from operative date) have not been fully assessed for effectiveness or efficiency.

Table 9: Plan Changes Relating to Chapter 33

Plan Change or Variation	Description of change and key matters
Variations 3 & 4 Inclusion of Discharge Provisions Notified 29 Sept 1998; Operative 26 Nov 2011	Variation 3 introduced the Part 6 chapters to the Proposed Tasman Resource Management Plan, namely Chapters 33 - 37. Variation 4 introduced the following sets of provisions to Parts 2 and 3 of the Proposed Tasman Resource Management Plan: (a) On-site disposal of domestic wastewater; (b) Special Domestic Wastewater Disposal Areas; (c) Stormwater management; (d) Hazardous substances – further policies to manage contaminated sites and contingency planning are introduced; (e) Coastal marine area – amendments to policies concerning hazardous substances and contingency planning; and (f) Planting and building setbacks – the Plan recognises the need to avoid conflicts between land uses where pesticide drift may cause adverse effects.
Variation 23: Wastewater Disposal in St Arnaud Notified 4 May 2002; Operative 1 Nov 2008	Variation 23 updated the policy and rules for wastewater disposal at St Arnaud township. A reticulated wastewater disposal scheme became operative in late 1999. This made the provisions in the Proposed Tasman Resource Management Plan inappropriate and likely to cause confusion because they were out of date.
Variation 46: Onsite Wastewater Management in Coastal Tasman Area Notified 3 Dec 2005; Operative 26 Feb 2011	Amendments to the TRMP to provide for on-site disposal of wastewater in the Coastal Tasman Area, following a decision by council not to proceed with a reticulation scheme. The area is expected to be subject to increasing intensity of development and there are a number of significant limitations to on-site disposal that need to be managed, including very low permeability clay soils, steep slopes, high groundwater tables, and the proximity to sensitive receiving environments such as the Waimea Inlet. The Variation identified a new Wastewater Management Area. It added policies 33.4.3.2 and 33.4.3.3 – 33.4.3.5 setting out specific matters to be addressed to minimise adverse impacts. It also added a new Controlled Activity rule (36.1.3.2), a new Restricted Discretionary Activity rule (36.1.4.2), and a new Non-Complying Activity Rule (36.1.6.1).
Variation 55: Design Guide for Subdivision & Development in the Coastal Tasman Area Notified 28 July 2007; Operative 9 Oct 2010	This Variation added the Coastal Tasman Area Design Guide as an appendix to the TRMP, rather than it sitting outside the Plan as an external document as originally intended. The Design Guide was developed by Council to guide subdivision and land development in the coastal Tasman area, from Mariri in the north to Waimea Inlet in the south. Its purpose is "*to promote and encourage well-designed and innovative developments in the Rural 3 Zone, which will retain the overall rural and coastal values and on-going opportunities to utilise land of high productive value*". The Design Guide promotes low impact drainage, stormwater and wastewater management in subdivision layout and design, and recommends a management plan for making clear the details of any shared wastewater management responsibilities

Variation 56: Stormwater Management Notified 28 July 2007; Operative 9 Oct 2010	Amendments to the TRMP stormwater provisions were made to encourage a much greater level of consideration of stormwater management within land use and subdivision activities. The approach recognised the link between changes in land uses and the flow, quality and sedimentation effects that they can have on stormwater. The changes also introduced low impact stormwater design (LID) for the effective management of stormwater, to enable methods and solutions which protect, incorporate or mimic natural drainage conditions of the site in the management of stormwater, e.g. retention of vegetation, protection of streams or wetlands, and the on-site detention of stormwater. As part of the variation, 9 policies and one method were added to chapter 33 and amendments were made to rules in chapters 16, 17 and 36.
Variation 67: Management of Greywater Discharges to Land Notified 19 Dec 2009 Operative 18 Aug 2012	Amendments to Chapter 36 to enable the re-use of greywater (e.g. as irrigation in gardens) instead of it being discharged down the drain. Benefits include water saving, reduced wastewater charges, reduced demand for water supplies, and reduces pressure on on-site disposal systems. The amendment removed conditions from Permitted Activity Rule 36.1.2.6 that required a very high standard of treatment before greywater could be sprayed to land. These conditions prevented easy installation of modern solutions to greywater disposal that seek to reduce water use and discharge of waste water. New conditions were added allowing for greywater disposal through subsurface irrigation methods provided risks of odour, impacts on human health, and breakdown / blockage of systems were addressed.
Plan Change 38: National Environmental Standard for Managing and Assessing Contaminants in Soil to Protect Human Health Notified 18 Aug 2012; Operative 27 Apr 2013	Amendments to the TRMP to remove policies that were inappropriate or superseded by the effect of the NES-CS. The changes reflect new duties and processes for managing particular land uses and subdivision of Hazardous Activity and Industry List (HAIL) sites. Other amendments were made without formality at the same time to introduce references to the National Standard in chapters 1, 16, 18, 19, and 33 of the TRMP.
Plan Changes 45 – 48: **Waimea Water Management and Augmentation (Lee Dam), Including District Provision for Infrastructure and Water Management** Notified 27 April 2013; Operative 19 Sept 2015	These Plan Changes updated general and specific water management provisions in the TRMP for the Waimea Water Management Zones, which were found to have over-allocated water in the zones. Accordingly, Plan Changes 45 - 48 provided for: • Different water management regimes for Waimea Plains water management zones in the event the Waimea Community Dam does or does not go ahead. • The management of water quality as a result of intensive land use resulting through irrigation, especially in the Waimea Plains. The amendments included a new Chapter 15 dealing with infrastructure, focused on the Waimea Community Dam. The Plan Changes consecutively amended TRMP Part 1 'Introduction' (PC45), Part 2 'Land' (PC46), Part 5 'Water' (PC47), and Part 6 'Discharges' (PC48). **Plan Change 48 (Changes to Part 6: Discharges)** 1. New objectives (33.1.2) in Part 6 (Contaminant Discharges) for the management of water quality of the Waimea Plains water resources, including the coastal springs. 2. New policies (33.1.3.7 & 33.1.3.7A) to manage the effects of land use on water quality, particularly as a result of intensification resulting from irrigation, including as a result of the Waimea Community Dam.

	3. A new schedule (Schedule 31E) specifying content relating to the preparation, implementation and auditing of irrigation and nutrient management plans 4. New supporting text in the introduction to 33.0.3 'Non-Point Source Contamination Discharges', 33.1.20 'Methods of Implementation', and 33.1.30 'Explanation and Reasons'.

3.1.6 Relevant Case Law[15]

Three cases of relevance to contaminant discharges involve: 1. enforcement action against a developer over a discharge to land that entered water; 2. an objection by tangata whenua to the installation of a wastewater pipeline across the coastal marine area; and 3. an objection by a community group to the discharge to land of 1080 for pest control.

Otago Regional Council v Northlake Investments Ltd 2019 NZDC 11710 (1)

This case involves a charge against a developer who failed to prevent the discharge of sediment (from a large subdivision) from flowing over land via a natural flowpath and ending up discharging into Clutha River some 1 - 1.5kms from the development site.

The Judge found that the risk of a potential discharge of silt and sediment from the bulk earthworks for the subdivision were well known in advance. Conditions of consent and a detailed site management plan (SMP) identified the need to minimise the extent of open areas to avoid discharge of sediment (by air or water), the need to topsoil and revegetate open areas at the conclusion of each stage of bulk earthworks, and the need to change the SMP from time to time to reflect the actual circumstances.

However, following heavy rainfall, sediment from open (unvegetated) earthworked areas were discharged into the flowpath on the property, which in turn flowed onto neighbouring land and ultimately to the Clutha River. According to the Judge:

> *Notwithstanding Northlake's knowledge regarding these matters, on completion of the bulk earthworks... virtually the entire subdivision area... comprised un-revegetated areas of topsoil or colluvium loess. The vulnerability of the colluvial soils to mobilisation is well recognised and although topsoil is more stable, it too can be readily mobilised in wet weather if not stabilised by vegetation. I ask the question whether a reasonably prudent developer would have allowed the situation described in the preceding paragraph to prevail coming into winter without reviewing the SMP to fully assess the adequacy of the silt and sediment containment controls in place, particularly when those controls had been founded on the basis of minimal open areas and a revegetated site? In my view the common sense and only logical answer is no.*

The Judge contended that Northlake might reasonably be expected to know that the offence was to be or was being committed, and that it did not take all reasonable steps to prevent the commission of the offence. Northlake was accordingly found guilty of an unlawful discharge of contaminants onto land in circumstances which might have resulted in those contaminants entering water.

[15] Information in this section has come from a TDC commissioned report: Tasman Law (June 2019). *Legal Report for Section 35 TRMP Review*.

Ngāti Rārua Iwi Trust v Tasman District Council W25/2003 and W32/2004 (Allin J presiding)

The Environment Court issued an interim and final decision granting consent for a wastewater pipeline across the esplanade reserve at Tapu Bay and necessary consents for a pipeline to cross the Riwaka River. The Court considered the matters of national importance under Part 2 including the Māori provisions, and the NZCPS and Tasman Regional Policy Statement, particularly in relation to iwi and coastal waters. Also considered was the Tasman Transitional Coastal Plan and the PTRMP. The Court found the physical effects of installing the pipeline as proposed would be minor, but the real issues related to how the proposal affected various Māori related matters. The Court found the Riwaka River, Tapu Bay and esplanade reserve were significant areas for Māori and there was a strong relationship of iwi and their culture and traditions with the land, water, sites, waahi tapu and other taonga in the vicinity of the proposed pipeline.

The Court held that the existence of the pipeline would be an affront to Māori and if not for the pressing need for it, it would have issued a decision to encourage the TDC to look at alternatives. The Court did not allow appeal but directed the parties to consider the issue of the river crossing and revised the term to 11 years to allow time for consideration of alternative options. Following this the parties filed with the Court a MOU recording that they were to enter into discussions concerning longer term options for disposal and treatment of wastewater for the coastal communities extending from Marahau to Motueka and to establish a task force.

Brook Valley Community Group Incorporated v Brook Waimarama Sanctuary Trust [2017] NZHC 1944

The Brook Waimarama Sanctuary Trust (the Trust) intended to carry out three aerial applications of baits containing brodifacoum in the sanctuary in order to achieve pest eradication. The Trust relied on the Resource Management (Exemption) Regulations 2017 (the Regulations), which exempts the discharge of brodifacoum from s15 of the RMA under certain conditions.

The Brook Valley Community Group challenged the validity of the Regulations in the High Court, and also argued that an additional resource consent was required under s13 of the RMA. The Community Group sought declarations that the Regulations were unlawful and that the aerial discharge of brodifacoum was prohibited under s13(1)(d) of the RMA. The High Court held that s13 was not applicable, and that the decision to promulgate the Regulations was properly authorised and made in accordance with all required considerations.

The High Court decision was essentially upheld with similar reasoning by the Court of Appeal in Brook Valley Community Group Inc v Brook Waimarama Sanctuary Trust [2018] NZCA 573.

3.1.7 Relevant Iwi Management Plan Provisions

The RMA (s66(2A)) and NZCPS 2010 (Policy 2) require TDC to "take into account" any relevant iwi planning document recognised by the appropriate iwi authority (or hapū under the NZCPS) and lodged with the council, to the extent that its content has a bearing on resource management issues in the district.

Three Iwi Management Plans (IMPs) have been lodged with TDC by Iwi having interests in the Tasman District:[16]

[16] https://www.tasman.govt.nz/my-region/iwi/iwi-management-plans/

1. Ngati Koata No Rangitoto Ki Te Tonga Trust Iwi Management Plan (2002)
2. Te Rūnanga O Ngāti Kuia, Pakohe Management Plan (2015)
3. Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan (2018)

Two other IMPs prepared by Iwi with an interest in Tasman have been lodged with Nelson City Council:[17]

4. Nga Taonga Tuku Iho Ki Whakatu Management Plan (2004)
5. Te Ātiawa Ki Te Tau Ihu Iwi Environmental Management Plan (2014)

Relevant provisions in the IMPs will need to be taken into account when the TRMP is updated following the present review. Examples of IMP provisions relating to Chapter 33 matters are shown in Appendix 1.

3.1.8 Other Factors

Stormwater Activity Management Plan 2018

The Stormwater Activity Management Plan (swAMP) encompasses the provision of stormwater collection, reticulation, and discharge systems in Tasman District. The assets used to provide this service include drainage channels, piped reticulation networks, tide gates, detention or ponding areas, inlet structures, discharge structures and quality treatment assets.

TDC undertakes the stormwater activity to minimise the risk of flooding of buildings and property from surface runoff and small urban streams. Council enables the safe and efficient conveyance and disposal of stormwater from the urban drainage areas, this improves the economic and social well-being of the District by protecting people and property from surface flooding.

The council has a duty of care to ensure that the effects of any runoff from its own properties is remedied or mitigated. Because most of its property is mainly in the form of impermeable roads in developed areas, this generally means that some level of reticulation system is constructed. The presence of this system means it also becomes the logical network for dealing with private stormwater disposal.

Effects on the Environment

To address the effects of stormwater discharges on the receiving environment the swAMP states council will adopt a water sensitive design approach that is based on the following principles:

- Protection and enhancing the values of our natural ecosystems.
- Addressing the effects from stormwater as close to source as possible.
- Mimicking natural systems and hydrological processes for stormwater management.

Developers will be required to follow the same approach in accordance with the Nelson Tasman Land Development Manual[18] (NTLDM) 2019. The approach includes requirement for stormwater treatment and protecting stream health.

[17] http://www.nelson.govt.nz/council/plans-strategies-policies/strategies-plans-policies-reports-and-studies-a-z/iwi-management-plans

[18] The NTLDM was also given legal status through the plan by plan change 69 which is effectively operative and will be updated in the TRMP in July 2020.

TDC will obtain discharge consent through which the effects from stormwater discharges on the environment will be managed and controlled.

Urban Stormwater Strategy 2019

The purpose of the Strategy is to provide direction to the development of urban stormwater catchment management plans in the Tasman District to support the analyses, planning and management of stormwater. The Strategy has identified a range of long term goals for stormwater management relating to protection of water quality, avoidance of flood hazards, enabling water sensitive growth, and ensuring stormwater services are efficient and cost effective.

Nelson Tasman Land Development Manual 2019

The design and management of network infrastructure is primarily managed through the Nelson Tasman Land Development Manual (NTLDM). Previously, Tasman had its own Engineering Standards.

The NTLDM is incorporated by reference into the TRMP, and has a policy relationship through Chapter 15 'Strategic Infrastructure and Network Utilities' to manage the environmental impacts from network infrastructure, as well as objectives for integrated, efficient and resilient design.

The effectiveness of the NTLDM has not been evaluated as part of the TRMP review, as it has only been in effect since 2019 and has not had sufficient time to be implemented.

Wastewater Activity Management Plan 2018

The purpose of this activity management plan (wwAMP) is to outline and summarise the Council's strategic management and long-term approach for the provision and maintenance of its wastewater activity.

The provision of wastewater management services is core business for local government and includes the planning, implementation, and maintenance of wastewater services in the District. For Council a key duty required by the Health Act 1956 is to improve, promote, and protect public health within the District. Providing wastewater services helps achieve this. Councils have the obligation to identify where such a service is required, and to either provide it directly themselves, or to maintain overview of the supply if it is by others.

Key issues identified in the wwAMP include:

- Meeting residential and commercial growth by utilising existing capacity, upgrading current capacity, or installing new infrastructure.
- The unintentional entry of ground water (infiltration) and rainwater (inflow) into the wastewater network, which uses pipe capacity, increases conveyance and treatment costs, and contributes to overflows.
- Managing overflows where untreated wastewater escapes from the network into the environment, presenting a risk to public and environmental health. Overflows can be caused by wet weather due to stormwater inflows which overload the system, blockages, breaks, power outages, or lack of network capacity.

TDC Wastewater Bylaw 2015

The Wastewater bylaw applies to all users of the wastewater system and includes trade waste and protection of the wastewater infrastructure. The bylaw sets out the requirements around

connection and discharges to the wastewater system, the extent of public/private responsibilities, the prevention of inflow and infiltration, and working and building around wastewater reticulation. The Bylaw regulates the discharge of trade waste into the wastewater system through a registration and permitting process and distinguishes between permitted, conditional and prohibited users.

Economic and Population Drivers

In 2019, agriculture, forestry and fishing accounted for 13.7% of Tasman District's GDP and 20.7% of filled jobs (see Figs 2 and 3). Other significant industries in the District's economy include manufacturing (12.5% and 11.3% respectively), construction (7.9% and 9.4%), and retail trade (7% and 10.8%).

Table 10 shows that over the eleven year period from 2009 to 2019, retail trade contributed $74m to the District's economy. This was followed by agriculture, forestry and fishing ($56m), property services ($55m), construction ($54m), and manufacturing ($52m).

Given their importance to the local economy, it is not surprising that these industries are major resource users (e.g. land, fresh and coastal water) and they can have considerable discharges associated with their activities.

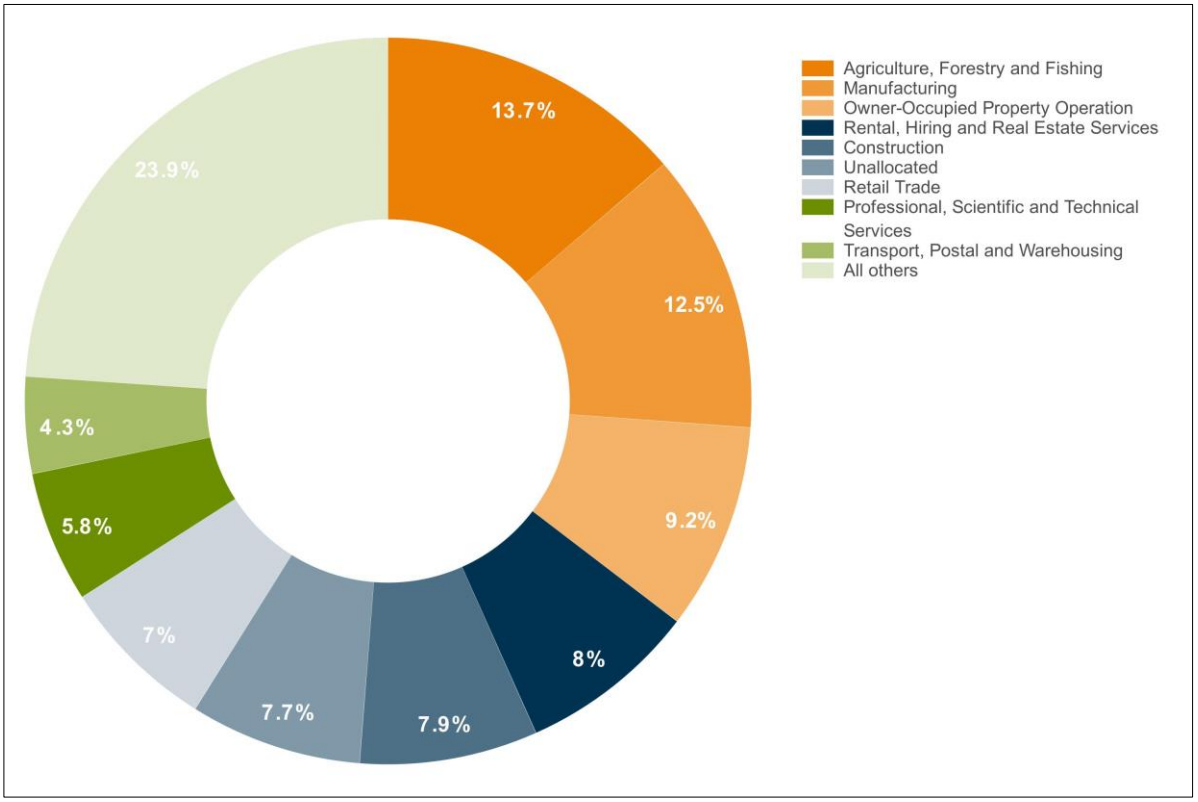


Figure 2: Proportion of GDP in Tasman District (by ANZSIC 1-digit industries), 2019[19]

[19] https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Gdp

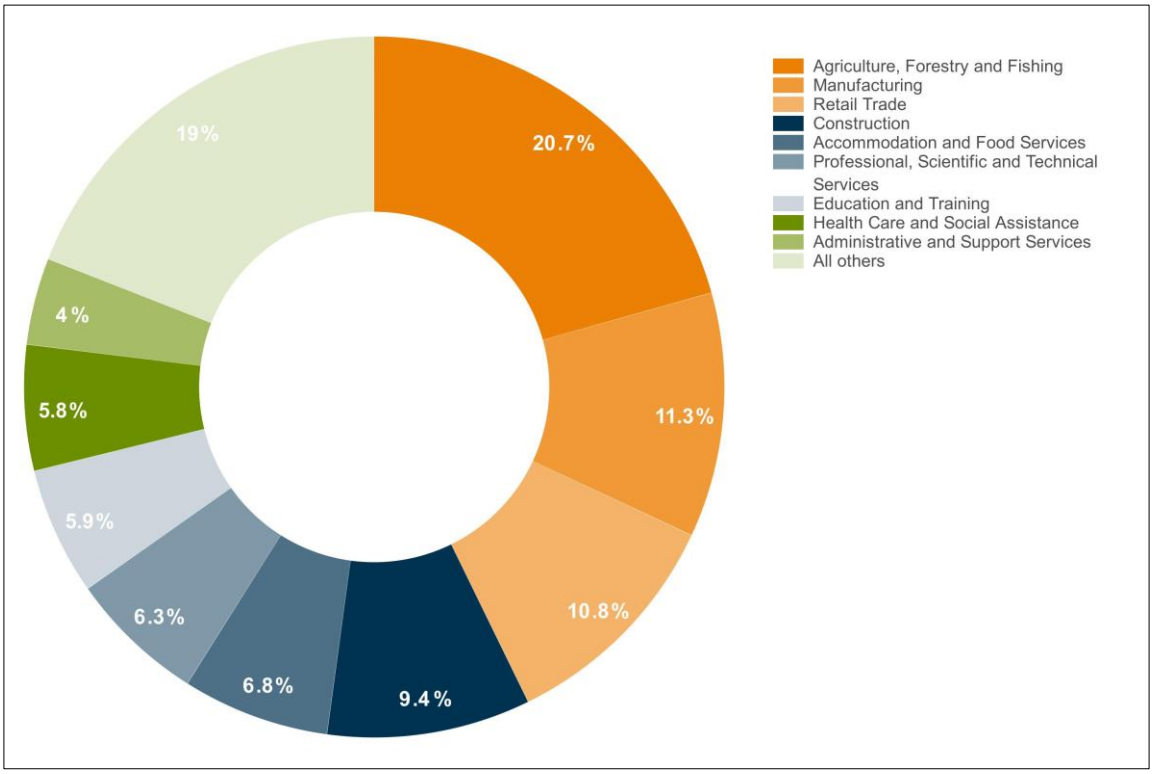


Figure 3: Proportion of filled jobs in Tasman District (by ANZSIC 1-digit industries), 2019[20]

Table 10: Biggest contributors to economic growth in the Tasman District, 2009-2019[21]

Retail Trade	$74m
Agriculture, Forestry and Fishing	$56m
Rental, Hiring and Real Estate Services	$55m
Construction	$54m
Manufacturing	$52m
All other industries	$362m
Total increase in GDP	**$654m**

[20] https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Employment

[21] https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Gdp

Tasman District has experienced significant population growth over the past ten years, from an estimated 47,400 in 2010 to 54,800 in 2019 (see Figure 4).[22] This represents an increase of 15% over that period. As a consequence, there has been considerable pressure for residential development, including infill, expansion of existing settlement boundaries, and rural residential living opportunities.

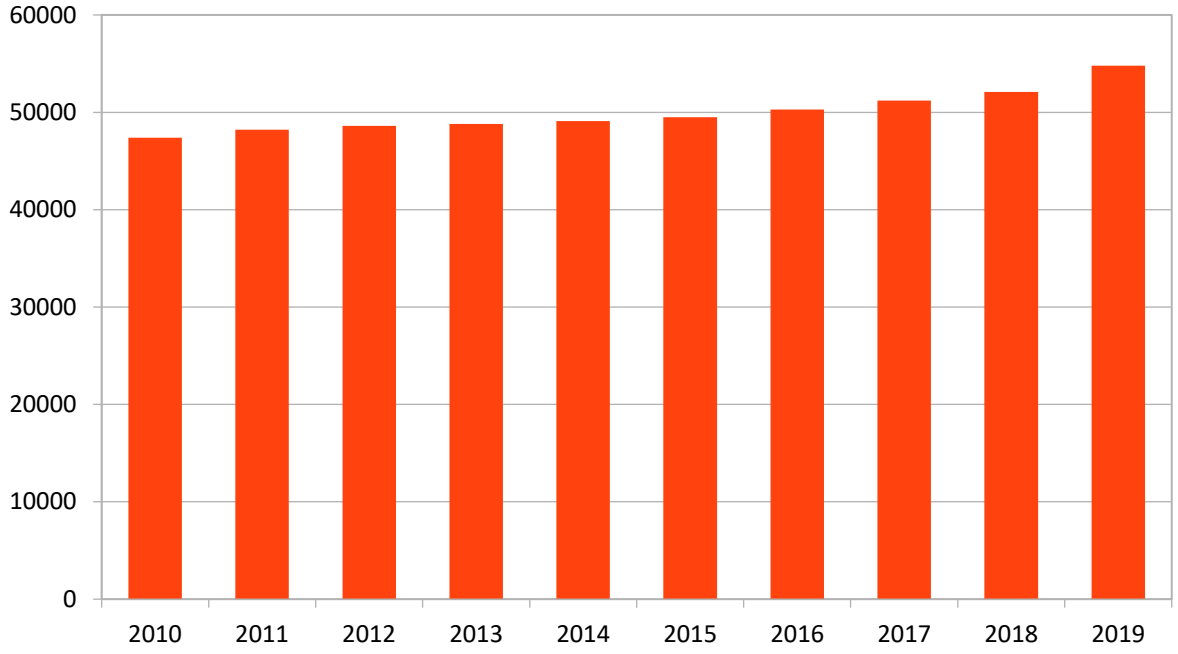


Figure 4 Estimated Population Growth in Tasman District (2010-2019)

3.2 Internal Consistency of Provisions

The internal consistency scores for Chapter 33 objectives are shown in Table below.[23] The chapter is all about discharges to land and water from land-based activities such as domestic wastewater and effluent. Soil and water contamination are the primary effects that the objectives and policies aim to avoid, with impacts on ecosystem and human health and safety being the focus of objectives. The chapter is characterised by a focus on water quality.

Table 11: Chapter 33 Summary of Internal Consistency

Objective	Internal Consistency	Comment
33.1.2.1 *The discharge of contaminants in such a way that avoids, remedies or*	**Varied**	At a high level the rules do appear to implement water quality objectives, and water classification schedules provide detailed information about what those objectives aim to achieve. However, the connection between the rules (consents hierarchy) and the information in the schedules is not as clear as it could be. There are no

[22] Population data extracted on 17 Sep 2019 21:12 UTC (GMT) from NZ.Stat; 2019 data is from https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Population.

[23] Information in this section has come from a TDC commissioned report: Leusink Sladen, S. (Dec 2019). *Tasman Resource Management Plan Policy Mapping - Review of the Internal Consistency and Integrity of Plan Objectives, Policies and Rules Parts III – VI*.

mitigates adverse effects while: *(a) Maintaining existing water quality; and* *(b) Enhancing water quality where existing water quality is degraded for natural and human uses or values* **33.1.2.2** *The management of land and water use in the Waimea Water Management Zones to maintain, and where it is degraded to improve, water quality to meet the management objectives specified in Schedule 30B*		specific cross references to the schedules within activity conditions. The policy set contains examples of 'process' policies, aimed at Council in decision making (33.1.3.9, 33.1.3.10) and non-regulatory ones encouraging Council in an advocacy role (33.1.3.7). Less strongly implemented policies include 33.1.3.3 and 33.1.3.12, seeking improvements to water quality and riparian management.
33.2.3 *The avoidance, remediation or mitigation of the adverse effects resulting from emergency discharges or accidental spills*	**Moderate**	Just two policies implement this objective, and they both focus on accidental spills (contingency planning) associated with land use activities. There is significant cross-over with 16.7 hazardous facilities, and within this section the idea of contingency planning is less strongly addressed (i.e. Chapter 36).
33.3.2 *Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse effects of downstream stormwater inundation, erosion and water contamination.*	**Varied**	Multiple policies addressing a wide range of issues and effects characterise this set: stormwater flow, habitat management, low impact design, groundwater re-charge and water quality effects are key examples. Strongly represented policies are ones with a focus on water quality outcomes, with rules clearly outlining contamination limits e.g. 33.3.3.1, 33.3.3.5. Weakly implemented policies are ones dealing with groundwater re-charge, whole-catchment management, low impact design and riparian/drainage restoration. Flow and volume management concepts do not appear to be addressed comprehensively, despite being important management considerations of stormwater. Given that Part 6 is focussed on contamination, it is perhaps not surprising that these 'other' objectives of stormwater management are less strongly addressed.
33.4.2 *On-site disposal of domestic wastewater, which avoids, remedies or mitigates adverse effects on groundwater or surface water quality, habitats, human health and amenity values.*	**Strong**	Six (6) policies implement this objective and they all appear to be clearly implemented through the domestic wastewater rule sets. In some examples such as 33.4.3.5 the policy provides more detail than the assessment matter that implements it.
33.5.2 *To avoid, remedy or mitigate the adverse effects of*	**Strong**	This set is characterised by a proportionately significant number of non-regulatory policies, with 5 out of 7 policies

contaminated sites on human health and the environment.		focussing on education and advocacy, information and monitoring, and compliance and enforcement. Regarding the two policies with regulatory implication, 33.5.3.6 and 33.5.3.7, these appear to have direct implementation through hazardous facilities rules (16,7) and specific reference within the Chapter 36 rule sets.

In strengthening the internal consistency of Chapter 33 provisions, the following actions are recommended:

- Check rules for connection/implementation of standards in the water classification schedules and revise with respect to the NPS-FM requirements.
- Review emergency discharges policies in relation to Part 2 land sections and Part 3 CMA sections, and revise contingency concept (with stronger cross-referencing if necessary).
- Review stormwater management policies and rules, with consideration for improved articulation of volume/flow issues and catchment-based considerations. Part 6 is focussed on contamination, but stormwater has an important flow and drainage dimension (that may or may not involve contamination). Effective stormwater management also involves consideration of the effects of land use activities such as site coverage (Part 2), the beds of rivers and lakes with regards to riparian management (Part 4), and strategic infrastructure, namely stormwater network infrastructure (Part 2). Groundwater recharge and the overall management of water resources is also implicated (Part 5).
- Recommend some discussion around 'improvements' to water quality, how/why/when/by whom they might be achieved.

3.3 Evidence of Implementation

The Chapter 33 objectives and policies are largely implemented via rules in Chapter 36 of the TRMP. The rule sets for contaminant discharges are set out in Appendix 2. These include a range of permitted, controlled, restricted discretionary, discretionary, non-complying and prohibited activities applying to wastewater, stormwater and drainage water, animal effluent, leachate from compost and offal pits, mining wash, application of fertiliser and a number of other contaminants.

The provisions relating to the discharge of pesticides have been evaluated in the s35 report for Chapter 34 'Air Discharges', and provisions relating to coastal discharges are discussed in the s35 report for Chapter 35 'Discharges to the Coastal Marine Area'.

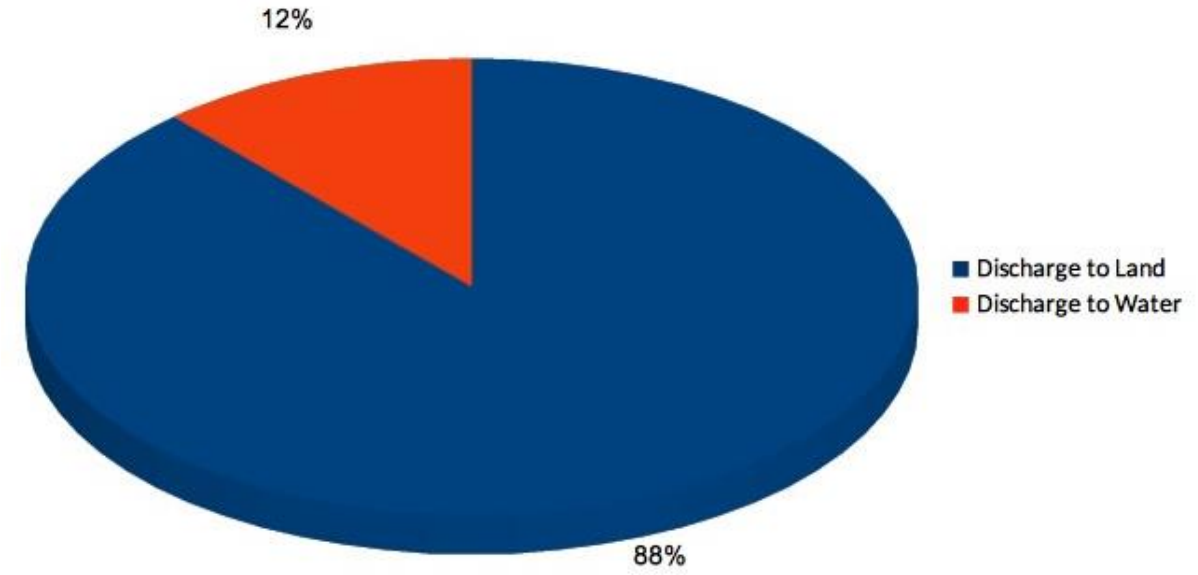
3.3.1 Resource Consent Data

Over the previous ten years (2010–2019) 1136 resource consent applications were received by TDC, as well as 117 applications to vary the conditions of existing consents, giving a total of 1253 applications under the relevant TRMP rule-sets.[24]

[24] Resource consent information was extracted from TDC's MagiQ-BI consents database using keyword searches (it is not possible to search by TRMP rule number). As a consequence, there may be relevant resource consent data that was not captured by the key words used.

Figure 5 shows, a significant majority of consent applications (1136 or 88%) involved discharges to land, with discharges to water making up the other 12% (or 112 consent applications). Of the variations, 83 (71%) related to discharges to land and 34 (29%) related to discharges to water.

Figure 5: Resource consent application types



Wastewater and stormwater discharges were by far the most common reasons for consent applications to discharge to land. Wastewater consents were largely related to subdivision development, often in wastewater management areas. Stormwater consents also typically related to residential development, but also commercial and industrial sites. Other activities requiring consent included discharge of oil to roads for dust suppression and discharges from alluvial gold mining operations.

The majority of consent applications for discharges to water related to stormwater discharges from residential, commercial and industrial properties. Other discharges included 'dewatering' of trenches associated with land development and subdivision, discharges from dams to streams and rivers, discharges of stock effluent, sediment discharges from mining operations, roadworks, installation or maintenance of infrastructure (e.g. wastewater) and gravel washing, and discharges associated with the operation of hydro power stations.

Figure 6 (below) shows the number of consent applications and variations received by TDC each year between 2010 and 2019. Applications received range from lows of 94, 96 and 99 in 2019, 2015 and 2013 respectively, to a noticeable peak of 193 in 2014. For seven of the 10 years, the number of applications received varied between 90 and 120 per year.

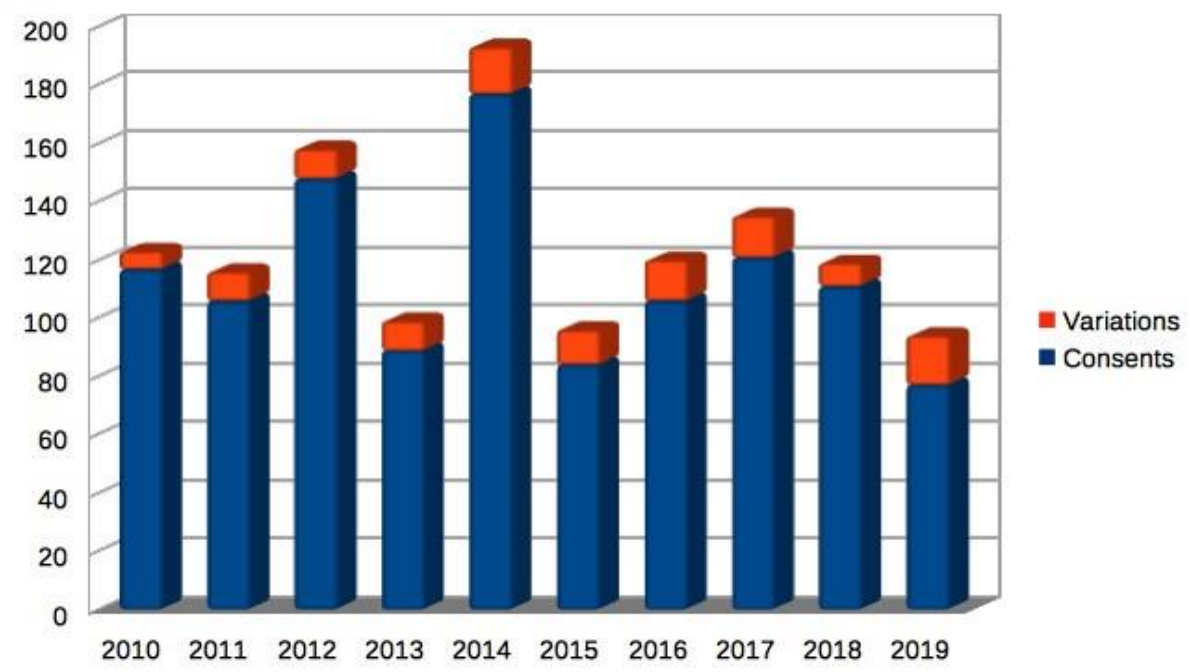


Figure 6: Number of Consent Applications and Variations

Figure 7 shows that the majority of the consent applications received (1011, or 89%) are 'consent effective', which means that the activities granted are currently being carried out by the applicants. This is made up of 918 consents for discharges to land and 93 consents for discharges to water. The next largest group are 73 consents (6%) that have expired (65 land, 8 water). Consents that have been surrendered by the applicant account for 2% of the total (15 land, 5 water), and another 1.5% are still being assessed by Council and awaiting a decision (12 land, 5 water). The final 1.5% include consents that have either lapsed or have been cancelled or withdrawn by the applicant (14 land, 1 water).

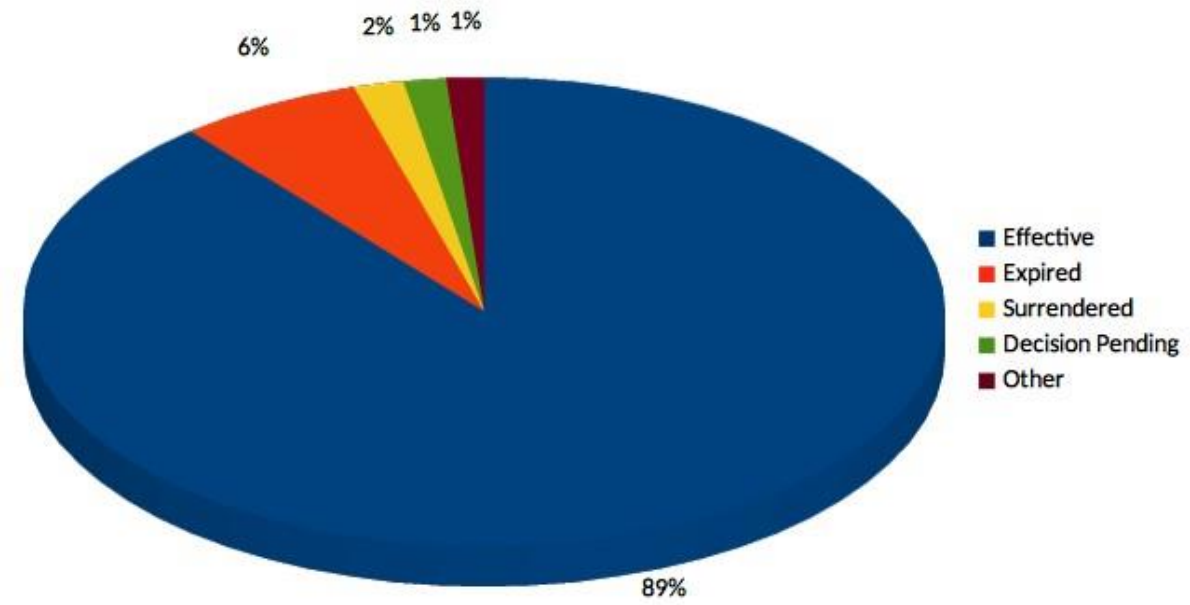


Figure 7 Consent application status

As shown in Table below, a total of 977 consent applications (87%) were decided upon without notification, whereas 40 applications (4%) were fully (i.e. publicly) notified and 102 consents (9%) were processed under limited notification (where specifically identified people or groups are affected by the proposal and given an opportunity to make a submission). Decisions on 17 applications are yet to be made.

Table 12: Notification Status of Resource Consent Applications 2010-2019

Notification Status	Discharges to Land	Discharges to Water	Total	%
Publicly Notified	33	7	40	4
Limited Notified	98	4	102	9
Non-Notified	881	96	977	87
TOTAL	1012	107	1119	100

For discharges to land, applications processed under limited and full notification were for wastewater and stormwater discharges, mostly relating to multi-lot subdivisions.

For discharges to water, applications assessed under limited notification included sediment discharges from flood protection activities (including upgrading culverts and constructing stopbanks and swales) and dewatering groundwater associated with replacement of the Pohara Pump Station (both applications by TDC), sediment discharge from a subdivision development, and discharge of water to a stream from a power station.

Publicly notified applications involving discharges to water included three consents for the Waimea Community Dam, a global consent by TDC for flood protection and erosion control, another global consent by TDC for discharge of herbicides to control woody weed growth within flood channels, the discharge of stormwater from an industrial site, and the discharge of sediment arising from a residential development.

Tasman District Council was the applicant that applied for the most consents under Chapter 33 provisions, with a total of 55 applications and an additional 19 variations (see Table 13). These were for a variety of activities, including discharges to water during construction or replacement of pipes, culverts, bridges pumping stations etc, discharge of stormwater and wastewater, and the flood control measures mentioned above.

The Department of Conservation had 18 consent applications and three variations relating to discharge of wastewater and aerial discharge of pesticides. In addition, a small number of companies involved in larger residential subdivisions applied for between 14 and 22 consents each.

Table 13: Number of Consents Applications by TDC

	Consent Applications		Variations	
Activity	**Total**	**TDC**	**Total**	**TDC**
Discharge to Water	112	32	34	7
Discharge to Land	1024	23	83	12
TOTAL	**1136**	**55**	**117**	**19**

Consents Received under the NES-Contaminated Soils Regulations 2011

As well as consent applications received under the relevant TRMP rules, applications have also been received for an activity regulated by the NES-CS for land that is considered to be potentially contaminated. The regulations introduced by the NES-CS include permitted, controlled, restricted discretionary and discretionary activities (see Appendix 2).

The NES-CS sets out clear and strict requirements that must be met for the various activities it regulates and details the matters over which control or discretion have been reserved. In most circumstances the applicant is required to provide Council with a detailed site investigation of the piece of land which must state that the soil contamination does not exceed the applicable standard outlined in Regulation 7 of the NES-CS.

Since the regulations came into force in 2011 approximately 56 applications have been received by TDC, including around 50 new applications and six variations. The applications sought consent for a variety of activities, including the disturbance and removal of contaminated soil, subdivision of a contaminated site, construction of buildings on a contaminated site, change of use (from horticultural to residential), excavation of a contaminated site (e.g. for works on a petrol station, to install a wastewater treatment and disposal system on a former orchard, and to trench and install broadband fibre), and the discharge of potentially contaminated stormwater.

Site management plans can be required for larger proposals to ensure appropriate steps are taken to avoid or minimise adverse effects, including protecting stormwater exit points, covering exposed surfaces or contaminated stockpiles, and restricting the area that can be excavated and exposed at any one time. Additionally, any excavated material that is required to be disposed of off-site needs to be tested for the presence of contaminants, transported using licensed contractors, and deposited at a facility authorised to receive contaminated material.

3.3.2 State of the Environment Monitoring Data

A number of monitoring reports and studies shed light on the health of rivers and streams (and to a lesser extent lakes) in the Tasman District. They also help identify the factors that enhance or degrade the condition of waterbodies over time, including direct impacts of human activities. This information is invaluable for evaluating the effectiveness of TRMP policies and methods, and determining the extent to which TRMP objectives have been achieved.

Appendix 3 summarises the key findings from the monitoring data by identifying the key issues relevant to freshwater quality, the main pressures, and high level implications for the TRMP review. Note that the evaluation report for Chapter 35 sets out additional monitoring data relating to the quality of coastal water.

Overall, the monitoring data shows that Tasman District has relatively few water quality issues compared to other parts of New Zealand, due to the District's large rivers having a significant proportion of native forest in their headwaters. Therefore, any inputs of pollutants from developed land in the middle and lower reaches are substantially diluted by the large volume of high quality water from upstream.

Nevertheless, there has been a deterioration in the health of water quality and associated habitats and native fish stock, particularly for small streams. This is linked to intensive land uses, including agriculture, horticulture and residential development, and related activities that lead to an increase in sedimentation, nutrient runoff and contamination of waterways. The close connection between

land use activities and effects on fresh and coastal water quality therefore requires stronger integration between regional and district provisions in the TRMP.

River Water Quality SOE Report 2015[25]

As part of its obligations under the RMA, TDC monitors the state of surface water quality and river health at more than 57 sites throughout the Tasman District. The state of river water quality in the 2015 monitoring report is determined by data collected from a set of core sites between 2010 and 2015. River water quality trends, by comparison, are examined using data from the entire record (since 1987 for three sites but the majority of sites since 2000)..

The following summarises the main findings of the 2015 monitoring report (pp.2-4):

> Threats to Water Quality
>
> *The main threats to water quality and stream health in the Tasman District relate to the intensification of agriculture in the district and, to a lesser extent, the expansion of residential development. The main problems with water quality are currently found in small streams whose catchments contain a large proportion (>50%) of intensively developed land.*
>
> *Sites with pastoral and urban land cover had higher concentrations of disease-causing organisms, greater quantities of deposited fine sediment and lower water clarity than sites with indigenous forest or exotic forest land cover. Focussing on the monitoring sites in pastoral catchments, 40% posed a high risk to people and animals from disease-causing organisms... while 21% had excessive amounts of deposited fine sediment in the bed.*
>
> Key recommendations:
>
> *To achieve the greatest immediate benefits restoration efforts should focus on the following:*
>
> - *Reducing faecal bacteria and fine sediment inputs to small streams (stock access and riparian buffers for earthworks and land cultivation).*
> - *Increasing the amount of bank-side vegetation along these streams to provide shading and to keep water temperatures below the critical levels required for protecting ecosystem health.*
> - *Restoring wetlands in key locations where runoff enters streams.*

The actions required by these recommendations are not well supported in the current TRMP provisions, particularly rules that enable wetland enhancement/restoration, stream bank planting, and riparian margin setbacks for cultivation/earthwork (Chapter 8).

A related issue raised at the Council workshop concerns the potential for disease causing organisms from dogs (through access to rivers and runoff from stormwater containing dog faeces) and their effect on water quality and swimmability. While monitoring of Tasman waterways has not identified this issue, a 2009 report for Environment Canterbury by the Institute of Environmental Science and Research found that dog faeces was a primary or secondary source of E. coli in the Avon River in Christchurch. The report states that:

> *In the absence of rainfall, E. coli levels of up to 540 E. coli/100ml were measured in the Avon River. The primary sources of these E. coli are wildfowl, with secondary contributions from dog faecal material.... During, and immediately following rainfall, E. coli counts in the Avon River increased up to*

[25] James, T and McCallum, J 2015. *State of the Environment Report: River Water Quality in Tasman District 2015*. Prepared for Tasman District Council https://www.tasman.govt.nz/my-region/environment/environmental-management/water/river-water-quality/water-quality/

3,600 E. coli/100ml. The faecal source profile changed to be dominated by what appeared to be dog faeces, with secondary contributions from wildfowl (p.i).[26]

There are other reports around the world that support this general finding.

Health of Freshwater Fish Communities Monitoring Report 2018[27]

TDC has established a Freshwater Fish monitoring programme as part of its functions under the RMA to monitor and manage the life-supporting capacity and natural character of waterways. The latest monitoring report brings together the results of fish surveys completed from 2011 to March 2018. The surveys were primarily carried out on lowland streams as these are areas most at risk of degradation by various human activities. Additional reference sites on nearby streams with limited or no risk of degradation were also surveyed for comparison, where possible. The streams sampled were generally small (less than three metres wide) with varying types and degrees of habitat modification.

The following is a summary of the key findings (pp.1-3):

- There are 20 species of indigenous freshwater fish identified within Tasman and three sport-fish (all salmonids), the most abundant of which is brown trout.
- Of the native fish species in Tasman, more than half (currently 12) are listed as At Risk or Nationally Vulnerable by the Department of Conservation. This high proportion of species with declining populations is largely due to broad-scale land use changes which has led to the degradation of fish habitat in waterways.
- At a national scale, the occurrence of all native fish is declining, with particularly severe reductions in pasture and urban catchments. The longest-running quantitative fish surveys in Tasman are on the Onekaka River, Golden Bay. Here there appears to be a statistically significant decline in longfin eel and total fish numbers.
- Sampling efforts targeting specific rare species such as giant kōkopu and lamprey failed to find any of these fish species at all. However lamprey are very difficult to find using traditional methods and reasonable amounts of pheromone are being found particularly in the Aorere catchment and coastal streams north of the Takaka River.
- This indicates that these species may now be extinct in parts of our region. High water temperatures lead to fish stress and reduced feeding rates as well as reduce the capacity of water to hold oxygen, while promoting the growth of aquatic plants.
- Native fish species that are particularly sensitive to habitat degradation are typically absent from streams with high loads of fine sediment or little riparian vegetation. This indicates that these species may now be extinct in parts of our region.

[26] https://www.esr.cri.nz/assets/WATER-CONTENT/Images-and-PDFs/technical-report-faecal-source-tracking-avon-river-march-may-2009-screen-000809.pdf

[27] McCallum, J. & James, T. 2018. *The Health of Freshwater Fish Communities in Tasman District 2018*. Tasman District Council, Richmond, New Zealand

Waimea and Moutere Sediment Sources Study 2018[28]

Sediment input into the coastal marine area is a significant issue in Tasman. A 2018 report prepared for TDC by the National Institute of Water and Atmospheric Research Ltd (NIWA) has helped to identify the sources of sediment being deposited in the Waimea and Moutere estuaries.

The study found that sediment in the Waimea Catchment could be attributed to soil erosion following harvesting of pine forests and 'legacy sediment' from bank and hillside erosion.

In the Moutere Catchment, sediment was found to be caused by river bank erosion, possibly attributable to hill-slope erosion following the removal of tree root boles and recontouring for conversion from pine to pasture. Further down the catchment sediment was linked to harvested pine forest, with only a small amount of pasture contribution. Almost 90 % of the sediment at the Moutere River mouth was identified as being of pine forest origin.

The key findings of the report were:

- Native forest and mature pine forest plantations were found to produce very little sediment.
- A substantial proportion of fine sediment was found to originate from forest harvesting and bank erosion.
- The Waimea Estuary is receiving a high proportion of legacy sediment from bank erosion but is also receiving sediment from harvested pine forest at various locations down the river, particularly the Wairoa, Lee and Roding catchments.
- Moutere Estuary is receiving a high proportion of sediment directly attributable to pine forest harvesting. This sediment may be travelling through the Moutere River system rapidly and being flocculated out at the river mouth when it contacts the more saline sea water. Some of this sediment may be derived from recent harvesting in the Central Road tributary.
- While not part of this study, the dam burst in the upper Moutere caused a large amount of sediment release to this river.

TDC Stormwater Quality Data[29]

Most of Council's current knowledge of stormwater quality is from the Richmond Catchment and relates to data obtained around ten years ago; there being a lack of more recent monitoring data. Council collected stormwater samples (in 2010), this being from stormwater flowing in a roadside channel on Gladstone Road, Richmond. This site was selected because it has the highest traffic flows in Richmond and includes a high percentage of heavy vehicles. This single sample was analysed for total Al (16 g/m3), Cu (0.046 g/m3), and Zn (0.27 g/m3). These concentrations are within the range found elsewhere in New Zealand.

In addition, the Council undertook a debris net collection exercise immediately downstream of the Beach Road and Stratford Street culverts between October 2011 and February 2012. The study showed that the majority of the litter consisted of leaf matter and organic materials (92%) with

[28] Gibbs, M. & Woodward, B. 2018. *Waimea and Moutere Sediment Sources by Land Use*. Prepared for Tasman District Council.

[29] Information in this section has come from TDC's Global Stormwater Resource Consent Application RM191015 (and others); available from file:///Users/IPL/Downloads/RM191015%20and%20ors%20Tasman%20DC-EngineerServicesSW-AppnAEEAppendices%202019-10-01.pdf

smaller amounts of plastic bottles/wrappers (6.5%), some aluminium cans (1%), and glass bottles (0.5%).

Samples were also collected from Richmond waterways during rainfall events in 2009 and 2010[30]. The first sample was assessed for E.coli and the second for metals, PAH, benzene, toluene, ethylbenzene, and xylene and a range of other volatile and semi-volatile organic compounds. The results of this study in terms of water quality effects were:

- Total suspended solids concentrations were relatively low in all samples other than Borck Creek (180g/m3) where a discharge from a concrete product plant occurred upstream. Results for Jimmy Lee Creek ranged from 10 g/m3 at Hill Street to 66 g/m3 and 34 g/m3 at 35 and 64 Beach Road respectively.
- Water samples from Jimmy Lee Creek were slightly above ANZECC guidelines (90% level of ecosystem protection) for aluminium, copper and zinc at all sites, including the upstream reference site. However, when compared to guidelines for 80% level of ecosystem protection all these metals were at acceptable concentrations. Aluminium and zinc increased 2-3 times between the residential area (Washbourn Gardens) and the industrial area (top end of Beach Road Drain). The concentrations of all other metals were below detection levels and guidelines (for 90% protection).
- Copper and chromium concentrations in Borck Creek (at the Railway Reserve) were almost 10 times and 14 times higher than Jimmy Lee Creek respectively (and ~23 times and 7.3 times the ANZECC guidelines for 90% ecosystem protection, respectively). This site is downstream of a yard storing timber treated with copper-chrome-arsenic (CCA) and it is likely that this yard is a significant contributor to these results. Aluminium, cadmium and lead were also above the ANZECC 90% ecosystem protection guideline with only aluminium being significantly above. This site on Borck Creek was the only site where arsenic and cadmium were above detection levels.
- The screen of 148 volatile or semi-volatile organic compounds in water samples from four sites on Jimmy Lee Creek and Borck Creek showed none above detection levels. Chemicals tested for included: polyaromatic hydrocarbons (including benzo-α-pyrene and nathalene), organochlorine pesticides, halogenated aromatics, plasticisers, petroleum hydrocarbons and BTEX.
- Faecal bacteria in Jimmy Lee Creek were elevated at the upstream reference site (upstream of Hill Street) and generally decreased downstream with the exception of a spike from a source in Washbourn Gardens where E.coli concentrations more than doubled.
- E.coli concentrations in Reservoir Creek at Easby Park (upstream of Marlborough Crescent) were similar to those measured in Jimmy Lee Creek. A sample taken upstream of the reservoir showed much lower concentrations (at detection).
- E.coli concentrations in Borck Creek ranged from 290-375 E.coli/100 mL at all sites from Hill Street to its mouth.

The results are in keeping with what is expected to be found in stormwater within similar urban areas throughout New Zealand. Detailed results were obtained which are indicative of the uses present and representative of the possible urban stormwater contaminants in these areas.

[30] Impact of discharges from stormwater systems on streams and estuary margins in Richmond: 2010 report - report REP10-07-07, J.Easton and T.James

3.3.3 Issues Identified with Implementation of Provisions

During rapid assessment workshops, Council staff from policy, consents, compliance, engineering, and environmental monitoring identified a number of issues with implementation of the Chapter 33 provisions. These are discussed below.

Giving Effect to National Directives

Chapter 33 provisions need to be updated to give effect to the NPS-FM and NZCPS with regard to the effects of contaminant discharges on fresh and coastal water quality. Both policy statements set clear directives for Council to maintain and improve water quality. The NPS FM in particular requires Council to maintain and improve freshwater quality and in particular to control urban and rural land uses to reduce sediment loads and discharge of contaminants in runoff, wastewater and stormwater.

In support, the NZ Coastal Policy Statement requires council to "Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment". This includes impacts of activities that degrade freshwater quality 'upstream' of the coast, such point and non-point discharges (e.g. sediment, nutrients and contaminant discharges).

Regional councils will need to recognise the effects on receiving coastal waters when making decisions about fresh water in freshwater management units. Coastal water quality will be affected by the quality of fresh water that flows into it and, amongst other matters, the NPS-FM places obligations on councils to:

- Improve the integrated management of land use and fresh water, particularly the interactions of fresh water and the coastal environment.
- Recognise the interactions, ki uta ki tai (from the mountains to the sea) between fresh water, land, associated ecosystems, and the coastal environment.
- Have regard to the connections between freshwater bodies and coastal water when setting freshwater objectives and limits.

Climate Change

Under s7 of the RMA, councils are required to have particular regard to the effects of climate change. In addition, when addressing both water quality and quantity under the NPS-FM, councils are required to have regard to "the reasonably foreseeable impacts of climate change". The NPS-FM further notes that "*NZ faces challenges in managing our fresh water to provide for all of the values that are important to New Zealanders. The quality, health, availability and economic value of our fresh waters are under threat. These challenges are likely to increase over time due to the impacts of climate change*" (p.4).

Currently, the Chapter 33 provisions (and TRMP generally) do not take into account the effects of climate change and this will need to be strengthened as part of the review. In implementing the NPS-FM, TDC needs to consider the ways in which climate change may affect water quality, including matters such as:[31]

- Changes in frequency and severity of heavy rainfall and flushing or flooding events.

[31] See pp.40-41 in Ministry for the Environment. 2017. *A Guide to the National Policy Statement for Freshwater Management 2014 (as amended 2017)*. Wellington: Ministry for the Environment.

- Exacerbation of existing anthropogenic effects (eg, land-use impacts, flooding, or nutrient runoff) – degraded ecosystems are less resilient to additional pressures, including those resulting from climate change.
- Deterioration of water quality in some areas as a result of lower flows in freshwater bodies.

Consideration of the impacts of climate change needs to be based on the best information available. TDC's region-specific information for climate effects on hydrology (eg, rainfall models), should have regard for this information in establishing objectives and limits under the NPS-FM.

Tangata Whenua Interests

A general observation made about the TRMP is the need for a more consistent approach to addressing matters of significance to Māori.[32] An assessment of internal consistency of the regional provisions of the TRMP concluded that iwi issues were weakly implemented, particularly in relation to freshwater management and coastal values, and sites of significance both in relation to freshwater resources and coastal marine area locations.[33]

With regard to Chapter 33, there is no section or set of provisions explicitly and comprehensively addressing the effects of contaminant discharges on Māori interests, values or environmental aspirations. This needs to be addressed in collaboration with tangata whenua as part of the TRMP review process.

The 2019 Urban Stormwater Strategy identifies a number of matters of significance to Māori with respect to stormwater discharges, including contamination of habitats and loss of waahi taonga species, diminishing mauri of the wai, destruction or contamination of waahi tapu, and the ability to practice kaitiakitanga. These and other matters, e.g. as described in the relevant iwi planning documents, need to be reflected in the review of the TRMP discharge provisions.

Contaminant Discharges

Managing Effects of 'Upstream' Activities

The TRMP provisions deal most effectively with point source (i.e. 'end of pipe') discharges, but non-point 'diffuse' discharges are not well addressed. These include sedimentation of rivers and streams from land development, which ends up being transported into the District's coastal bays, and runoff from sewage, stock effluent, fertilisers and land disturbance, which can increase the amount of bacterial contamination and nutrients in freshwater bodies and estuaries. As shown in Appendix 3, monitoring shows these discharges are having a significant impact on water quality.

The objective-policy-rule framework addressing non-point source discharges needs strengthening in Chapter 33 and the TRMP generally. Provisions should identify and address the effects of non-point source contamination. This is beyond the ability of Chapter 33 to address, and instead relies upon integration between the district and regional plan provisions. Such integration is anticipated by the NPS-FM and NZCPS 2010 and needs to be addressed as part of the TRMP review.

The framework developed under the Takaka FLAG collaborative process will assist with reviewing this aspect of Chapter 33. It includes the use of farm environment plans for risk identification of

[32] Mason (2019) *Stage 1 of Tasman Regional Policy Statement Efficiency and Effectiveness Review: Integrated Management*. Prepared for Tasman District Council.

[33] Leusink-Sladen (2019) *Policy Mapping - Review of the Internal Consistency and Integrity of Plan Objectives, Policies and Rules: Parts III – VI*. Prepared for Tasman District Council.

critical source paths of contamination, intensification controls, setback from water bodies for certain activities, and high risk practice controls. Council has agreed for a draft plan change to be progressed based on this work. However, aspects of this framework may be superseded by the NES-FW expected in July 2020.

Effects of Fertiliser on Water Quality

A similar issue relates to the regulation of fertiliser as a contaminant, which is not well distinguished in the TRMP. Nitrate levels in ground water is an issue particularly on the Waimea Plains where monitoring shows spikes in levels after heavy rainfall. While the TRMP recognises the contaminant effects of pesticides and seeks to prevent it from entering freshwater, the provisions relating to fertiliser use are concerned with cross boundary issues, i.e. the avoidance of fertiliser drift over adjoining properties. It is also largely carried out as a permitted activity.

This is despite the fact that the activities and risks/environmental effects associated with both pesticide and fertiliser use are largely similar, as noted in Chapter 33, which states that:

> *Contaminants arise from land use activities such as fertiliser and pesticide use, land disturbance, composting or allowing stock to have uncontrolled access to watercourses. Contaminants may enter the environment directly while the activity is being carried out, or diffusely as a result of natural processes such as leaching, run-off or through wind action* (p.33/3).

The TRMP review therefore needs to consider the contaminant effects of fertiliser use and update the relevant provisions accordingly to avoid adverse effects on water quality.

Permitted Activity Rule

Consent staff noted that Chapter 36 lacks a general permitted activity rule for small scale contaminant discharges. Examples where this would be useful include polymers applied to roads for dust control and backwash from swimming pools. Staff are currently using their discretion in determining what activities need a consent, but this would be made more straightforward if there was a permitted activity rule that spelt it out.

The permitted activity rule for air discharges (36.3.2.1 'Discharge of Any Contaminant to Air') provides a useful example to base a rule for contaminant discharges on.

Schedules 30A and 30B Incomplete

The significant uses and values of water bodies that may be adversely affected by reduced water quantity and quality are identified in Schedules 30A and 30B of the TRMP. The Schedules include 'instream uses and values', such as aquatic ecosystems, wildlife and aquatic plant habitat, contact and non-contact recreation activities, cultural and spiritual values, and landscape values. They also identify a range of 'other uses and values', such as irrigation, community water supply, stock and farm water supply, industrial supply, and hydro-electric power generation. Rule conditions in Chapter 30 (including for permitted activities) require the avoidance of effects on the uses and values identified for specific water bodies.

It is noted in the TRMP that the list of values is not yet complete for all water bodies or for all values, and that "*Further work is also underway to develop consistent protocols and determine the evidential requirements for inclusion of values into the Schedule*". However, the Schedule has not been updated since the TRMP was made operative and staff report that this has made it difficult to implement.

Further consideration is required on the scope of values information needed to inform consent assessments and whether this is suitable in an updated schedule or of a size and format (ie spatial) that it should be managed outside of the TRMP as a cross-referenced document or system.

Schedules 36A and 36B Out of Date

These two schedules set out water classes and standards for water bodies in the Motueka/Riwaka Plains and Waimea Water Management Areas. These classes and standards are based on the Third Schedule of the RMA and are used to help assess the effects of contaminant discharges on freshwater bodies. The classes identify various uses that the waterbody is to be managed for, including aquatic ecosystems, fisheries, contact recreation, irrigation and water supply. The standards are mostly narrative (rather than numerical), for instance "There must be no undesirable biological growths as a result of any discharge of a contaminant into the water".

However, an amendment to the RMA in 2017 removed the requirement to include the Schedule 3 classes and standards (although they still apply to coastal water). Instead, the 'national objectives framework' introduced in the National Policy Statement for Freshwater Management 2014 (NPS-FM) applies. Schedules 36A and 36B therefore need to be updated to incorporate the new requirements of the NPS-FM.

Accidental or Emergency Discharges

There is a degree of duplication between policies relating to hazardous substances in the Regional and District Plans. Chapter 5 'Site Amenity Effects', Chapter 23 'Natural Hazards and Hazardous Substances' and Chapter 35 'Discharges to the Coastal Marine Area' all include provisions relating to accidental or emergency discharges, particularly for hazardous substances.

Additionally, the requirement for councils to control hazardous substances was removed from the RMA in 2017, to avoid duplication with similar regulation under the HSNO and HSW Acts. As a consequence, the hazardous substances provisions in the TRMP need to be updated to ensure they focus on relevant environmental matters not covered by the other legislation.

In considering the effectiveness and efficiency of the hazardous substance provisions, the s35 report for Chapter 5 concluded that the hazardous substance provisions might be better dealt with as a contaminant discharge, in order to avoid duplication across TRMP chapters and with the new legislative regime:

> *Due to duplications of regulation there are significant requirements on industries and users of hazardous substances. In light of recent amendments to the RMA that remove the requirement for Council's to regulate hazardous substance storage and use, it will be necessary to reassess and rationalise the controls that are retained in the TRMP so that they remain appropriate and efficient.*
>
> *It is anticipated that the policies that remain will be more environmentally effects-based and focus less on the process and requirements for storage and use of substances. Those latter matters will be better dealt with under the HSNO Act. As a result it is anticipated that the hazardous substance policies may be better integrated into the discharges chapter.*

Stormwater Discharges

Stormwater Capacity vs Quality

A key issue raised by consent staff is that the TRMP stormwater rules control new discharges to the stormwater network, but with a greater focus on the capacity of the network to accommodate the additional stormwater compared to the effects of the stormwater on water quality. In other words, consent is required for what is essentially an infrastructure issue and although staff can include

conditions aimed at managing stormwater quality, this is not typically the reason why the consent is required.

In considering the effects of urban stormwater discharges on water quality, the Council's recently published Urban Stormwater Strategy identifies that:

> *The quality effects stem from the fact that urban land uses such as roads, parking, industrial zones and certain building materials generate contaminants, such as treated timber and zinc galvanised roofs that are picked up by stormwater runoff and accumulate in fresh water and marine water receiving environments where they have an adverse effect on ecosystems. The health of our streams, wetlands and coastal waters is affected by these discharges. It is acknowledged in Council documents that urban stormwater runoff is very similar to that found in many other urban centres in New Zealand and often contains contaminants such as sediments, oils, greases, metals, rubbish, organic material and contaminants illegally discharged. Urban runoff may also lead to increased water temperature in summer which has an effect on stream life.*

Staff also noted that Council has very little control over what people put down their stormwater drains – either accidentally or intentionally. Cross-connection between stormwater and wastewater can also be an issue leading to microbial contamination in stormwater.

Discharges from Roads

A gap identified in Chapter 33 is a lack of policies addressing stormwater runoff from the District's larger and busier roads. There has been a limited amount of monitoring with regard to stormwater contaminants from roads, but the degree of contamination in Tasman District is considered to be relatively consistent with other urban areas (as discussed on p.xyz above). Guidance in the TRMP for addressing this issue is required.

TDC Stormwater Discharges Currently Unconsented

Council does not currently hold a district wide resource consent for stormwater discharges or for the wider network infrastructure where this may require consent.[34] Consequently the Council is in the process of applying for consent to discharge stormwater from across the District. The proposal covers TDC's urban stormwater networks in the District's fifteen Urban Development Areas that require resource consents.

While the main features are the discharges from the networks, the proposal also includes other aspects of use, operation and maintenance of the networks that require consent, including:

- the discharges of water and contaminants from the urban stormwater networks.
- the management of stormwater and discharges of contaminants from extensions to the Urban Development Areas to service future urban growth as identified through individual catchment management plans.
- the maintenance, repair, upgrade and renewal of the physical network, including any associated construction activities and temporary discharges of contaminants.

The Council proposes to manage stormwater on a catchment wide basis across its Urban Development Areas in accordance with individual catchment management plans prepared as part of the operation of its networks. Each catchment management plan will:

[34] Noting that the majority of the network is provided for as a permitted activity through rule 16.6.2.1). There are a number of current consents held for various parts of the network and for specific discharge points.

- identify and address the specific features and issues of that stormwater network and the receiving environment it discharges to; and
- result in specific prioritised work programmes to address the identified stormwater management issues and how the network would be operated, maintained and upgraded to improve the quality of stormwater discharges.

The application has been notified and a single submission was received in support. A decision on whether or not to grant the application, including any conditions to be imposed is pending.

Onsite Disposal of Domestic Wastewater

Contamination of Groundwater

The TRMP identifies Wastewater Management Areas (WwMAs) in the Rural 3 and adjacent Rural Residential zones that have higher risks associated with the on-site disposal of domestic wastewater. This is because of the low permeability and shallow nature of the soils, steep slopes, high groundwater tables in some areas, and proximity to sensitive water bodies, including the Moutere, Mapua and Waimea Inlets. Consent staff report that the WwMA provisions in the TRMP have worked well, in particular because the development is less dense and the sites rely on sources of water other than ground water (i.e. water tanks), which reduces the risks of drinking water becoming contaminated.

In contrast, staff state that the Special Domestic Wastewater Discharge Areas (SDWDAs) have not been as successful. SDWDAs have been identified in areas where the combination of site specific characteristics such as soil, geology and topography, and risks of adverse effects, especially cumulative effects, from the on-site disposal of domestic effluent are high. In practice, staff have found that the SDWDAs cover areas with more intensive residential development and that the risk of wastewater discharges contaminating groundwater is high. Unlike properties in the WwMAs, households in the SDWDAs rely on groundwater for drinking.

In particular, staff are concerned with the permitted activity rule that enables the discharge of domestic wastewater into land from an on-site wastewater treatment disposal field in a SDWDA (Rule 36.1.2.5). They believe the rules need to be tightened up to reduce the risk of contaminating drinking water. They also believe the SDWDA boundaries should be reviewed to ensure they cover areas that are appropriate for that type of residential development and resultant wastewater discharges.

Wastewater Systems for Multiple Households

Wastewater treatment systems that service a cluster of households (predominantly for large developments in the Rural 3 zone) have also proven to be problematic, as they require oversight by a residents' society and management can become an ongoing issue. In these situations residents have tried to get TDC to take over responsibility for the wastewater systems. While the concept could work in some situations this has not proven to be the case so far and the provisions around wastewater treatment systems for multiple households should be reviewed.

Other Wastewater Management Issues Identified

Two other issues raised by staff that should be considered as part of the TRMP review are:

- Wastewater fields are only expected to last for a limited period once installed after which time they need to be replaced. However, small sections such as those in Tasman village lack sufficient space to install a second field when the first one has reached the end of its life.

- There is a lack of awareness regarding the ongoing management of wastewater systems once they have been consented and installed, i.e. around how to operate and maintain the systems. TDC has recently (2019) published a guide on managing onsite wastewater systems.[35]

Contaminated Site Management

Giving Effect to the NES on Assessing and Managing Contaminated Soils

The TRMP needs to be updated to give full effect to the NES-CS. Plan Change 38 removed two policies from Chapter 33 that were "inappropriate or superseded by the effect of the National Standard".

However, additional policy guidance could be provided in the chapter for implementing the rules associated with the NES-CS. As well, the framework for contaminated sites in the TRMP should be reviewed to ensure it is fit for purpose and consistent with the NES-CS, particularly the need for the Chemical Hazard Area provisions.

While the NES-CS focuses on human health, TDC has a role in managing effects on the environment arising from contaminated sites and this needs to be strengthened in the TRMP framework.

3.4 Effectiveness and Efficiency

This section provides an analysis of the efficiency and effectiveness of Chapter 33 of the TRMP. It focuses on the achievement of objectives contained within the chapter. The analysis draws on the information from earlier sections, including environmental data, council records, and the opinion of experienced plan users.

[35] Good Practice Guide for Operating On-site Wastewater Systems: Tasman Resource Management Plan Good Practice Guide No. 5; file:///Users/IPL/Downloads/GPG%205%20On-site%20Wastewater%20Systems.pdf

3.4.1 Contaminant Discharges

Table 14:1 Assessment of Efficiency and Effectiveness – Contaminant Discharges

Chapter 33 Objectives	Analysis	Rating of Achievement
Objective 33.1.2.1 *The discharge of contaminants in such a way that avoids, remedies or mitigates adverse effects while:* *(a) maintaining existing water quality; and* *(b) enhancing water quality where existing quality is degraded for natural and human uses or values.* **Policy set 33.1.3.1 – 33.1.3.16**	Chapter 33 regulates a range of contaminant discharges that can have an impact on water quality. Assessment of effects through the resource consent process has enabled TDC to control the impacts of discharges on water quality in many instances, typically in relation to point source (i.e. end of pipe) discharges. Over 1100 consents have been processed by Council under Chapter 33 provisions over the past ten years, ranging from discharges from individual sites, to discharges from large rural subdivisions. Key shortcomings with the Chapter include the challenge of managing non-point source discharges, the lack of provisions addressing tangata whenua interests in water management, the lack of policies addressing the effects of discharges on land (as opposed to effects on water quality), and the need to update the schedules relating to water body uses and values (Schedules 30A & B) and water classifications and standards (Schedules 36A & B). Water quality monitoring shows that contamination of waterways is related to intensive land use activities such as agriculture and horticulture, and to a lesser extent residential development. The close connection between land use activities and effects on fresh and coastal water quality requires stronger integration between regional and district provisions in the TRMP. Giving full effect to the NPS-FM and NZCPS will assist with achieving this as both these national directives require councils to manage activities and their effects in an integrated way. Overall, this objective is considered to be 'partially achieved'.	Partial achievement
Objective 33.1.2.2 *The management of land and water use in the Waimea Water Management Zones to maintain, and where it is degraded to improve, water quality to meet the management objectives specified in Schedule 30B.* Policy set 33.1.3.1 – 33.1.3.16	This objective and related policies have only relatively recently been made operative in the TRMP (2015). Additionally, the Waimea Community Dam, which is expected to improve water management on the Waimea Plains, is still under construction. The 'has not achieved' assessment is therefore largely reflective of the fact that there has been insufficient time to fully implement the relevant Chapter 33 provisions for Waimea. Nevertheless, there are shortcomings in the Chapter provisions that need to be addressed as part of the review. For instance, Schedules 31E 'Requirements for Irrigation and Nutrient Management Plans' and 31 F 'Nutrient Allowances' are incomplete and there is as yet no regulatory requirement for consent applicants to provide a nutrient management plan. This is despite an ongoing issue of spikes of nitrate levels in ground water on the Waimea Plains following rain. As above, the requirements of the NPS-FM need to be given full effect to.	Has not achieved

3.4.2 Accidental or Emergency Discharges

Table 15: Assessment of Efficiency and Effectiveness – Accidental or Emergency Discharges

Chapter 33 Objectives	Analysis	Rating of Achievement
Objective 33.2.3 *The avoidance, remediation or mitigation of the adverse effects resulting from emergency discharges or accidental spills.* Policies 33.2.3.1 & 33.2.3.2	The policies in this section are concerned with contingency planning for accidental or emergency discharges, particularly of hazardous substances. The requirement for contingency plans and environmental monitoring is a normal requirement of resource consents issued by the consents team. There are clear triggers for contingency plans in the matters relevant to the rules. For these reasons, the objective is considered to be 'on track to achieve'. Regulation of hazardous substances is now spread across a number of statutes, which means there are significant requirements on industries and users of hazardous substances. Consequently, the requirement for councils to control hazardous substances was removed from the RMA in 2017, to avoid duplication with similar regulation under the HSNO and HSW Acts. The hazardous substances provisions in the TRMP therefore need to be updated to ensure they focus on relevant environmental matters not covered by the other legislation. It is anticipated that the policies that remain will be more environmentally effects-based and focus less on the process and requirements for storage and use of hazardous substances. As a result, the hazardous substance policies in other chapters of the TRMP may be better integrated into the discharges chapter, including provisions relating to emergency discharges, accidental spills and contingency planning.	On track to achieve

3.4.3 Stormwater Discharges

Table 2: Assessment of Efficiency and Effectiveness – Stormwater Discharges

Chapter 33 Objectives	Analysis	Rating of Achievement
Objective 33.3.2 *Stormwater discharges that avoid, remedy or mitigate the actual and potential adverse effects of downstream stormwater inundation, erosion and water contamination.* Policy set 33.3.3.1 – 33.3.3.11	Responsibility for stormwater management in Tasman is spread between different departments of council. As well as the TRMP provisions, TDC has multiple stormwater plans and strategies, including the TDC Engineering Standards (2008 & 2013), the Stormwater Activity Management Plan 2018, the Nelson-Tasman Land Development Manual 2019 (which replaced the engineering standards), the Urban Stormwater Strategy 2019, and the Richmond Catchment Management Plan 2019. Stormwater management is therefore complex and many aspects of the council's operations can influence achievement of this objective. With respect to the TRMP, the Chapter 33 discharge provisions have been applied to a large number of consent applications in both urban and rural settings, from individual sites to large greenfield subdivisions. A range of measures have been applied to ensure stormwater is discharged in a way that avoids inundation and contamination, including low impact design options.	Partial achievement

Chapter 33 Objectives	Analysis	Rating of Achievement
	Additionally, ongoing work by Council to increase capacity of the stormwater network (such as the Queen Street upgrade in Richmond) has helped reduce the risk of stormwater inundation in localised areas. However, consent staff identified that the TRMP provisions place greater emphasis on the capacity of the urban stormwater network to accommodate additional stormwater as compared to consideration of the effects on water quality. Staff also noted that Council has very little control over what people put down their stormwater drains – either accidentally or intentionally. Cross-connection between stormwater and wastewater can also be an issue leading to microbial contamination in stormwater. To date, discharges from the urban stormwater network managed by TDC have largely been operating without a resource consent. This has meant that the significant volume of stormwater discharged from the network has not been assessed for compliance against the TRMP provisions, which is contrary to Policy 33.3.3.1. A comprehensive application has since been publicly notified and is currently awaiting a decision. Council's approach to stormwater management has evolved over the past 10 years and it is likely that many of these issues will be addressed as a result. Recent documents such as the Urban Stormwater Strategy 2019 and the Richmond Catchment Management Plan 2019 signal a move away from generic engineering solutions to a more holistic catchment management approach aimed at addressing issues related to stormwater networks and discharges in specific areas. The TRMP review will need to ensure the stormwater provisions reflect these changes. The stormwater provisions will also need to be reviewed to ensure they give effect to the water quality requirements for discharges under the NPS-FM. Overall, this objective is considered to be 'partially achieved'.	

3.4.4 On-site Disposal of Domestic Wastewater

Table 17: Assessment of Efficiency and Effectiveness – On-site Wastewater Disposal

Chapter 33 Objectives	Analysis	Rating of Achievement
Objective 33.4.2 *On-site disposal of domestic wastewater, which avoids, remedies or mitigates adverse effects on groundwater or surface water quality, habitats,*	As with stormwater, wastewater management is governed by a range of instruments, not just the TRMP. This includes the TDC Engineering Standards and latterly the Nelson-Tasman Land Development Manual, the Wastewater Bylaw 2015, and the Wastewater Activity Management Plan 2018. However, an important distinction is that the Chapter 33 objective and related policies are focused on discharges from on-site disposal systems, such as septic tanks, not on the use and performance of the public wastewater system managed by TDC. With this in mind, the wastewater provisions for Wastewater Management Areas (WwMAs) are considered to be effective.	Partial achievement

Chapter 33 Objectives	Analysis	Rating of Achievement
human health and amenity values. Policy set 33.4.3.1 – 33.4.3.6	Consent staff report that the WwMA provisions in the TRMP have worked well, in particular because the development is less dense and the sites rely on sources of water other than ground water (i.e. water tanks), which reduces the risks of drinking water becoming contaminated. In contrast, the Special Domestic Wastewater Discharge Areas (SDWDAs) have not been as successful. Consent staff have found that the more intensive residential development has increased the risk of wastewater discharges contaminating groundwater. In particular, the permitted activity rule that enables the discharge of domestic wastewater into land in a SDWDA is too lenient. Staff believe the rules need to tightened and the SDWDA boundaries reviewed to reduce the risk of contamination. In implementing the NPS-FM national objectives framework, the wastewater provisions will need to be reviewed to ensure they give effect to the water quality requirements for discharges. Overall, this objective is considered to be 'partially achieved'.	

3.4.5 Contaminated Site Management

Table 18: Assessment of Efficiency and Effectiveness – Contaminated Site Management

Chapter 33 Objectives	Analysis	Rating of Achievement
Objective 33.5.2 *To avoid, remedy or mitigate the adverse effects of contaminated sites on human health and the environment.* Policy set 33.5.3.1 – 33.5.3.4; 33.5.3.6; 33.5.3.7; 33.5.3.9	The 2011 NES for Managing and Assessing Contaminated Soils (NES-CS) has introduced a robust consenting system for identifying land that may be contaminated, and requiring consent for activities on that land that may impact on human health. TDC has received over 50 applications thus far for a range of activities undertaken on contaminated land under the NES-CS, which has enabled soil monitoring and site investigation to be undertaken to ensure the works carried out will protect human and environmental health. The Chapter provisions relating to contaminated sites could be strengthened by providing greater policy guidance to support implementation of the NES-CS regulations around human health. As well, the policies addressing environmental impacts could be more detailed and directive. Provisions for contaminated sites are spread out between Chapters 5, 16, 18 and 33 and this needs to be consolidated. Overall, this objective is considered to be 'on track to achieve'.	On track to achieve

Appendix 1: Iwi Management Plan Provisions Relating Contaminant Discharges

Examples of provisions from Te Tau Ihu Iwi Management Plans relevant to the matters addressed in Chapter 33 are shown below. These issues are summarised from the following plans:

1. Ngati Koata No Rangitoto Ki Te Tonga Trust Iwi Management Plan (2002)
2. Te Rūnanga O Ngāti Kuia, Pakohe Management Plan (2015)
3. Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan (2018)
4. Nga Taonga Tuku Iho Ki Whakatu Management Plan (2004) (lodged with Nelson City Council)
5. Te Ātiawa Ki Te Tau Ihu Iwi Environmental Management Plan (2014) (lodged with Nelson City Council)

For the full text please refer to the individual plans.

Key Issues Relating to Contaminant Discharges

- The principle of ki uta ki tai - the flow of water from the source to the sea, recognises the interconnected nature of rivers, lakes, wetlands, wai puna and the coastal environment. Upstream activities have the potential to degrade the mauri of estuarine and seaward areas. For example cumulative effects on coastal water from runoff and discharges into fresh water upstream;
- Activities, which reduce water quality, also reduce the mauri of the water body – the life force, which sustains indigenous life and many associated values. Key concerns include: a) point and non-point discharges to water; b) sedimentation of waterways; c) the removal of indigenous vegetation on riparian margins; d) activities which reduce water quantity to the extent that a water body is unable to flush out contaminants and e) a lack of information regarding the presence and health of indigenous species.
- Discharge of contaminants into water, including fertilisers, agrichemical and herbicide spray on stream margins, agricultural run-off, direct stock access to waterways, septic tank overflows and stormwater discharges into catchment drainage.
- Diminishing mauri (life force) of a water body and the loss of habitats supporting indigenous species.
- Loss of ability for tangata whenua to practise their customs and traditions associated with water, leading to a loss of matauranga (knowledge) associated with those species and habitats.
- Mixing waters from one catchment with another contaminates the wairua (spirit) and can reduce the mauri (life force) of the receiving water body, and may reduce water quality and introduce plant and animal pest species.
- Changes to the natural balance of fish habitat and breeding patterns due to increased nutrients, reduced organic matter, increased suspended sediments and changes to water flow.

Desired Outcomes

- Recognition of the role of tangata whenua as rangatira and kaitiaki of nga taonga tuku iho.
- Tangata whenua, as kaitiaki, will be effective in ensuring that the mauri or essential life principle of the natural world within the rohe is maintained and enhanced.

- Water is protected from being used as a medium for transporting and treating waste, and waste water is treated to the highest standard possible before being discharged to land.
- That the natural functioning and life supporting capacity of ecosystems is not disrupted by discharges into, the taking, use, damming and diversion of fresh surface water or groundwater.
- Maintenance and enhancement of freshwater aquatic ecosystems and the management of the effects of activities on water quality in wetlands, lakes, rivers, groundwater and receiving coastal waters that enables: a) contact water recreation; b) food gathering; c) cultural integrity; and d) biological / ecological life supporting capacity.
- Water bodies are healthy and maintained to a level sufficient to:
    - Preserve the mauri (life force) of the water body;
    - Provide for tangata whenua cultural and spiritual values, customs and traditions;
    - Provide sustenance for present and future generations; and
    - Increase opportunities for tangata whenua to practice customs and traditions associated with the uri (descendants) of Tangaroa.
- The relationship between land and water is recognised through integrated catchment planning.
- The health of wāhi tapu and wāhi taonga is paramount in relation to the use of hazardous substances or introduction of new organisms.

Appendix 2: Summary of TRMP Rules for Chapter 33 Matters

Table 19: Summary of TRMP Rules for Chapter 33

Chapter 36 Discharge Rules	Description
36.1 Discharges to Land	
36.1.2.1 – 36.1.2.11 Permitted Activities	• Discharge of Fruit Dump Water • Discharge of Fruit or Vegetable Processing Wastewater • Discharge of Bird or Animal Effluent • Discharge of Domestic Wastewater • Discharge of Domestic Wastewater (Special Areas) • Discharge of Greywater • Discharge of Human Effluent from a Long Drop Toilet • Discharge of Drilling Water • Discharge of Leachate from Compost • Discharge of Leachate from Offal Pits • Discharge of Mining Wash Water Provided the discharges comply with the specified rule conditions.
36.1.3.1 Controlled Activities	• The discharge of sodium fluoro-acetate (1080 poison) from air onto land for possum and other vertebrate control, Provided it complies with the specified rule conditions.[36]
36.1.3.2 Controlled Activities	• The discharge of domestic wastewater into or onto land in the Wastewater Management Area commencing after 3 December 2005, Provided it complies with the specified rule conditions.
36.1.4.1 Restricted Discretionary Activities	• The discharge of oil onto land as a dust suppressant, Provided it complies with the specified rule conditions.
36.1.4.2 Restricted Discretionary Activities	• Except as specified in rule 36.1.3.2, the discharge of domestic wastewater into or onto land in the Wastewater Management Area commencing after 3 December 2005, Provided it complies with the specified rule conditions.
36.1.5.1 Discretionary Activities	• The discharge of soil, vegetation, effluent, refuse, offal or debris into any open sinkhole.
36.1.5.2 Discretionary Activities	• Except as specified by rule 36.1.6.1, any discharge to land that does not comply with the conditions of rules 36.1.2.1 to 36.1.2.11 or rule 36.1.3.1.
36.1.6.1 Non-Complying Activities	• The discharge of domestic wastewater into or onto land in the Wastewater Management Area commencing after 3 December 2005 that does not meet the conditions of rule 36.1.3.2 or rule 36.1.4.2.
36.2 Discharges to Fresh Water or Coastal Water	
36.2.2.1 – 36.2.2.8 Permitted Activities	• Discharge of Fruit Dump Water • Discharge of Mining Wash Water • Discharge of Sediment or Debris from Land Disturbance Activities • Discharges Arising from Activities in the Beds of Rivers and Lakes

[36] The provisions relating to the discharge of pesticides have been evaluated in the s35 report for Chapter 34 'Air Discharges'. Please refer to that report for analysis of the rule relating to 1080.

	• Discharges arising from Entering or Passing over Beds – Stock • Discharge of Vegetation from Land Disturbance Activities • Discharge of Dye • Discharge of Water Provided the discharges comply with the specified rule conditions.
36.2.3.1 Discretionary Activities	• The discharge of any contaminant or water into water that does not comply with the conditions of rules 36.2.2.1 to 36.2.2.8.
36.2.4.1 Prohibited Activities	• The discharge into water of untreated dairy shed effluent, piggery effluent from buildings housing pigs, or untreated human sewage other than from vessels.
36.4 Discharges or Diversions to Land or Water	
36.4.2.1 Permitted Activities	• Except in the Richmond Intensive Development Area, the discharge or diversion of stormwater or drainage water into water, or onto or into land, where the stormwater or drainage water may enter water, Provided it complies with the specified rule conditions.
36.4.2.1A Permitted Activities	• In the Richmond Intensive Development Area, the discharge or diversion of stormwater or drainage water from a site into water, or onto or into land, where the stormwater or drainage water may enter water, Provided it complies with the specified rule conditions.
36.4.2.2 Controlled Activities	• The discharge or diversion of stormwater or drainage water that does not comply with the conditions of rule 36.4.2.1. Provided it complies with the specified rule conditions.
36.4.2.3 Restricted Discretionary Activities	• The discharge or diversion of stormwater or drainage water into water or onto or into land that does not comply with the conditions of rule 36.4.2.1, 36.4.2.1A or 36.4.2.2.
36.5 Discharges to Land or Air	
36.5.2.1 Permitted Activities	• The discharge of fertiliser into the air or onto land, Provided the discharge is undertaken in such a way that fertiliser drift does not move over an adjoining property.
36.5.2.2 Controlled Activities	• The discharge of fertiliser to land or into the air that does not comply with the conditions of rule 36.5.2.1.
36.7 Discharges to Water in Water Management Areas or Coastal Waters	
36.7 Terms of any Contaminant Discharge into Water	Sets out the terms that apply to the discharge of any contaminant into water within any water management area that requires a resource consent.
Schedules	
Schedule 36A	Water Classification for the Motueka/Riwaka Plains Water Management Area
Schedule 36B	Water Classification for the Waimea Water Management Area
Schedule 36D	Assessment Criteria for Discharges
NES for Assessing and Managing Contaminants in Soils to Protect Human Health	
Regulation 8 Permitted Activities	• Removing or replacing underground fuel storage systems and affected soil (provided certain requirements are met). • Sampling soil and for small- scale soil disturbances, including subsurface investigations (provided certain requirements are met). • For subdividing land or for land-use changes where it is highly unlikely there is a risk to human health from soil contaminants for the intended land use (provided certain requirements are met).

Regulation 9 Controlled Activities	• Activities that are unable to meet the permitted activity requirements, and where soil contamination does not exceed the applicable numerical standard for the land use or intended land use.
Regulation 10 Restricted Discretionary Activities	• Activities that are unable to meet the permitted or controlled activity requirements, and where soil contamination exceeds the applicable numerical standard for the land use or intended land use.
Regulation 11 Discretionary Activities	• Any activities that do not meet the requirements for a permitted, controlled or restricted discretionary activity.

Appendix 3: Summary of Freshwater Data and Implications[37]

Table 20: Summary of freshwater monitoring data and implications

Issue	Cause	Implications
Climate Change[38] • Changes to our climate are already being observed. Climate change is expected to affect when, where, and how much rainfall, snowfall, and drought occur. This may change the amount of water in our soil and in glaciers, lakes, rivers, and groundwater. • The frequency of extreme weather events is expected to increase. The flows, mixing, and temperature of water in lakes, rivers, and groundwater is also projected to change. • The effects of climate change will intensify with time. Many effects are irreversible on a human timescale. Some, like species extinction are permanent. • Many aspects of ecosystem functioning are expected to change with the progress of climate change.	• Increasing concentrations of greenhouse gases in the atmosphere from activities such as industry, agriculture and transportation. • New Zealand's emissions are dominated by animal agriculture, followed by transport, manufacturing and industrial activities.	• Climate change will exacerbate other pressures on waterways, e.g. increased frequency and severity of storm events will lead to increased runoff and bank erosion resulting in higher sediment and nutrient input from land. • Flows, mixing, and temperature of water in lakes, rivers, and groundwater is projected to change, which will impact on aquatic habitats and native species. • More frequent and intense droughts are likely to increase the demand for water to irrigate land and increase competition for this resource. • Increased heavy rainfall will put pressure on Council and landowners for additional flood protection measures. • Controls on a range of land use activities need to be maintained, strengthened or introduced to avoid, remedy or mitigate the worst effects of climate change on the health of rivers and lakes.
Primary Productivity	• Excessive nutrient run-off (especially nitrogen) from land via sewage, stock	• Maintain and where necessary increase controls on nutrient

[37] Information in the table comes from the following sources: **1.** James, T and McCallum, J 2015. *State of the Environment Report: River Water Quality in Tasman District 2015*. Prepared for Tasman District Council https://www.tasman.govt.nz/my-region/environment/environmental-management/water/river-water-quality/water-quality/; **2.** Newcombe E, Clark D, Gillespie P, Morrisey D, MacKenzie L 2015. *Assessing the State of the Marine Environment in Tasman Bay and Golden Bay*. Prepared for Nelson City Council and Tasman District Council. Cawthron Report No. 2716; **3.** McCallum, J. & James, T. 2018. *The Health of Freshwater Fish Communities in Tasman District 2018*. Tasman District Council, Richmond, New Zealand; and **4.** Gibbs, M. & Woodward, B. 2018. *Waimea and Moutere Sediment Sources by Land Use*. Prepared for Tasman District Council.

[38] See Ministry for the Environment & Stats NZ (2020). *New Zealand's Environmental Reporting Series: Our freshwater 2020*. Available from www.mfe.govt.nz and www.stats.govt.nz.

Issue	Cause	Implications
• -Increased nitrate concentrations. • Problem growths of microalgae; some microalgae produce toxins that can be harmful to aquatic organisms or humans.	effluent, industrial waste, fertilisers, and land disturbance. • Plantation forestry harvesting large catchments within a short duration. • Lack of riparian planting leading to increased water temperatures (and light) and growth in algal blooms.	inputs to ensure problems do not occur.
Sedimentation Fine sediment discharged to waterways and the coast.	• Harvesting of plantation forestry, with Separation Point granite areas being particularly susceptible. • Earthworks associated with land use change, e.g. from forestry to pasture or forestry to residential. • Earthworks for road / farm track construction. • Stock access to waterways and stream banks. • Farming practices such as break feeding on winter crops or cultivation close to waterways. • Heavy rainfall events causing large sediment discharges to streams and bank erosion.	• Maintain and where necessary strengthen controls to limit sediment input from land and reduce disturbance of river / stream banks and beds.
Habitat Integrity Changes to the features of a habitat, such as the amount or type of sediment, water flow (yield), disturbance of river banks and beds, the presence of barriers in waterways, the extent of riparian planting, or the loss of key plants or animals that create structure, will affect biodiversity and habitat-integrity.	• Reduced water flow in streams due to the high rate of evaporation and transpiration from pine trees. • Stormwater runoff from impervious surfaces in urban catchments causing higher peak stream flows and lower base flows, leading to increased bed and bank disturbance. • Modification of urban streams, e.g. straightening and widening for flood protection, removal of vegetation.	• Protection of habitat integrity by limiting disturbance. • Increasing the amount of bank-side vegetation along rivers and streams to provide shading and to keep water temperatures below the critical levels required for protecting ecosystem health. • Restore wetlands in the District and create especially where runoff enters streams.
Contamination • Bacterial: can cause problems for human health through contact with the water. • Chemical: Toxic chemicals can kill aquatic species, or reduce their ability to grow and reproduce. Human	• Sources of microbial contamination: • Dairy and intensive farming, including through direct stock access to waterways, effluent discharges from dairy sheds, stand-off pads, raceways or laneways, pasture runoff, and break feeding on winter crops close to waterways.	• Reducing faecal bacteria inputs to small streams (stock access and riparian buffers for earthworks and land cultivation). • Restoring or creating wetlands in key locations where runoff enters streams. • Undertaking catchment management planning.

Issue	Cause	Implications
health can be affected if contaminants accumulate in the bodies of species that we consume. • Sites with pastoral and urban land cover have higher concentrations of disease-causing organisms.	• Discharges from town sewage treatment plants and household septic tanks, particularly Dec-Feb when many holiday-makers are present. • Sources of chemical contamination: • Horticultural discharges of pesticides and other chemicals (e.g. anti-budding). • Discharges down drains on residential and commercial properties in urban areas, including the washings of cement, vehicles, paint, petroleum products, roof cleaning products and pesticides. • Industrial discharges to waterways, including accidental discharges. • Stormwater runoff from roads, particularly in Richmond, containing heavy metals and hydrocarbons. • Contamination from past mining activities in localised areas, e.g. the Lake Otuhie and Maruia River catchments,	• Using effective low impact urban design methods to manage peak flow and water quality. • Treating stormwater before it is discharged to waterways.
Fisheries • Declining native fish populations due to habitat disturbance. • Sedimentation in waterways which limit the ability of freshwater fish to see food to catch and therefore can restrict feeding. • Increases in water temperature beyond fish tolerance • The presence of fish passage barriers which block access to large areas of catchment for several fish species.	• Land use change which has led to the degradation of fish habitat in waterways. • Land disturbance and run-off, particularly through plantation forestry operations, roading and residential development. • Installation of structures in waterways without provision of fish passage, such as farm track / road crossings and water supply intakes. • A lack of riparian vegetation to shade waterways and provide habitat for fish. • Modification of rivers and streams, e.g. straightening and widening for flood protection.	• Reduce faecal bacteria and fine sediment inputs to small streams, e.g. by avoiding stock access and providing riparian buffers for earthworks and land cultivation. • Increase the amount of bank-side vegetation along these streams to provide shading and to keep water temperatures below the critical levels required for protecting ecosystem health. • Restore or create wetlands in key locations where runoff enters streams. • Ensure structures in streams and rivers maintain river natural morphology and ecosystem health, and allow for passage of fish.

Issue	Cause	Implications
Biosecurity • Invasive species compete with native species leading to negative ecological, recreational, commercial, and cultural effects.	• Pest plants in riparian margins compete with and degrade indigenous flora and habitats for nesting birds. A lack of active pest control in some river catchments enables pest plants to spread and infest other areas. • Pest fish, such as koi carp, perch, rudd and tench, have been found in ponds on private land and control operations appear to have achieved eradication. • Gambusia (mosquitofish) are spreading across coastal streams in the Waimea and Moutere Inlets and proving difficult to control.	• Ensure full implementation of the Nelson Tasman Pest Management Plan 2019-2029. • Ensure landowners have information about invasive species and the means for controlling them.