

Item 1



Outlook

Wastewater standards - DOC RE: DOC wastewater treatment examples

From Evie Wallace <ewallace@doc.govt.nz>**Date** Thu 3/6/2025 2:28 PM**To** Simone.Blackburn@taumataarowai.govt.nz <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>**Cc** James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <gasmith@doc.govt.nz>

Kia ora Janelle, Simone and Michael,

Thank you again for the time mid January with James and I to discuss the DOC wastewater treatment examples and the wastewater standards.

You gave a verbal indication during our meeting that all of the wastewater system examples we provided (which were all some form of onsite system with discharge to land) were intended to be excluded from the standards. We also talked about the need for the definition of onsite systems to be clear in the standards. For clarity, are you still able to formally respond and confirm the outcome of those previous discussions please.

We provided some short initial feedback to DIA during the agency consultation period on the standards, and it looks like some of our feedback was incorporated into the discussion document (Section 3 Page 8, expansion of the definition of on-site systems) which is great to see thank you. However we think further clarification of this definition is still required.

Now that we have seen the proposed standards, there are a number of other types of treatment and discharge arrangements that DOC has that will require clarification of where these should sit relative to the standards, e.g. small oxidation ponds that discharge to land. We would like the opportunity to please continue our discussions and feedback directly within the next 2 months. Would it be possible to schedule another meeting with you in March/April to discuss?

Ngā mihi,
Evie

Evie Wallace

Water Engineer (CPEng)

Christchurch | Ōtautahi

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From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>**Sent:** Wednesday, 8 January 2025 12:09 pm**To:** James Brooks <jbrooks@doc.govt.nz>; Evie Wallace <ewallace@doc.govt.nz>**Cc:** Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick

<michael.petherick@taumataarowai.govt.nz>

Subject: FW: DOC wastewater treatment examples

Hi James

Happy new year – hope you had a restful break.

Thank you so much for sending the below, that is all really useful.

I'll send through an invite for a quick catch up early next week to discuss those examples.

Thank you

Janelle

From: James Brooks <jbrooks@doc.govt.nz>

Sent: Friday, 20 December 2024 8:24 am

To: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Isobel Oldfield

<Isobel.Oldfield@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>

Subject: DOC wastewater treatment examples

Hi Janelle, Isobel and Simone,

Just following up from our earlier chat about upcoming wastewater standards and implications for DOC. As we discussed, I've compiled some examples of DOC wastewater treatment facilities which should help in our further conversations if you would like to meet up again in the new year. I've also attached the wastewater discharge consents for Whakapapa and Aoraki Mt Cook systems as you requested.

Regards and Merry Christmas
Jim

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Department of Conservation Wastewater treatment and disposal Examples of campgrounds and amenity area facilities.

Rainbow Falls car park – public toilet

Description

Serviced facilities – Car park single building 3 pan toilet unit with urinal and sinks

Wastewater treatment system - Eloy Oxyfix C90 SAFF unit includes primary tank, bio reactor, clarifier and final effluent screen

Effluent disposal - PCDI distribution pipelines to land disposal area 1000 m²

RC consented flow 3m³/d



Whites Bay campground

Description

Serviced facilities – campground toilet units x 3, Surf club building

Wastewater treatment – primary settlement tanks and wisconsin mound filter bed

Effluent disposal – Wisconsin mound disposal field 500m²

RC consented flow 8m³/d



Cape Reinga Visitor car park toilets

Description

Serviced facilities – Car park single building 13 pan toilet block with urinals and sinks

Wastewater treatment – Innoflow AdvanTex textile packed bed reactor

Effluent disposal - PCDI distribution pipelines to land disposal area 4500 m²

RC consented flow 16m³/d



Momorangi Bay Campground

Description

Serviced facilities – campground ablutions (2 units), car park amenity area public toilets, camp warden house and office.

Wastewater treatment - Innoflow AdvanTex textile packed bed reactor

Effluent disposal - PCDI distribution pipelines to land disposal area 38500 m²

RC consented flow 77m³/d



Totaranui Campground

Description

Serviced facilities – Campground ablutions (6 units including site office), 4 no staff houses

Wastewater treatment - Innoflow AdvanTex textile packed bed reactor

Effluent disposal – PCDI distribution pipelines to land disposal 9300m² and LPED 4000m²

RC consented flow 100m³/d



**DECISION ON AN APPLICATION FOR A NON-NOTIFIED
DISCHARGE PERMIT (TO LAND)
UNDER THE RESOURCE MANAGEMENT ACT 1991**

CONSENT HOLDER

Department of Conservation
Whakapapa Village
P O Box 71029
MOUNT RUAPEHU 3951

| | |
|---|--|
| DECISION DATE 11 January 2012 | FILE REFERENCE 7/5/DOC |
| CONSENT NUMBER 105684 | CONSENT TYPE Discharge Permit (discharge to land) |
| ADDRESS FOR ACTIVITY Whakapapa Village, State Highway 48, Mount Ruapehu | MAP REFERENCE NZMS260 S19:296-201 NZTopo50 BH34:196-585 |
| LEGAL DESCRIPTION Tongariro National Park | VALUATION NUMBER 06090/176/01 |
| CONSENT PLANNER Leana Shirley | |

1. BACKGROUND

Department of Conservation (DOC) were issued a consent in October 2002 to discharge tertiary treated wastewater to land (consent number 101961). The Whakapapa Wastewater Treatment Plant upgrade had not been completed at the time of granting the consent and so the applicant was also issued resource consent to discharge wastewater to water for a period of 3 years (consent number 101960). The wastewater treatment plant upgrade was carried out and completed in 2004.

On 10 September 2003, DOC applied for a variation to change consent conditions 6 and 7 of consent 101961 to account for changes to the system design (use of the oxidation pond for overflows), the additional volume of wastewater needing to be applied to land and the increased rate of discharge to land. Throughout the process, the applicant advised of other operation issues they had experienced and needed to address through the variation application. This application was never resolved as it was determined in 2010 that the application was outside the scope of original consented activity and therefore it was not appropriate to consider the application under section 127 of the Resource Management Act.

On 18 February 2011, DOC applied for a new consent to discharge treated wastewater to land. This application was amended via letter on 29 July 2011.

2. APPLICATION

On 18 February 2011, an application was received from, Department of Conservation; to discharge UV treated wastewater to land. The application details were as follows:

- Discharge up to 12,000 cubic metres per year of wastewater and stormwater from the emergency overflow pond (old oxidation pond) into land via a series of ground soakage trenches;
- Discharge contaminants into land through the base and sides of the unlined emergency overflow pond; and
- Discharge up to 700 cubic metres per day (700 m³/day) of UV treated wastewater to land via drip irrigation at a rate of 3.5 litres per hour (3.5 L/hr) over a total land disposal area of 2.96 hectares.

On 29 July 2011, a letter amending the application was received requesting the applicant be issued a short term consent for three years to continue to discharge wastewater to land as follows:

- Discharge up to 700 cubic metres per day of treated wastewater to land during storm events and peak flow (winter);
- Discharge an annual average of 170 cubic metres per day of treated wastewater to land;
- Discharge to land via drip-line irrigation at a rate of 3.5 L/hr to a 2.96 hectare disposal field; and
- Discharge tertiary treated wastewater to the unlined emergency overflow pond and then to ground soakage via three existing ground soakage trenches.

The applicant amended the application after a meeting with Manawatu-Wanganui Regional Council staff highlighted potential issues relating to nutrient loading and the long term sustainability of the discharge activity. The applicant has proposed to undertake investigations into stormwater removal, nutrient loading, land disposal, plant performance and undertake intensive monitoring over the next 12 months. DOC then intends to use the information gathered to determine what level of treatment / additional infrastructure is required to ensure the effects of the discharge are minor.

The applicant has sought a term of 3 years for this resource consent.

This application was lodged to replace resource consent 101961 which expires on 18 September 2022.

3. THE SITE

The discharge occurs within Tongariro National Park which is administered by Department of Conservation. The Whakapapa Wastewater Treatment Plant site comprises of a total of 5.2 hectares. The discharge to land occurs through buried dripper lines situated on the old airstrip and tundra sites east of the Chateau golf course.

The site falls within the Cherry Grove (Whai_2) Water Management Zone and the Upper Whakapapa (Whai_2b) Water Management Sub-Zone.

4. PLANNING ASSESSMENT

The application has been assessed against the following statutory documents.

4.1 Land and Water Regional Plan (2003)

The discharge of treated wastewater to land from a wastewater treatment plant falls for consideration as a Discretionary Activity under DL Rule 13 of the Land and Water Regional Plan (2003).

4.2 Proposed One Plan (2010)

The discharge of treated wastewater into and on land is considered to be a Discretionary Activity under POP Rule 13-27 of the Proposed One Plan (2011) as it is unable to comply with the performance criteria of POP Rule 13-25. Specifically the discharge contains sewage and exceeds 50 cubic metres per day (50 m³/day).

4.3 Overall Assessment Based on Regional Plans

The proposal has been assessed as a Discretionary Activity under the Land and Water Regional Plan and the Proposed One Plan (2010).

5. EVALUATION

5.1 Section 104

Section 104(1) of the Resource Management Act 1991 outlines the matters that the consent authority is to have regard to when considering applications for resource consent, subject to Part II of the Resource Management Act. I have assessed the application under these matters. Note that only the relevant sections, or parts of sections of statutory documents as applicable to this resource consent have been assessed in this report.

5.1.2 Environmental Effects

This application and subsequent amendments have been assessed with regard to the actual and potential adverse environmental effects by Harold Barnett, Manawatu-Wanganui Regional Council's Environmental Scientist.

Discussion

This proposal has the potential to result in adverse environmental effects on soil, groundwater and surface water quality. Below is an assessment of effects on these aspects.

Given the volume of wastewater initially proposed to be discharged and the land application area available, it was determined that the nutrient loading and hydraulic loading would potentially have more than minor effects. High hydraulic loadings are suspected to come from large stormwater inflows entering the wastewater reticulation following large storm events coinciding with the peak 'holiday' ski season. Nutrient loading, calculated from information provided in the initial application (dated February 2011) showed the loading on the land application area to be up to 667 kg N/ha/yr during peak flow. This loading rate is much higher than the limits specified in the Land and Water Regional Plan and Proposed One Plan and the effects of discharging at the above loading would potentially have more than minor effects on the soil quality, groundwater resource and adjoining surface water resource.

Given the sensitive nature of the receiving environment, a meeting was held between Horizons staff and the applicant to discuss Horizons' concerns regarding the application. Discussions at the meeting highlighted that there is limited information available on the treatment plant's performance and quality of wastewater being discharged. Following this meeting, the applicant

formally amended the application to request a short term to allow for the necessary monitoring and investigations to be carried out and decisions to be made on appropriate upgrades and treatment measures to ensure the effects of the discharge in the long term are no more than minor.

The applicant has indicated that the focus of the investigation and remedial actions over the next 3 years will be to address hydraulic loads and concentration of nitrogen. This will involve improving plant performance (reduction in nitrogen, suspended solids and BoD₅) and also reducing the hydraulic loading through addressing key elements such as stormwater infiltration. Addressing these aspects will be critical elements behind ensuring the actual and potential effects of the discharge activity are no more than minor. The applicant provided a suite of suggested conditions as mitigation in combination with standard discharge conditions for the on going discharge to land under the current regime for three years.

Mitigation / conditions

In addition to the conditions proposed by the applicant, conditions addressing the following matters have been imposed to mitigate effects over the duration of this consent:

- Development and implementation of an Operation and Management Plan for the treatment plant and land application activities;
- Provision of an Annual Monitoring Report which covers all monitoring and an assessment of the results against consent conditions to be submitted by 1 March each year of the consent;
- Monitoring conditions, to monitor surface water quality to determine / provide more certainty on the level of effect the discharge is having on the nearby streams; and
- Soil monitoring conditions to determine / provide more certainty on the level of effect the discharge is having on soil quality.

Conclusion

The proposal put forward in the initial application was discovered to have adverse effects that may be more than minor due to plant performance, hydraulic loading and nutrient (nitrogen) loading. The applicant has proposed to operate as they currently do for a maximum of three years, while undertaking the necessary investigations and monitoring to determine how the plant should be operated and whether any upgrades or additional treatment are required. While the current discharge may have potential adverse effects over the duration of this consent, I am satisfied that the mitigation proposed by the applicant combined with the conditions imposed and the short term will mean that the overall adverse effects are sufficiently mitigated.

5.2 Objectives and Policies

The following identifies the relevant objectives and policies of both operative and proposed Regional Policy Statements and Regional Plans

5.2.1. Regional Policy Statement

Operative Regional Policy Statement

Objective 12 seeks to maintain the life supporting capacity of the streams and rivers.

Objective 13 seeks to maintain and improve the groundwater quality.

Policies 13.1 and 13.2 seek to prevent discharges to land where there will be a significant adverse effect on the quality of the groundwater and the potential users of the groundwater for domestic water supplies.

It is considered that the land discharge can be sufficiently managed to ensure the discharge of effluent to land will mitigate the potential effects on the surface and ground water. In addition, this application is for a short term consent (3 years) while monitoring and investigations into the operation of the plant and potential upgrades are undertaken. Therefore it is considered that this application is consistent with the objectives and policies of the Regional Policy Statement.

Proposed Regional Policy Statement (2010 version)

Objective 6-2 relates to water quality and seeks to maintain the existing groundwater quality or improve it where degraded.

Policy 6–2 relates to the maintenance of groundwater quality and requires management of land use activities to maintain the quality with the exception being when discharge to land being a better option, achieves the purpose of the RMA than discharge to water.

In this case, it is considered the application of wastewater can be managed to mitigate the potential effects on water quality. Given the sensitive receiving environment of the location of this activity, discharge to land is considered to be a better option than discharging to water in achieving the purpose of the RMA. As such it is considered that the application to discharge treated wastewater to land is consistent with the objectives and policies of the proposed Regional Policy Statement.

5.2.2 Land and Water Regional Plan (2003)

DL Objective 1 and 2 seeks to improve the groundwater quality and reduce nutrient leachate.

DL Policy 2 identified matters that need to be considered for resource consent applications.

DL Policy relates to restrictions around nitrogen loadings from wastewater discharges. The proposed discharge is for a short term (3 years) and a condition of consent will require the applicant to manage the discharge to mitigate the effects of nitrogen loading over the term of the consent.

The proposed discharge via dripper tubes consists of tertiary treated wastewater and the discharge from the old oxidation pond is secondary treated. The wastewater will be managed to ensure the discharge is evenly spread over the land to minimise any effect.

The application is therefore considered that the proposal is not contrary to the objectives and policies of the Land and Water Regional Plan.

5.2.3 Proposed One Plan as Amended by Decisions (2010)

Objective 13–1 relates to the discharges to land and water and requires any discharges that may enter water to have regard to the values associated with the water body and to avoid any adverse effects on that water body.

Policies 13-2 and 13-2B note the matters the Regional Council must have regard to when considering an application to discharge to land. The Regional Council must also consider alternative discharge options and the best practicable option available.

In this case, the discharge will need to be managed to ensure there is no surface runoff into both the Wairere Stream and its unnamed tributary. The consent is for a short term while the applicant monitors and investigates suitable treatment and plant management options. Therefore it is considered that the proposal is not inconsistent with the objectives and policies of the Proposed One Plan.

Overall Conclusion

After considering all of the relevant objectives and policies of both the operative and proposed Regional Plans, I consider that the proposed activity is consistent with the relevant Objectives and Policies.

5.3 Section 105

This consent is considered to be for a short term, while monitoring and investigations into proposed upgrades occur. However while the discharge is monitored and treatment is investigated, the current discharge will need to continue and as such it is considered that the discharge to land is the most practicable option while developing a longer term solution.

Having considered alternatives to this discharge and in particular alternative receiving environments, I was satisfied that the proposed discharge method was the most appropriate method of wastewater disposal for this site.

5.4 Section 107

Section 107 of the Resource Management Act specifies that a consent authority shall not grant a discharge permit to do something that would otherwise contravene section 15 if, after reasonable mixing the contaminant or water discharged, is likely to give rise to all or any of the following effects in the receiving waters:

- (a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- (b) Any conspicuous change in the colour or visual clarity;
- (c) Any emission of objectionable odour;
- (d) The rendering of fresh water unsuitable for consumption by farm animals; and
- (e) Any significant adverse effects on aquatic life.

This application is for a discharge of treated wastewater to land. There is potential for the discharge to reach water either via ground soakage or run-off. However, based on the level of treatment, the nature of the discharge (i.e. to land) and the management of the activity, I am comfortable that the discharge will not give rise to any of the above effects.

Having considered section 107, I am satisfied that the proposed discharge in its current form is consistent with the provisions of this section.

5.5 Part 2 of the Resource Management Act 1991

Part 2 of the Resource Management Act 1991 RMA includes the purpose and principles of the RMA, matters of national importance and other matters.

The proposal is considered to be consistent with the purpose and principles of the RMA as the wastewater treatment facility will provide for the development of community infrastructure to provide social, economic and cultural wellbeing whilst ensuring there adverse effects on the life supporting capacity of air, water, soil and ecosystems are sufficiently mitigated. The actual and potential effects are considered to be remedied by the short duration of consent, management of the facility and mitigated by appropriate conditions.

6. CONSENT DURATION

The Regional Policy Statement Objective 34 and Policy 34.2 allows for the duration of the consent to be considered on the merits of the application and has a number of factors that can be considered when determining the duration of a consent.

Policy 11A-5 of the POP (2010) states that consent expiry dates shall be set to the date sought by the applicant unless there are reasons that make this inappropriate. This policy also notes that consents shall be set to a common catchment expiry date identified within the POP.

The applicant has sought a term of 3 years for this consent. This term is considered appropriate and will therefore be included in the decision.

7. RECOMMENDATION

I recommend that the resource consent application by Department of Conservation for a Discretionary Activity to discharge treated wastewater into and onto land at Whakapapa Village, State Highway 48, Mount Ruapehu be granted for a term of 3 years expiring on 1 December 2014 pursuant to sections 104, 104B, 105, 107 and 108 of the Resource Management Act 1991 for the following reasons:

- the activity has been assessed by Manawatu-Wanganui Regional Council's Environmental Scientist. Based on this assessment I am satisfied the actual and potential effects of the proposal are sufficiently mitigated;
- the activity is not contrary to any relevant Objectives or Policies; and
- the activity is consistent with the purpose and principles of the Resource Management Act 1991.

And subject to the following conditions:

General

1. The consent holder shall undertake the activity in general accordance with the consent application and its associated plans and documents first lodged with Manawatu-Wanganui Regional Council on 18 February 2011, and further information received on:
 - a. 29 July 2011 via letter, being an amendment to the requested consent term and proposed activity.

Where there may be contradiction or inconsistencies between the application and further information provided by the applicant, the most recent information applies. In addition, where there may be inconsistencies between information provided by the applicant and conditions of the resource consent, the conditions of the resource consent apply.

Advice Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.

2. The activities authorised by this discharge permit shall be restricted to:
 - a. discharge of treated wastewater via subsurface dripper tubes to an area of land no less than 2.96 hectares; and

- b. the discharge of treated wastewater into land via a series of three infiltration trenches; and
- c. the discharge of treated wastewater to land through the base and sides of the unlined emergency overflow pond

on land being legally described as Tongariro National Park at approximate map reference NZMS260 S19:296-201 / NZTopo50 BH34:196-585 as shown on the attached plan (Plan C105684A) attached to and forming part of this consent.

Land discharge restrictions

3. The maximum volume of treated wastewater (hereafter referred to as wastewater) authorised to be discharged into and onto land via subsurface dripper tubes and ground soakage (trenches) shall not exceed 700 cubic metres per day (700 m³/day).
4. Subject to Condition 3, the average annual discharge of wastewater into and onto land shall not exceed 170 cubic metres per day (170 m³/day).
5. The discharge of treated wastewater to land via subsurface irrigation shall not exceed a hydraulic loading rate of 1litre per hour per square metre of land (1 L/hr/m²).
6. The consent holder shall ensure that only secondary or tertiary treated wastewater is discharged into the emergency overflow pond (old oxidation pond) when required during high flow (storm) events.
7. By **30 June 2014** the consent holder shall cease discharging treated wastewater from the emergency overflow pond (old oxidation pond) and all wastewater shall be discharged via the subsurface land application system.
8. The discharges into and onto land authorised by this consent shall comply with the following separation distances:
 - a. 20 metres from bores, surface waterbodies and/or artificial watercourses; and
 - b. 20 metres from any residential buildings, public places and amenity areas where people congregate, education facilities and public roads.

Advice note: Condition 8 applies to both the discharges to land via subsurface irrigation and the discharge via infiltration trenches.

Odour

9. The activities authorised by this consent shall not cause any objectionable odour to the extent where it causes an adverse effect beyond the bounds of the wastewater treatment plant and land disposal area site.

Advice note: Odour will only be considered objectionable, after a Manawatu-Wanganui Regional Council officer has considered the Frequency, Intensity, Duration, Offensiveness and Location of the odour (FIDOL factors).

Operation and Maintenance Plan

10. By **30 April 2012**, the consent holder shall update the existing Operation and Maintenance Plan (titled *Whakapapa Wastewater Treatment Plant Operations Manual*,

June 2006) and submit the updated Plan to Manawatu-Wanganui Regional Council's Environmental Protection Manager. The plan shall include but not be limited to:

- a. A description of the entire treatment and disposal facilities including plans showing the buildings, treatment facilities, distribution lines for land disposal and infiltration trenches;
 - b. A description of the routine inspection and maintenance procedures to be undertaken at the treatment plant (i.e. the buffer pond, sedimentation basins, oxidation pond, filtration unit and UV sterilisation) and wastewater disposal area and procedures for the recording of all maintenance and repairs undertaken;
 - c. Procedure(s) for the managing, recording and reporting of daily wastewater applications (rates and volumes) to the disposal area;
 - d. An outline of the procedure for monitoring volumes and quality of wastewater inflow into the treatment plant and outflow to land disposal
 - e. A description of how the irrigation (sub-surface dripper tube and infiltration trench) systems will be operated and managed;
 - f. A description of the procedure(s) for the management of activated sludge and biosolids generated at the wastewater treatment plant including the dewatering and offsite disposal measures;
 - g. Details on the frequency that the irrigation lines are flushed to prevent/minimise blockages and ensure wastewater is irrigated evenly;
 - h. The management of odour from activities at the treatment plant;
 - i. A description of procedures for the management of unforeseen emergency situations such as failures of pumps and mechanical parts at the plant, blockages in the reticulation system, pipeline ruptures and power outages;
 - j. The maintenance of a daily weather register to record daily rainfall and wind direction;
 - k. a list of names of appropriate contact people in the event of system malfunction, including contact telephone numbers; and
 - l. the keeping of a complaints register to record any complaints received with regard to wastewater collection, reticulation, treatment and disposal (i.e. date, time, complainant, nature of complaint, what was done about it or what went wrong, who repaired it and how.
11. Should alterations to the Maintenance and Operations Plan be made as a result of changes to the treatment plant, land application area and/or wastewater scheme, the consent holder shall submit a revised copy of the Plan to Manawatu-Wanganui Regional Council's Environmental Protection Manager by **1 June** of each year.
12. The consent holder shall ensure that the wastewater treatment plant is operated in accordance with the Operation and Maintenance Plan at all times.

Recording

13. **By 1 March 2012**, the consent holder shall install and maintain, in a fully operational condition, flow meter(s) at the Wastewater Treatment Plant to accurately measure the volume of wastewater entering the plant and exiting the plant. The flow meters shall have a pulse counter output traceably calibrated to +/- 5 % or better.
14. The consent holder shall monitor the flow meters to keep an accurate record of the daily volumes entering the wastewater treatment plant and the volumes discharged to land via subsurface irrigation under this consent.

15. The consent holder shall keep an accurate daily record of the volume and treatment level of wastewater entering the emergency overflow pond and infiltration trenches. If no wastewater is discharged to the pond or trenches on any day, a 'nil' measurement shall be recorded.

Advice note: To achieve compliance with conditions 14 and 15 the consent may need to install an additional flow meter at the outlet of the irrigation field pressure pump.

16. A copy of the records required by Conditions 14 and 15 shall be forwarded to Manawatu-Wanganui Regional Councils Environmental Protection Manager by **31 May** each year in the Annual monitoring report required by Condition 30 or upon request.

Monitoring Programme

Wastewater and water quality sampling

17. Commencing **1 January 2012**, the consent holder shall collect a monthly sample of the tertiary treated wastewater in the 'wet well' (after wastewater has been through UV treatment) prior to the wastewater being discharged to land. Monthly wastewater sampling shall continue until **1 January 2014**.
18. Commencing **1 January 2012**, the consent holder shall collect a monthly instream sample both upstream and downstream of the wastewater treatment plant in the unnamed tributary of the Wairere Stream and in the Wairere Stream at the sites below as shown on Plan C105684B attached to and forming part of this consent. Monthly stream sampling shall continue until **1 January 2014**.
19. The wastewater and instream sampling required by conditions 17 and 18 shall be analysed for the following:
 - a. pH;
 - b. Dissolved Oxygen;
 - c. Dissolved Carbonaceous BOD₅;
 - d. Total Suspended Solids;
 - e. Dissolved Reactive Phosphorus;
 - f. Dissolved inorganic nitrogen (i.e. sum of nitrate, nitrite and ammoniacal nitrogen);
 - g. Total ammoniacal nitrogen; and
 - h. Ecoli.
20. All wastewater sample analysis required by conditions of this consent shall be undertaken by an independent laboratory accredited to IANZ.

Macro-invertebrate sampling (water quality sampling)

21. Commencing **August 2012**, the consent holder shall have an appropriately experienced and qualified freshwater ecologist undertake macro-invertebrate sampling once between the months August to October (winter/spring) each year of this consent in both the unnamed tributary of the Wairere Stream and the Wairere Stream.
22. The macro-invertebrate sampling required by Condition 21 shall be undertaken following a period of at least three weeks without a significant flood event as an instantaneous river flow exceeding 9.063 m³/second as recorded at the Whakapapa at Footbridge flow recording site operated by Genesis Energy).

Advice note: Flow information at this site can be found visiting the Genesis Energy website <http://www.genesisenergy.co.nz> under the rivers, lakes and rainfall tab.

23. The macroinvertebrate sampling required by Condition 21 shall be undertaken at the following sites as shown on Plan C105684B:
- a. Unnamed Tributary of the Wairere Stream upstream of the Whakapapa Village Wastewater Treatment Plant (point 1 on Plan C105864B);
 - b. Unnamed tributary of the Wairere Stream downstream of the Whakapapa Village Wastewater Treatment Plan (point 2 on Plan C105864B);
 - c. Wairere Stream downstream of the unnamed tributary confluence (point 3 on Plan C105864B); and
 - d. Wairere Stream upstream of the Whakapapa Village Wastewater Treatment Plant (point 4 on Plan C105684B).
24. The macro-invertebrate sampling required by Condition 21 shall follow Protocols C3 (hard bottomed quantitative), P3 (full count with subsampling option) and QC3 (Quality control for full count with subsampling option) from the Ministry for the Environment's "*Protocols for sampling macro-invertebrates in wadeable streams*" (Stark et al. 2001). Sampling shall involve:
- a. Collection of 5 replicate 0.1 m² Surber samples at random with a 20 m section of riffle habitat at each sampling site;
 - b. Full count of the macro-invertebrate taxa within each replicate sample to the taxonomic resolution level specified for use of the Macro-invertebrate Community Index (MCI); and
 - c. Enumeration of the results as taxa richness, MCI, QMCI, %EPT taxa and %EPT individuals.

Advice note: Please contact Manawatu-Wanganui Regional Council's Environmental Scientist – Water Quality on 0508 800 800 for guidance on how Conditions 21-24 can be implemented.

Periphyton and algae sampling (water quality sampling)

25. The consent holder shall have an appropriately experienced and qualified freshwater ecologist undertake an assessment of the percentage cover, biomass, chlorophyll a, AFDW and community composition of periphyton, filamentous algae and cyanobacterial mats in riffle habitat as close as possible to the sites selected under condition 23.
26. The periphyton and algae assessment shall be undertaken seasonally, once during the months; February, May, August and October regardless of flow during the first two years of this consent (2012 and 2013). The periphyton and algae assessment shall include:
- a. A visual assessment of the percentage cover of both filamentous algae and algal mats (to the nearest 5%) at 5 points across each of four transects encompassing run habitat and extending across the width of the stream(s) at each sampling site. The visual monitoring methods shall follow the protocols outlined in Appendix 2 of "*A periphyton monitoring plan for the Manawatu-Wanganui Region*" (Kilroy et al. 2008). Reported estimates shall include:
 - i. Percentage cover of visible stream bed by bacterial and/or fungal growths (sewage fungus) visible to the naked eye;
 - ii. Percentage cover of visible stream bed by filamentous algae more than 2 cm long;

- iii. Percentage cover of visible stream bed by diatoms or cyanobacteria mats more than 0.3 cm thick;
 - iv. Percentage cover of visible stream bed by diatoms less than 0.3 cm thick; and
 - v. Percentage cover of visible stream bed that is clean.
- b. The collection of periphyton samples at the same established monitoring sites and transects as defined in Condition 26a The periphyton collection methods shall follow the protocols outlined in Appendix 3 of "*A periphyton monitoring plan for the Manawatu-Wanganui Region*" (Kilroy et al. 2008). Analysis of periphyton samples shall also follow the Biggs and Kilroy (2000) guidelines for chlorophyll a analysis.

Advice note: Please contact Manawatu-Wanganui Regional Council's Environmental Scientist – Water Quality on 0508 800 800 for guidance on how Conditions 25-26 can be implemented.

Soil Sampling

27. In the month of **December 2012**, the consent holder shall undertake soil sampling at three separate areas. One sampling area shall be located in the Airport disposal area, one area shall be located in the Tundra disposal area and one area shall be located in an area not subject to wastewater irrigation (as a control area).
28. The consent holder shall take at least 9 cores from each area described in Condition 27 at varying depths as follows:
- a. 3 cores at 0-10 cm depth;
 - b. 3 cores at 10-20 cm depth; and
 - c. 3 cores at 50-70 cm depth.
29. The soil samples required by Conditions 27 and 28 shall be analysed for the following:
- a. pH;
 - b. phosphorus;
 - c. potassium;
 - d. magnesium; and
 - e. total nitrogen and base saturation.

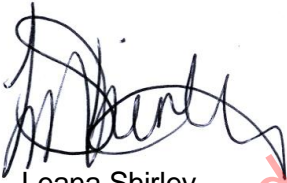
Annual reporting

30. Annual data records and a report summarising the results for each year ending 1 April shall be forwarded to the Manawatu-Wanganui Regional Council's Environmental Protection Manager by **31 May** of each year of this consent, commencing 31 May 2012 and shall include but not be limited to the following:
- a. The results and analysis of wastewater and water quality sampling required by Conditions 17-19;
 - b. A copy of the Operations and Management Plan and any subsequent updates required by Conditions 10 and 11;
 - c. A copy of the inflow and outflow records required by Conditions 13 and 14;
 - d. The results and analysis of macro-invertebrate and periphyton sampling required by conditions 21-26;
 - e. The results and analysis of soil sampling required by Conditions 27-29;

- f. An overall assessment of effects on land and water quality in the receiving environment from the discharges authorised by this resource consent;
- g. Details of any upgrades or maintenance already implemented or planned for the following 12 months;
- h. Details of investigations into plant performance including inflows, outflows, effluent disposal system and treatment system;
- i. Details of any changes to the operation of the plant and/or proposed upgrades resulting from investigations into plant performance and monitoring results; and
- j. The records of any complaints received and details of measures undertaken in response to the complaint.

Review

31. The Manawatu-Wanganui Regional Council may, under section 128 of the Act, initiate a review of all conditions of this consent in **July 2012 and 2013**, for the purpose of reviewing the effectiveness of these conditions in avoiding or mitigating any adverse effects on the environment. The review of conditions shall allow for:
- a. deletion or amendments to any conditions of this resource consent to ensure adverse effects are appropriately mitigated; or
 - b. addition of new conditions as necessary, to avoid, remedy or mitigate any unforeseen adverse effects on the environment; or
 - c. if necessary and appropriate, the adoption of the best practicable options to avoid, remedy or mitigate any adverse effects on the environment.



Leana Shirley
CONSENTS PLANNER

8. DECISION

For the reasons reported above, the Consents Manager of the Manawatu-Wanganui Regional Council (pursuant to delegated authority), grants resource consent by Department of Conservation under sections 104, 104B, 105, 107 and 108 of the Resource Management Act 1991 to discharge treated wastewater into and onto land at Whakapapa Village, State Highway 48, Mount Ruapehu for a term of 3 years expiring on **1 December 2014** and subject to conditions of consent in section 7 of this resource consent.

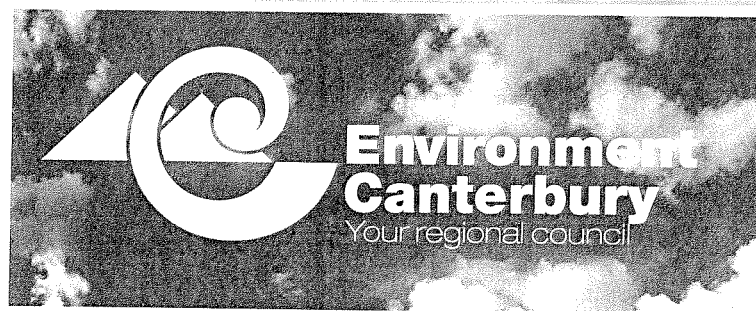


Phillip Hindrup
ACTING CONSENTS MANAGER

11 January 2012

FILE

CO6C/18362



27 September, 2007

Rob Dewhirst Consulting Limited
38A Penruddock Rise
Westmorland
CHRISTCHURCH

58 Kilmore Street, PO Box 345, Christchurch

General enquiries: 03 365 3828

Fax: 03 365 3194

Email: ecinfo@ecan.govt.nz

Customer services: 03 353 9007

or: 0800 EC INFO (0800 324 636)

Website: www.ecan.govt.nz

Attention to: Mr Rob Dewhirst

Dear Mr Dewhirst

NOTICE OF RESOURCE CONSENT DECISION

NUMBER: CRC054829

NAME: Department of Conservation (Aoraki Area Office)

The decision of Environment Canterbury is to grant your application on the terms and conditions specified in the attached resource consent document. The reasons for the decision are

- 1) The proposed activity does not conflict with the purpose of the Resource Management Act given the recommended conditions.

For some activities a report is prepared, with officer recommendations, to provide information to the decision makers. If you require a copy of the report please contact our Customer Services section and a copy will be provided.

If you do not agree with the consent authority decision, you may appeal to the Environment Court, P O Box 2069, Christchurch. The notice of appeal must be lodged with the Court within 15 working days of receipt of this decision, with a copy forwarded to Environment Canterbury within the same period. If you are in any doubt about the correct procedures, you should seek legal advice.

The commencement date for your resource consent is the date of this letter advising you of the decision, unless you lodge an appeal against the decision. The commencement date will then be the date on which the decision on the appeal is determined.

Enclosed is our Customer Satisfaction Survey. Please help us to provide a quality service that meets our customer needs by filling out the survey form and returning it in the postage paid envelope provided. Your feedback is anonymous unless you complete the space provided on the survey form with your name and consent number. If you would like a reply to any matters raised in your survey reply, please tick the box provided on the form.

Also enclosed is a Consent Holder Fact Sheet which you should read and keep for future reference. This fact sheet contains important information about your consent and answers some commonly asked questions about what will happen next in the life of your resource consent.

Charges, set in accordance with section 36 of the Resource Management Act 1991, shall be paid to the Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of resource consents and for the carrying out of its functions under section 35 of the Act.

Thank you for helping us make Canterbury a great place to live.

Our Ref: CO6C/18362

Your Ref:

Contact: Customer Services

RHC
Rev August 2007

For all queries please contact our Customer Services Section by telephoning 03) 353 9007, 0800 ECINFO (0800 324 636), or email ecinfo@ecan.govt.nz quoting the CRC number above.

Yours sincerely



Gaynor Smith
TEAM LEADER CONSENTS OPERATIONS
on behalf Environment Canterbury
Enc

Released under the Official Information Act

- 12) The results of all monitoring carried out in accordance with Conditions (9) to (11) shall be provided to the Canterbury Regional Council quarterly.
- 13) A record of any complaints to the consent holder relating to odour from the discharge shall be maintained, and shall include:
- (a) The location where the odour was detected by the complainant;
 - (b) The date and time when the odour was detected;
 - (c) A description of the wind speed and wind direction when the odour was detected by the complainant;
 - (d) The most likely cause of the odour detected, and
 - (e) Any corrective action undertaken by the consent holder to avoid, remedy or mitigate the effect of the odour detected by the complainant.
- This record shall be provided to the Canterbury Regional Council upon request.

MAINTENANCE

- 14) Maintenance of the treatment and disposal system shall be carried out in accordance with the "Department of Conservation – Municipal Wastewater Treatment Upgrade Aoraki/Mount Cook - Management Plan" October 2006.

REVIEW

- 15) The Canterbury Regional Council may, once per year, on any of the last five working days of March or November serve notice of its intention to review the conditions of this consent for the purposes of:
- (a) Dealing with any adverse effect on the environment which may arise from the exercise of the consent not foreseen at the time of granting the consent and is therefore appropriate to deal with later, or
 - (b) Requiring the adoption of the best practicable option to remove or reduce any adverse effect on the environment; or
 - (c) Complying with the requirements of a relevant rule in an operative regional plan; or
 - (d) Requiring monitoring instead of, or in addition to that required by the consent.

Issued at Christchurch on 27 September 2007



Gaynor Smith
TEAM LEADER CONSENTS OPERATIONS
on behalf of the Canterbury Regional Council

Environment Canterbury is the promotional name of the Canterbury Regional Council

RESOURCE CONSENT

Pursuant to Section 104 of the Resource Management Act 1991
The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO: Department of Conservation (Twizel Area Office)

A DISCHARGE PERMIT To discharge to land.

DATE DECISION: 24 August 2007 **EXPIRY DATE:** 24 August 2042

LOCATION: State Highway 80, MOUNT COOK VILLAGE

SUBJECT TO THE FOLLOWING CONDITIONS:

GENERAL CONDITIONS

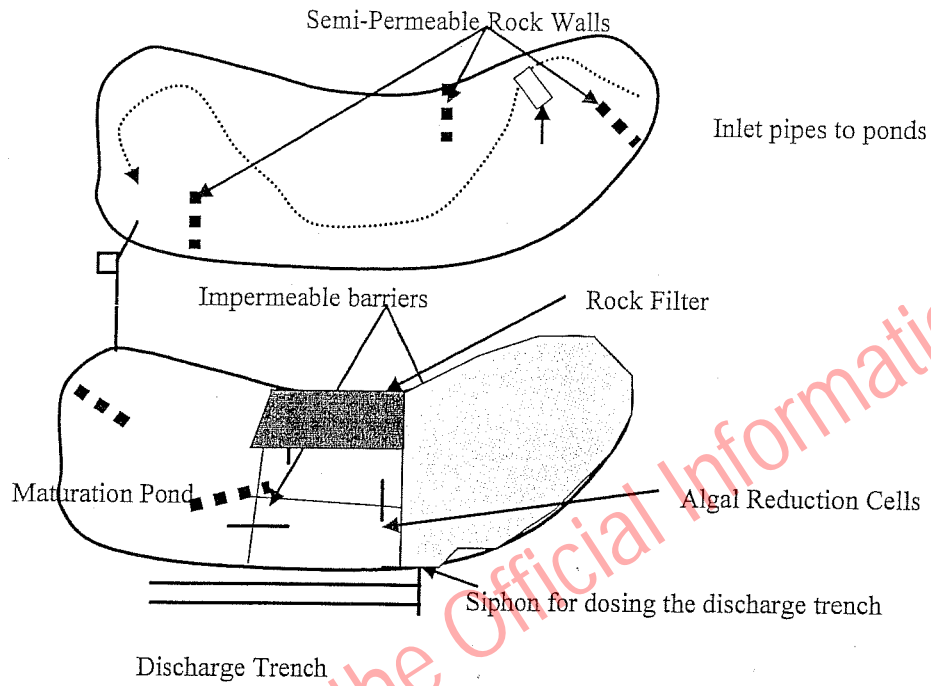
- 1) The discharge shall be only treated domestic effluent from the Mt Cook Village and associated facilities located in Aoraki/Mount Cook National Park.
- 2) The discharge to land shall be only via a discharge trench as shown on Plan CRC054829A, located at or about map reference NZMS 260 H36:7700-1425.
- 3) The volume of effluent discharged shall not exceed 600 cubic metres per day, except for during times of rainfall as measured at the Aoraki / Mount Cook NIWA Weather Station when the volume of effluent discharged may exceed 600 cubic metres per day.
- 4) Effluent shall be intermittently dosed to the disposal trench via a siphon at a maximum rate of 228 millimetres per day.
- 5) The volume of treated effluent discharged to land shall not exceed 910 cubic metres per day.
- 6) The pond shall be lined with a lining such as clay or PVC to ensure that leakage from the pond is minimised.
- 7) At least one month prior to the construction of any component of the pond and wetland system and discharge trench, final design plans for that component shall be submitted to the Canterbury Regional Council, Attention: RMA Compliance and Enforcement Manager.
- 8) A certificate signed by a Chartered Engineer or other suitably qualified person to certify that each component of the treatment and disposal system is constructed in accordance with the design plans and Conditions (2) to (4) and (6) shall be provided to the Canterbury Regional Council Attention: RMA Compliance and Enforcement Manager, within one month of construction of that component.

MONITORING

- 9) The consent holder shall:
 - (a) Record the volume of wastewater entering the pond in cubic metres per day; and
 - (b) Record the volume of wastewater discharged from the pond and wetland system in cubic metres per day.
- 10) The discharge quality will be sampled quarterly, prior to discharge into the disposal trenches. The discharge will be sampled for dissolved oxygen, total suspended solids, nitrate and *E. coli*.
- 11) Water quality in well H36/0001 shall be sampled quarterly and sampled for nitrate nitrogen and *E. coli*.

Environment Canterbury is the promotional name of the Canterbury Regional Council

PLAN CRC054829A Hybrid Pond and Wetland System



Released under the Official Information Act

Item 5

 Outlook

RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

From Evie Wallace <ewallace@doc.govt.nz>

Date Wed 3/26/2025 3:43 PM

To Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>

Cc James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <gasmith@doc.govt.nz>

 1 attachment (3 MB)

DOC_Wastewater treatment and disposal example sites_Discussion Points 26.03.2025.pdf;

Hi Janelle and all,

Please see attached further examples from DOC for our catch up next week.

We've also put together some discussion points (first page) we'd be interested to run through with you and get your thoughts, these also feed in to the further examples.

The onsite system examples James sent at the end of last year, and that we discussed in Jan, are still included in the back of this doc for reference.

Any queries before then let us know otherwise look forward to talking on Tuesday.

Ngā mihi,

Evie

Evie Wallace

Water Engineer (CPEng)

Christchurch | Ōtautahi

Department of Conservation | Te Papa Atawhai

Phone: 9(2)(a)

www.doc.govt.nz



From: Evie Wallace

Sent: Tuesday, 11 March 2025 4:14 pm

To: Janelle Eagleton ; Simone Blackburn ; Michael Petherick ; Donna Caddie

Cc: James Brooks ; Gavin Smith

Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Janelle,

Thank you – either of those weeks work for us, days Tuesday, Wednesday or Thursday please.

Will follow up with details of the systems prior to our catch up.

Ngā mihi,

Evie

Evie Wallace

Water Engineer (CPEng)

Christchurch | Ōtautahi

Department of Conservation | Te Papa Atawhai

Phone: 9(2)(a)

www.doc.govt.nz



From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>

Sent: Tuesday, 11 March 2025 9:07 am

To: Evie Wallace <ewallace@doc.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>

Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>

Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Evie

Thank you for your email – yes I can confirm that as we discussed in January, we do not intend for the wastewater standards as proposed to apply to onsite systems, including those with primary, secondary and disinfection treatment, as well as septic tanks.

Yes we would be very happy to have a further discussion soon. Would the week commencing 24 March be good for you, or the following one?

Can I suggest that you provide us with information in advance on the infrastructure that you want to discuss, so that we are able to be fully across the detail?

Ngā mihi

Janelle

From: Evie Wallace <ewallace@doc.govt.nz>

Sent: Thursday, 6 March 2025 2:29 pm

To: Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>

Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>

Subject: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Janelle, Simone and Michael,

Thank you again for the time mid January with James and I to discuss the DOC wastewater treatment examples and the wastewater standards.

You gave a verbal indication during our meeting that all of the wastewater system examples we provided (which were all some form of onsite system with discharge to land) were intended to be excluded from the standards. We also talked about the need for the definition of onsite systems to be clear in the standards. For clarity, are you still able to formally respond and confirm the outcome of those previous discussions please.

We provided some short initial feedback to DIA during the agency consultation period on the standards, and it looks like some of our feedback was incorporated into the discussion document (Section 3 Page 8, expansion of the definition of on-site systems) which is great to see thank you. However we think further clarification of this definition is still required.

Now that we have seen the proposed standards, there are a number of other types of treatment and discharge arrangements that DOC has that will require clarification of where these should sit relative to the standards, e.g. small oxidation ponds that discharge to land. We would like the opportunity to please continue our discussions and feedback directly within the next 2 months. Would it be possible to schedule another meeting with you in March/April to discuss?

Ngā mihi,

Evie

Evie Wallace

Water Engineer (CPEng)

Christchurch | Ōtautahi

Department of Conservation | Te Papa Atawhai

Phone: 9(2)(a)

www.doc.govt.nz



From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>
Sent: Wednesday, 8 January 2025 12:09 pm
To: James Brooks <jbrooks@doc.govt.nz>; Evie Wallace <ewallace@doc.govt.nz>
Cc: Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>
Subject: FW: DOC wastewater treatment examples
Hi James
Happy new year – hope you had a restful break.
Thank you so much for sending the below, that is all really useful.
I'll send through an invite for a quick catch up early next week to discuss those examples.
Thank you
Janelle

From: James Brooks <jbrooks@doc.govt.nz>
Sent: Friday, 20 December 2024 8:24 am
To: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Isobel Oldfield <Isobel.Oldfield@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>
Subject: DOC wastewater treatment examples
Hi Janelle, Isobel and Simone,
Just following up from our earlier chat about upcoming wastewater standards and implications for DOC. As we discussed, I've compiled some examples of DOC wastewater treatment facilities which should help in our further conversations if you would like to meet up again in the new year. I've also attached the wastewater discharge consents for Whakapapa and Aoraki Mt Cook systems as you requested.
Regards and Merry Christmas
Jim

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Caution - This message and accompanying data may contain information that is confidential or subject to legal privilege. If you are not the intended recipient you are notified that any use, dissemination, distribution or copying of this message or data is prohibited. If you received this email in error, please notify us immediately and erase all copies of the message and attachments. We apologise for the inconvenience. Thank you.

Discussion between DOC & WSA-Taumata Arowai on proposed wastewater environmental performance standards ‘the standards’ – March 2025

Discussion Points from DOC

1. Can TA give context on the intent of what the standards will achieve with respect to DOC? What is the desired outcome? How does that differ from the desired outcome for local government, or other government departments. How does this play out in terms of practicability?
 - a. Uniqueness of DOC – significant variable population to sites (summer peaks), remoteness of most sites, no daily operator on site, possibly no road access (islands, backcountry) or remote road access.
 - b. Is inclusion under the standards the right pathway to desired outcomes? Is an exemption appropriate?
2. Definition and exclusion of onsite systems
 - a. Discuss TA’s logic to the intent here for context – why onsite systems have been excluded
 - b. Recommend separating the exclusion from being within the same sentence as privately owned networks “these standards to not apply to privately owned networks, septic tanks or onsite systems...” – is misleading. If the intent is to also exclude onsite systems owned and operated by wastewater network operators, it should be its own standalone exclusion.
 - c. Getting this definition of onsite systems right – note the challenge with no current regulatory definition of onsite systems under national legislation. Each Regional Council has a regulatory definition but most of them differ.
 - d. Use of wording in the standards ‘Those captured by AS/NZS 1547’ – is useful for the scope of the definition & exclusion. Though we could discuss the risk of this being potentially misleading given the nature of this standard being focused on domestic systems, e.g. typical flow limit of 14,000 L/week, however the standard also notes/allows the principles of the Standard to be applied to systems exceeding this flow limit, and then generally requires a RC for the discharge. This is the case for a number of the DOC sites (e.g. Tōtaranui, Momorangi) DOC has previously given as examples to TA.
 - e. Onsite systems include a treatment plant and a land application system. The treatment plant can be any type of process from a septic tank through to an MBR with UV. Where do oxidation ponds with a LAS fit? Should these come under the onsite system exclusion (**see examples provided below** by DOC).
3. If the definition or intent of the exclusion of onsite systems is not clear, what protection do we have from Regional Councils applying the standards to us (e.g. requiring nutrient removal and groundwater monitoring for on-site systems not designed for this capability)?
4. Discharge for small treatment plants – only proposed for discharge to water in the standards, not for discharge to land. Is this intended (a standard for small plants discharging to land) in the future? Expected to be population, flow or load based? Overlap with onsite systems exclusion?
5. Discharge to water standard for small treatment plants (based on influent BOD load limit)
 - a. Intended to be only for oxidation ponds?
 - b. Is this intended to be receiving environment specific (different types of water receiving environments) or not? E.g. **refer Papatowai Campground example** with discharge to estuary. Would this come under a ‘small treatment plant’ category with specific or reduced nutrient removal characteristics, or under the discharge to water standard for estuaries.

Examples of oxidation ponds discharging to land

Waikaremoana WWTP

Description

Serviced facilities – Campground, visitor centre, DOC field centre and staff accommodation

Wastewater treatment system - oxidation pond 1 - 2400 m², oxidation pond 2 - 2400 m²

Effluent disposal – pumped to land disposal area 6231 m²

RC consented flow 172 m³/d

RC quality limits: Faecal coliforms, BOD, Total suspended solids, Total nitrogen



Matiu Somes Island WWTP

Description

DOC has managed the predator free scientific and historic reserve on Matiu/Somes Island since 1995.

Serviced facilities – Wastewater on the island is primarily generated from public toilet facilities, overnight visitor accommodation and the homes of the resident rangers. Due to the age of the system some stormwater also is combined into the wastewater system.

Wastewater system: Pressure and gravity pipes flowing to an oxidation pond on the southern side of the island which discharges to land.

RC conditions – flow and quality monitoring requirements (short term consent):

| | | |
|--|---|----------------------|
| Duration of consent | Granted/Commences: 10 May 2023 | Expires: 10 May 2028 |
| Purpose for which consent(s) is granted | To discharge wastewater to land where it may enter water (freshwater and the coastal marine area) and to discharge odour to air from a wastewater system for public toilet facilities, overnight visitor accommodation and homes of resident rangers. To discharge stormwater to land (via the wastewater system) from buildings and hardstand areas on Matiu/Somes Island. To discharge contaminants from a contaminated site (Lighthouse Gully) where it may enter the coastal marine area. | |

Effluent quality monitoring

8. The consent holder shall engage a suitably qualified and experienced person to take grab samples of wastewater on a monthly basis. After 12 months of data has been collected, effluent testing shall be undertaken quarterly, and heavy metals undertaken annually. Samples shall be taken at the oxidation pond inlet and outlet.
9. Effluent samples shall be analysed for:
 - Total suspended solids (TSS) g/m3
 - Total BOD5 g/m3
 - Ammonia Nitrogen (NH3) g/m3
 - Total phosphorus g/m3
 - Nitrate nitrogen g/m3
 - TKN
 - pH units
 - Dissolved Reactive Phosphorus g/m3
 - Total Nitrogen g/m3
 - Metals g/m3
 - Arsenic
 - Boron
 - Cadmium
 - Chromium
 - Copper
 - Lead
 - Mercury
 - Nickel
 - Zinc
 - Faecal coliforms, cfu/100ml



Kawau Island Mansion House WWTP

Description

Historic site that services day visitors via ferry sailings.

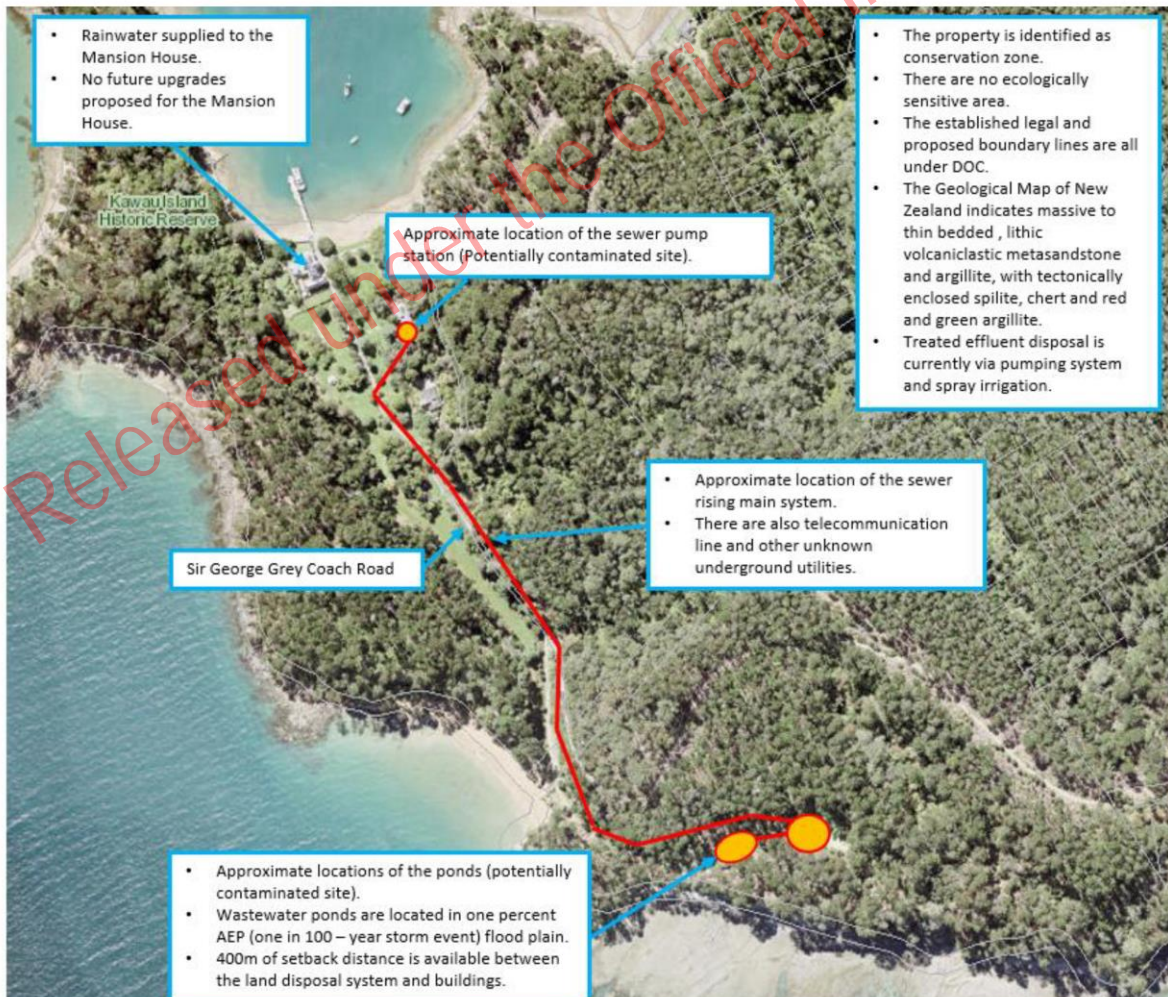
Serviced facilities – Mansion House – currently operating as a museum (café, public toilets, staff accommodation)

Wastewater treatment system – two oxidation ponds in series (0.12 ha and 0.14 ha) followed by effluent filtration.

Effluent disposal – pumped to an irrigation field (10,100 m²) consisting of four sections (spray irrigated via sprinklers) in a fenced and signposted forest area. Note the disposal was previously (prior to 2010) via dripper lines but these were difficult to maintain and were regularly damaged by falling trees, hence the change to sprinklers near the time of the consent renewal in 2010.

Previous RC consented flow 20.2 m³/day (combined flows – 16.3 m³ of rainwater into ponds and 3.9 m³ of secondary treated wastewater) – consent issued 2010 but is now expired, new consent application is in draft.

Previous RC consent conditions: BOD 40 mg/L, TSS 40 mg/L

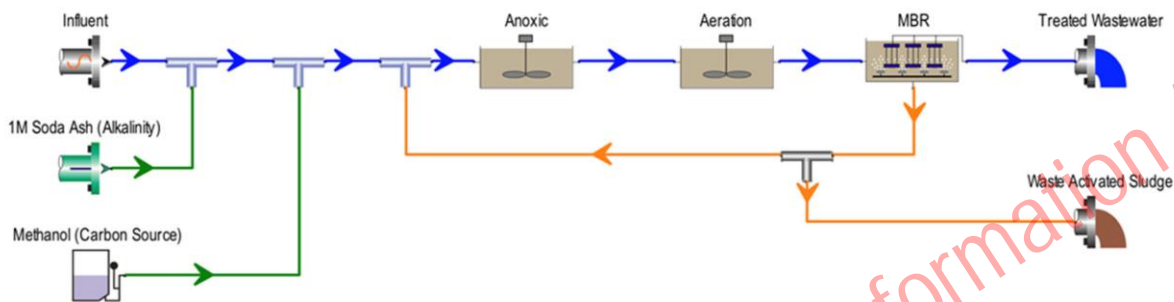


Example of Small WWTP discharging to Water

Papatowai Campground WWTP

Description

Activated sludge (MBR) plant with discharge to an unnamed tributary of the Tahakopa Estuary.



Current consented flow: 12.5 m³/day

Estimated maximum overnight population of 188 persons (47 sites with 4 people per site) and a maximum weekly overnight population of 700 (100 per night). Peak organic load 12.3 kg BOD/day (MWH, 2010).

Current consent conditions (samples in Jan, Feb, April and Oct):

- 15 mg/L BOD
- 10 mg/L TSS
- 25 mg/L TN
- 5 mg/L NH₄-N
- 10 cfu/100mL Enterococci
- 10 cfu/100mL E. coli

Current consent receiving environment monitoring:

9. The consent holder shall collect representative samples of water from the unnamed tributary at a site no greater than 10 metres downstream of the discharge in January and April. The samples shall be taken on the same date as those taken in accordance with Condition 7 of this consent. If the watercourse is

COPY

not flowing at these times, the consent holder shall take the samples at times during the month when there is a flow, as agreed by the Consent Authority. The samples shall be analysed for:

- (i) Dissolved inorganic nitrogen;
- (ii) Enterococci; and
- (iii) *Escherichia coli*.

Discharge to estuary draft standards (monthly sampling and reporting):

- 20 mg/L BOD annual median
- 25 mg/L TSS annual median
- 10 mg/L TN annual median [lower than current consent]
- 15 mg/L NH₄-N annual 90%ile [higher than current consent but note 90%ile]
- 2000 cfu/100mL E. coli annual 90%ile [higher than current consent but note 90%ile]

Examples of campgrounds and amenity area facilities - onsite systems (previously sent to Taumata Arowai 20/12/24 and discussed 14/01/25)

Rainbow Falls car park – public toilet

Description

Serviced facilities – Car park single building 3 pan toilet unit with urinal and sinks

Wastewater treatment system - Eloy Oxyfix C90 SAFF unit includes primary tank, bio reactor, clarifier and final effluent screen

Effluent disposal - PCDI distribution pipelines to land disposal area 1000 m²

RC consented flow 3m³/d



Whites Bay campground

Description

Serviced facilities – campground toilet units x 3, Surf club building

Wastewater treatment – primary settlement tanks and wisconsin mound filter bed

Effluent disposal – Wisconsin mound disposal field 500m²

RC consented flow 8m³/d



Cape Reinga Visitor car park toilets

Description

Serviced facilities – Car park single building 13 pan toilet block with urinals and sinks

Wastewater treatment – Innoflow AdvanTex textile packed bed reactor

Effluent disposal - PCDI distribution pipelines to land disposal area 4500 m²

RC consented flow 16m³/d



Momorangi Bay Campground

Description

Serviced facilities – campground ablutions (2 units), car park amenity area public toilets, camp warden house and office.

Wastewater treatment - Innoflow AdvanTex textile packed bed reactor

Effluent disposal - PCDI distribution pipelines to land disposal area 38500 m²

RC consented flow 77m³/d



Totaranui Campground

Description

Serviced facilities – Campground ablutions (6 units including site office), 4 no staff houses

Wastewater treatment - Innoflow AdvanTex textile packed bed reactor

Effluent disposal – PCDI distribution pipelines to land disposal 9300m² and LPED 4000m²

RC consented flow 100m³/d



Item 7



Outlook

RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

From Evie Wallace <ewallace@doc.govt.nz>**Date** Tue 4/15/2025 1:50 PM**To** Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>**Cc** James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <gasmith@doc.govt.nz>

1 attachment (4 MB)

DOC_Wastewater treatment and disposal example sites_Standards Feedback April 2025.pdf;

Hi Janelle and all,

Thanks again for the meeting and discussion we had week before last.

Attached is a document that includes the info we have sent to date and now updated with a short summary of our feedback/recommendations on the standards following our catch up.

Ngā mihi,

Evie

From: Evie Wallace**Sent:** Wednesday, 26 March 2025 3:43 pm**To:** 'Janelle Eagleton' ; 'Simone Blackburn' ; 'Michael Petherick' ; 'Donna Caddie'**Cc:** James Brooks ; Gavin Smith**Subject:** RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Hi Janelle and all,

Please see attached further examples from DOC for our catch up next week.

We've also put together some discussion points (first page) we'd be interested to run through with you and get your thoughts, these also feed in to the further examples.

The onsite system examples James sent at the end of last year, and that we discussed in Jan, are still included in the back of this doc for reference.

Any queries before then let us know otherwise look forward to talking on Tuesday.

Ngā mihi,

Evie

Evie Wallace

Water Engineer (CPEng)

Christchurch | Ōtautahi

Department of Conservation | Te Papa Atawhai

Phone: 9(2)(a)

www.doc.govt.nz**From:** Evie Wallace**Sent:** Tuesday, 11 March 2025 4:14 pm**To:** Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>**Cc:** James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>**Subject:** RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Janelle,

Thank you – either of those weeks work for us, days Tuesday, Wednesday or Thursday please. Will follow up with details of the systems prior to our catch up.

Ngā mihi,

Evie

Evie Wallace

Water Engineer (CPEng)

Christchurch | Ōtautahi

Department of Conservation | Te Papa Atawhai

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From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>

Sent: Tuesday, 11 March 2025 9:07 am

To: Evie Wallace <ewallace@doc.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>

Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>

Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Evie

Thank you for your email – yes I can confirm that as we discussed in January, we do not intend for the wastewater standards as proposed to apply to onsite systems, including those with primary, secondary and disinfection treatment, as well as septic tanks.

Yes we would be very happy to have a further discussion soon. Would the week commencing 24 March be good for you, or the following one?

Can I suggest that you provide us with information in advance on the infrastructure that you want to discuss, so that we are able to be fully across the detail?

Ngā mihi

Janelle

From: Evie Wallace <ewallace@doc.govt.nz>

Sent: Thursday, 6 March 2025 2:29 pm

To: Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>

Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>

Subject: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Janelle, Simone and Michael,

Thank you again for the time mid January with James and I to discuss the DOC wastewater treatment examples and the wastewater standards.

You gave a verbal indication during our meeting that all of the wastewater system examples we provided (which were all some form of onsite system with discharge to land) were intended to be excluded from the standards. We also talked about the need for the definition of onsite systems to be clear in the standards. For clarity, are you still able to formally respond and confirm the outcome of those previous discussions please.

We provided some short initial feedback to DIA during the agency consultation period on the standards, and it looks like some of our feedback was incorporated into the discussion document (Section 3 Page 8, expansion of the definition of on-site systems) which is great to see thank you. However we think further clarification of this definition is still required.

Now that we have seen the proposed standards, there are a number of other types of treatment and discharge arrangements that DOC has that will require clarification of where these should sit relative to the standards, e.g. small oxidation ponds that discharge to land. We would like the opportunity to please continue our discussions and feedback directly within the next 2 months. Would it be possible to schedule another meeting with you in March/April to discuss?

Ngā mihi,

Evie

Evie Wallace

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From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>

Sent: Wednesday, 8 January 2025 12:09 pm

To: James Brooks <jbrooks@doc.govt.nz>; Evie Wallace <ewallace@doc.govt.nz>

Cc: Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>

Subject: FW: DOC wastewater treatment examples

Hi James

Happy new year – hope you had a restful break.

Thank you so much for sending the below, that is all really useful.

I'll send through an invite for a quick catch up early next week to discuss those examples.

Thank you

Janelle

From: James Brooks <jbrooks@doc.govt.nz>

Sent: Friday, 20 December 2024 8:24 am

To: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Isobel Oldfield

<Isobel.Oldfield@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>

Subject: DOC wastewater treatment examples

Hi Janelle, Isobel and Simone,

Just following up from our earlier chat about upcoming wastewater standards and implications for DOC. As we discussed, I've compiled some examples of DOC wastewater treatment facilities which should help in our further conversations if you would like to meet up again in the new year. I've also attached the wastewater discharge consents for Whakapapa and Aoraki Mt Cook systems as you requested.

Regards and Merry Christmas

Jim

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Feedback from DOC to the WSA-Taumata Arowai on proposed wastewater environmental performance standards ‘the standards’ – April 2025

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1. Summary of DOC Feedback (Recommendations) April 2025

| No. | Topic | DOC Feedback / Recommendation |
|-----|--|--|
| 1 | Definition of a wastewater network | <ul style="list-style-type: none"> All of DOC's systems from pit toilets to containment toilets to onsite systems are currently included in the definition of a wastewater network in the WSA The Local Government (Water Services) Bill contains a different definition of a wastewater network and does not include department owned systems because of the definition of a water service provider. The different definitions require clarification and alignment. |
| 2 | Definition of onsite wastewater systems, for the purposes of excluding them from the standards | <p><i>Context: majority of DOC's wastewater systems are onsite systems and hence will be excluded from the standards. As has been discussed with TA the definition of this onsite system exclusion needs to be clear.</i></p> <ul style="list-style-type: none"> Recommend in the standards document, separating the exclusion from being within the same sentence as privately owned networks (make it a clear, standalone exclusion) Recommend the exclusion is clear that this includes onsite systems that are operated by, for, or on behalf of local authorities, CCOs, departments, NZDF Recommend the exclusion "(those captured by AS/NZS 1547:2012)" is expanded to say "onsite systems captured directly or indirectly by AS/NZS 1547:2012 and including both a treatment unit and a land application system (LAS). This may include septic tanks, and primary, secondary and disinfection wastewater treatment systems. These onsite systems are used for sites and houses in areas that do not have a reticulated sewer system." |

| | | |
|---|---|---|
| 3 | Small systems that discharge to land vs. onsite systems | <ul style="list-style-type: none"> Consider the overlap between small wastewater systems that discharge to land, and onsite systems Consider a standard specific to small systems discharging to land, same as has been done for small systems discharging to water Potential to include for variable population as part of the definition for inclusion, similar to DWQAR using 'base population' as a threshold for inclusion in small systems or onsite systems? |
| 4 | Definition/classification of small oxidation pond systems discharging to land (examples provided to TA below) | <p>Recommend these DOC wastewater systems with ponds and a land application system [LAS], and possibly other non-DOC similar examples should be classified as an onsite systems and hence excluded from the standards (and not classified under the discharge to land standards).</p> <p>The logic:</p> <ul style="list-style-type: none"> In DOC context some of these oxidation pond-LAS examples have smaller flows than other onsite systems that TA have indicated are exempt from the standards An oxidation pond is just a different treatment process to a septic tank or secondary package plant – still a treatment plant on the same land parcel as the wastewater generating facilities, discharging to a LAS which is also on the same land parcel Pond systems have limited treatment capability in terms of nitrogen removal, only providing primary to secondary treatment to a lesser quality than some of the other previously agreed 'onsite' systems Consideration of the impact of including these systems under the discharge to land standard: likely requiring additional treatment processes to meet the nutrient removal requirements (N & P), addition of groundwater monitoring, note two of these examples are on remote islands and the addition of more intensive treatment processes and monitoring requirements will have high cost from a capital and ongoing operational requirements perspective. |
| 5 | NEPM | <ul style="list-style-type: none"> Recommend that sites that are excluded from the standards (i.e. onsite systems) are also excluded from the NEPM. Previous agreement with TA that DOC wastewater supplies should not fall under these reporting requirements, with the exception of the 2 network village supplies at Aoraki Mt Cook and Whakapapa – refer previous consultation submission. |

2. Discussion Points from DOC (for meeting with TA held 1.04.2025)

1. Can TA give context on the intent of what the standards will achieve with respect to DOC? What is the desired outcome? How does that differ from the desired outcome for local government, or other government departments. How does this play out in terms of practicability?
 - a. Uniqueness of DOC – significant variable population to sites (summer peaks), remoteness of most sites, no daily operator on site, possibly no road access (islands, backcountry) or remote road access.
 - b. Is inclusion under the standards the right pathway to desired outcomes? Is an exemption appropriate?
2. Definition and exclusion of onsite systems
 - a. Discuss TA's logic to the intent here for context – why onsite systems have been excluded
 - b. Recommend separating the exclusion from being within the same sentence as privately owned networks “these standards to not apply to privately owned networks, septic tanks or onsite systems...” – is misleading. If the intent is to also exclude onsite systems owned and operated by wastewater network operators, it should be its own standalone exclusion.
 - c. Getting this definition of onsite systems right – note the challenge with no current regulatory definition of onsite systems under national legislation. Each Regional Council has a regulatory definition but most of them differ.
 - d. Use of wording in the standards ‘Those captured by AS/NZS 1547’ – is useful for the scope of the definition & exclusion. Though we could discuss the risk of this being potentially misleading given the nature of this standard being focused on domestic systems, e.g. typical flow limit of 14,000 L/week, however the standard also notes/allows the principles of the Standard to be applied to systems exceeding this flow limit, and then generally requires a RC for the discharge. This is the case for a number of the DOC sites (e.g. Tōtaranui, Momorangi) DOC has previously given as examples to TA.
 - e. Onsite systems include a treatment plant and a land application system. The treatment plant can be any type of process from a septic tank through to an MBR with UV. Where do oxidation ponds with a LAS fit? Should these come under the onsite system exclusion (**see examples provided below** by DOC).
3. If the definition or intent of the exclusion of onsite systems is not clear, what protection do we have from Regional Councils applying the standards to us (e.g. requiring nutrient removal and groundwater monitoring for on-site systems not designed for this capability)?
4. Discharge for small treatment plants – only proposed for discharge to water in the standards, not for discharge to land. Is this intended (a standard for small plants discharging to land) in the future? Expected to be population, flow or load based? Overlap with onsite systems exclusion?
5. Discharge to water standard for small treatment plants (based on influent BOD load limit)
 - a. Intended to be only for oxidation ponds?
 - b. Is this intended to be receiving environment specific (different types of water receiving environments) or not? E.g. **refer Papatowai Campground example** with discharge to estuary. Would this come under a ‘small treatment plant’ category with specific or reduced nutrient removal characteristics, or under the discharge to water standard for estuaries.

3. Examples of oxidation ponds discharging to land (sent to TA for meeting 1.04.2025)

Waikaremoana WWTP

Description

Serviced facilities – Campground, visitor centre, DOC field centre and staff accommodation

Wastewater treatment system - oxidation pond 1 - 2400 m², oxidation pond 2 - 2400 m²

Effluent disposal – pumped to land disposal area 6231 m²

RC consented flow 172 m³/d

RC quality limits: Faecal coliforms, BOD, Total suspended solids, Total nitrogen



Matiu Somes Island WWTP

Description

DOC has managed the predator free scientific and historic reserve on Matiu/Somes Island since 1995.

Serviced facilities – Wastewater on the island is primarily generated from public toilet facilities, overnight visitor accommodation and the homes of the resident rangers. Due to the age of the system some stormwater also is combined into the wastewater system.

Wastewater system: Pressure and gravity pipes flowing to an oxidation pond on the southern side of the island which discharges to land.

RC conditions – flow and quality monitoring requirements (short term consent):

| | | |
|--|---|----------------------|
| Duration of consent | Granted/Commences: 10 May 2023 | Expires: 10 May 2028 |
| Purpose for which consent(s) is granted | To discharge wastewater to land where it may enter water (freshwater and the coastal marine area) and to discharge odour to air from a wastewater system for public toilet facilities, overnight visitor accommodation and homes of resident rangers. To discharge stormwater to land (via the wastewater system) from buildings and hardstand areas on Matiu/Somes Island. To discharge contaminants from a contaminated site (Lighthouse Gully) where it may enter the coastal marine area. | |

Effluent quality monitoring

8. The consent holder shall engage a suitably qualified and experienced person to take grab samples of wastewater on a monthly basis. After 12 months of data has been collected, effluent testing shall be undertaken quarterly, and heavy metals undertaken annually. Samples shall be taken at the oxidation pond inlet and outlet.
9. Effluent samples shall be analysed for:
 - Total suspended solids (TSS) g/m3
 - Total BOD5 g/m3
 - Ammonia Nitrogen (NH3) g/m3
 - Total phosphorus g/m3
 - Nitrate nitrogen g/m3
 - TKN
 - pH units
 - Dissolved Reactive Phosphorus g/m3
 - Total Nitrogen g/m3
 - Metals g/m3
 - Arsenic
 - Boron
 - Cadmium
 - Chromium
 - Copper
 - Lead
 - Mercury
 - Nickel
 - Zinc
 - Faecal coliforms, cfu/100ml



Kawau Island Mansion House WWTP

Description

Historic site that services day visitors via ferry sailings.

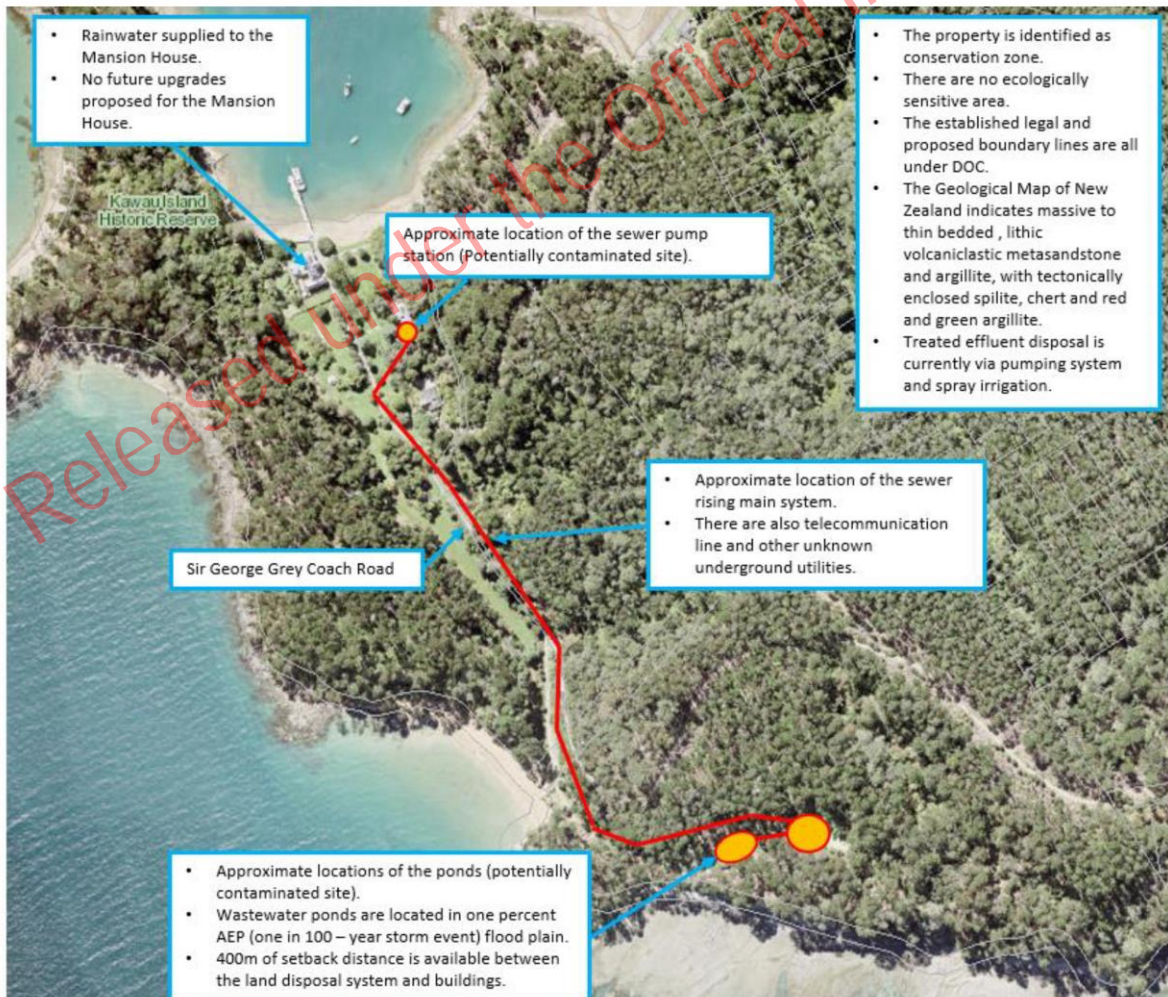
Serviced facilities – Mansion House – currently operating as a museum (café, public toilets, staff accommodation)

Wastewater treatment system – two oxidation ponds in series (0.12 ha and 0.14 ha) followed by effluent filtration.

Effluent disposal – pumped to an irrigation field (10,100 m²) consisting of four sections (spray irrigated via sprinklers) in a fenced and signposted forest area. Note the disposal was previously (prior to 2010) via dripper lines but these were difficult to maintain and were regularly damaged by falling trees, hence the change to sprinklers near the time of the consent renewal in 2010.

Previous RC consented flow 20.2 m³/day (combined flows – 16.3 m³ of rainwater into ponds and 3.9 m³ of secondary treated wastewater) – consent issued 2010 but is now expired, new consent application is in draft.

Previous RC consent conditions: BOD 40 mg/L, TSS 40 mg/L

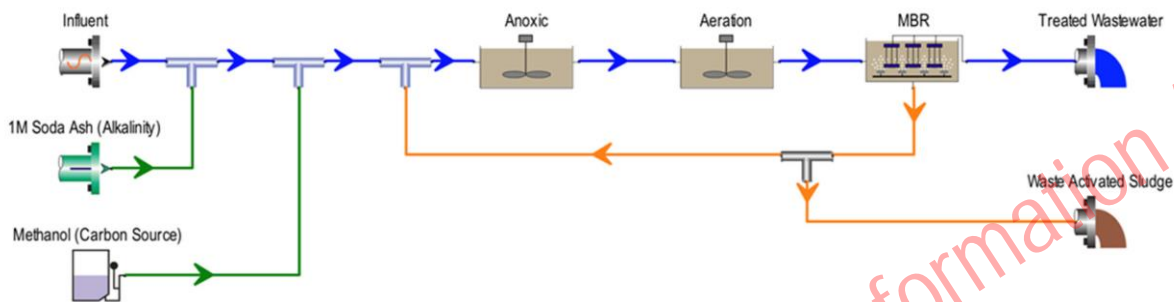


4. Example of Small WWTP discharging to Water (sent to TA for meeting 1.04.2025)

Papatowai Campground WWTP

Description

Activated sludge (MBR) plant with discharge to an unnamed tributary of the Tahakopa Estuary.



Current consented flow: 12.5 m³/day

Estimated maximum overnight population of 188 persons (47 sites with 4 people per site) and a maximum weekly overnight population of 700 (100 per night). Peak organic load 12.3 kg BOD/day (MWH, 2010).

Current consent conditions (samples in Jan, Feb, April and Oct):

- 15 mg/L BOD
- 10 mg/L TSS
- 25 mg/L TN
- 5 mg/L NH₄-N
- 10 cfu/100mL Enterococci
- 10 cfu/100mL E. coli

Current consent receiving environment monitoring:

9. The consent holder shall collect representative samples of water from the unnamed tributary at a site no greater than 10 metres downstream of the discharge in January and April. The samples shall be taken on the same date as those taken in accordance with Condition 7 of this consent. If the watercourse is

Page 2 of 5

COPY

not flowing at these times, the consent holder shall take the samples at times during the month when there is a flow, as agreed by the Consent Authority. The samples shall be analysed for:

- (i) Dissolved inorganic nitrogen;
- (ii) Enterococci; and
- (iii) *Escherichia coli*.

Discharge to estuary draft standards (monthly sampling and reporting):

- 20 mg/L BOD annual median
- 25 mg/L TSS annual median
- 10 mg/L TN annual median [lower than current consent]
- 15 mg/L NH₄-N annual 90%ile [higher than current consent but note 90%ile]
- 2000 cfu/100mL E. coli annual 90%ile [higher than current consent but note 90%ile]

5. Examples of campgrounds and amenity area facilities - onsite systems (previously sent to Taumata Arowai 20.12.24 and discussed 14.01.25)

Note in meeting with TA on 14.01.2025, TA confirmed all of the below examples were intended to be excluded from the standards under the 'onsite systems' exclusion.

Rainbow Falls car park – public toilet

Description

Serviced facilities – Car park single building 3 pan toilet unit with urinal and sinks

Wastewater treatment system - Eloy Oxyfix C90 SAFF unit includes primary tank, bio reactor, clarifier and final effluent screen

Effluent disposal - PCDI distribution pipelines to land disposal area 1000 m²

RC consented flow 3m³/d



Whites Bay campground

Description

Serviced facilities – campground toilet units x 3, Surf club building

Wastewater treatment – primary settlement tanks and wisconsin mound filter bed

Effluent disposal – Wisconsin mound disposal field 500m²

RC consented flow 8m³/d



Cape Reinga Visitor car park toilets

Description

Serviced facilities – Car park single building 13 pan toilet block with urinals and sinks

Wastewater treatment – Innoflow AdvanTex textile packed bed reactor

Effluent disposal - PCDI distribution pipelines to land disposal area 4500 m²

RC consented flow 16m³/d



Momorangi Bay Campground

Description

Serviced facilities – campground ablutions (2 units), car park amenity area public toilets, camp warden house and office.

Wastewater treatment - Innoflow AdvanTex textile packed bed reactor

Effluent disposal - PCDI distribution pipelines to land disposal area 38500 m²

RC consented flow 77m³/d



Tōtaranui Campground

Description

Serviced facilities – Campground ablutions (6 units including site office), 4 no staff houses

Wastewater treatment - Innoflow AdvanTex textile packed bed reactor

Effluent disposal – PCDI distribution pipelines to land disposal 9300m² and LPED 4000m²

RC consented flow 100m³/d



6. DOC initial feedback to DIA via Agency Consultation Process (sent to DIA 11.02.2025)

Agency consultation on Cabinet paper - proposed wastewater environmental performance standards, approval to publicly consult. Feedback to DIA 11 Feb 2025.

Feedback on the reference to onsite systems (comments on pages 4, 7 and 32):

The definition of a wastewater network in the Act (and in the discussion documents to which the standards will apply to) being “the infrastructure and processes that— (a) are used to collect, store, transmit through reticulation, treat, or discharge wastewater” – is currently inclusive of ALL forms of wastewater infrastructure operated by a local authority or a department, from a containment tank under a single toilet through to large wastewater treatment plants.

The discussion document notes that onsite wastewater treatment systems (such as septic tanks) are excluded from the standards. DOC has previously discussed with Taumata Arowai in early consultation meetings about the type of onsite systems that are owned and operated by DOC, including sharing a number of examples with Taumata Arowai, and have highlighted the need for a clearer definition of an onsite wastewater systems.

Onsite wastewater systems can involve much more than just a septic tank. ASNZS 1547:2012 gives scope that the “onsite systems covered by this standard include primary, secondary and disinfection wastewater systems. The Standard gives specific details for septic tanks, other wastewater treatment units and land application systems.”

DOC has 100s of onsite wastewater systems ranging from pit toilets (long drops), composting toilets, septic tanks/primary treatment, all often at very remote backcountry sites, through to secondary treatment systems at front country sites such as visitor centers or day visitor sites (e.g. which may include primary and secondary treatment, aeration, chemical dosing and UV disinfection). The vast majority of these systems discharge to land. Taumata Arowai gave verbal feedback to DOC that all of these types of onsite systems (the examples that DOC shared), which included secondary treatment plant onsite systems, were intended to be exempt from the standards. This included examples of wastewater from multiple buildings within one site (e.g. this could include wastewater from a campground ablution block, a staff accommodation house, an office and car park amenity public toilets, all being treated in the same wastewater treatment system and discharged to one land disposal area).

Recommendation: The discussion document should be updated to clarify the intent around the exclusion of onsite wastewater systems, rather than just saying “such as septic tanks”. This definition or clarification could include, for example:

- Making reference to the scope of ASNZS 1547:2012 – onsite systems including primary treatment/septic tanks as well as secondary and disinfection treatment systems
- Including wastewater from multiple buildings but within one land area or site
- Including of a land application system (discharge to a land).

This clarification could additionally focus on a class of wastewater network operator to clarify that onsite systems operated by government departments are not intended to be the subject of these standards.

Comment on implication:

If the definition of an onsite system is not clear, and interpretation of a wastewater network is left as per the current definition in the Act (“the infrastructure and processes that— (a) are used to collect, store, transmit through reticulation, treat, or discharge wastewater”) – then the standards are at risk of subjecting many onsite wastewater systems owned and operated by government departments to the discharge to land standard. This could then trigger the requirements for higher levels of treatment and nutrient removal, much higher monitoring and reporting

requirements (i.e. groundwater monitoring and soil monitoring required under the discharge to land standard) which would be hugely costly, infeasible and understood to be not the intention of the standards.

Small wastewater systems:

The discussion document proposes a separate standard for small wastewater systems that discharge to water, noting these are mostly oxidation ponds, at sites that are isolated and often do not have access to electricity.

DOC has a small number of small oxidation pond treatment systems, in isolated or remote locations, that discharge to land. The standards and discussion document should consider whether these arrangements would be classified as an onsite system or a small wastewater system discharging to land. If classified as a wastewater system discharging to land, revised and reduced reporting and monitoring requirements should be included for these types of systems, relative to larger scale treatment plants that discharge to land.

Future wastewater standards and small systems:

We note that small onsite systems may still benefit from standardisation of treatment targets and monitoring and reporting requirements rather than seeing this vary by region as it does under the current resource consenting processes. The discussion document addresses this via statement “National standards for these areas may be addressed through future wastewater standards.” Some of these onsite systems in the form of secondary treatment plants may also be a use case for the ‘infrastructure design solutions’, and hence this could be considered as part of the second implementation phase for wastewater standards.

Released under the Official Information Act

Item 9



RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

From Evie Wallace <ewallace@doc.govt.nz>
Date Wed 8/27/2025 4:05 PM
To Simone Palmer <Simone.Palmer@taumataarowai.govt.nz>
Cc Gavin Smith <gasmith@doc.govt.nz>

Yes thanks, that suits.

Talk Monday,
Evie

From: Simone Palmer <Simone.Palmer@taumataarowai.govt.nz>
Sent: Wednesday, 27 August 2025 3:49 pm
To: Evie Wallace <ewallace@doc.govt.nz>
Cc: Gavin Smith <grsmith@doc.govt.nz>
Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Thanks Evie, Monday works well. Does 2.30-3.30pm suit?

Cheers,
Simone

From: Evie Wallace <ewallace@doc.govt.nz>
Sent: Wednesday, 27 August 2025 1:25 pm
To: Simone Palmer <Simone.Palmer@taumataarowai.govt.nz>
Cc: Gavin Smith <grsmith@doc.govt.nz>
Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

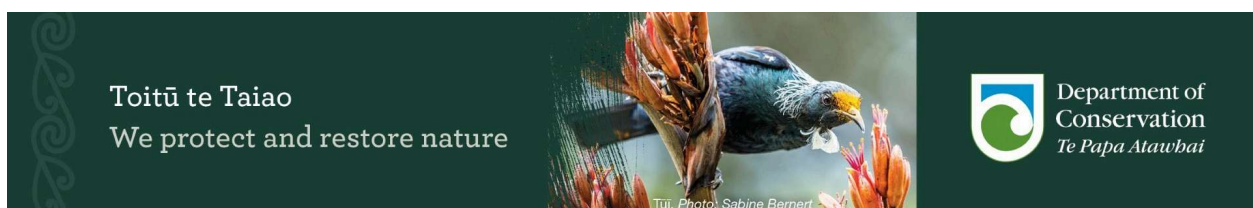
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Kia ora Simone,

Thanks for the follow up. I am on leave the next two days, so Monday suits. Any time in the afternoon?

Gavin and I will be there, and likely one more as Jim is on leave at the moment, I will forward the invite when I know who will take his place.

Ngā mihi,
Evie

Evie Wallace
Water Engineer (CPEng)
Christchurch | Ōtautahi
Department of Conservation | Te Papa Atawhai
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www.doc.govt.nz



From: Simone Palmer <Simone.Palmer@taumataarowai.govt.nz>
Sent: Wednesday, 27 August 2025 11:29 am
To: Evie Wallace <ewallace@doc.govt.nz>
Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Evie

Hope you're doing well.

We're close to finalising the wastewater standards and would like to confirm that the refined approach will work for DOC's arrangements. We would also like to discuss how the overflows standard aligns with the New Zealand Coastal Policy Statement and how regional councils currently engage with the NZCPS, with many overflows going to the coastal environment.

Could you convene the right people from your end and let me know when suits to meet? Either this Friday or next Monday would be preferable for us.

Thanks,
Simone

From: Evie Wallace <ewallace@doc.govt.nz>
Sent: Tuesday, 15 April 2025 1:51 pm
To: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Simone Palmer <Simone.Palmer@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>
Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>
Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

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Hi Janelle and all,

Thanks again for the meeting and discussion we had week before last. Attached is a document that includes the info we have sent to date and now updated with a short summary of our feedback/recommendations on the standards following our catch up.

Ngā mihi,
Evie

From: Evie Wallace
Sent: Wednesday, 26 March 2025 3:43 pm
To: 'Janelle Eagleton' <janelle.eagleton@taumataarowai.govt.nz>; 'Simone Blackburn' <Simone.Blackburn@taumataarowai.govt.nz>; 'Michael Petherick' <michael.petherick@taumataarowai.govt.nz>; 'Donna Caddie' <donna.caddie@taumataarowai.govt.nz>
Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>
Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Hi Janelle and all,

Please see attached further examples from DOC for our catch up next week. We've also put together some discussion points (first page) we'd be interested to run through with you and get your thoughts, these also feed in to the further examples. The onsite system examples James sent at the end of last year, and that we discussed in Jan, are still included in the back of this doc for reference.

Any queries before then let us know otherwise look forward to talking on Tuesday.

Ngā mihi,
Evie

Evie Wallace

Water Engineer (CPEng)
Christchurch | Ōtautahi
Department of Conservation | Te Papa Atawhai
Phone: 9(2)(a) [REDACTED]
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From: Evie Wallace

Sent: Tuesday, 11 March 2025 4:14 pm

To: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>

Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>

Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

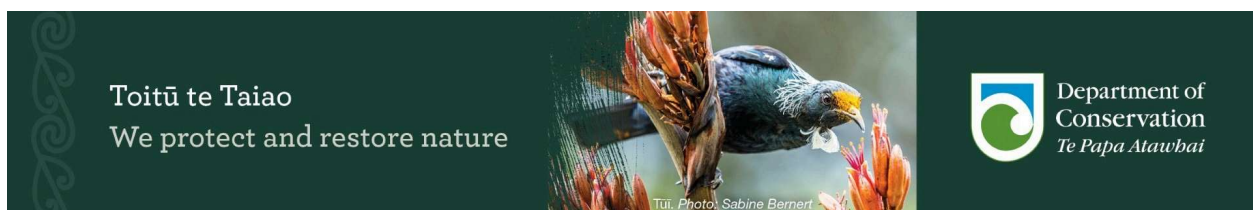
Kia ora Janelle,

Thank you – either of those weeks work for us, days Tuesday, Wednesday or Thursday please. Will follow up with details of the systems prior to our catch up.

Ngā mihi,
Evie

Evie Wallace

Water Engineer (CPEng)
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From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>

Sent: Tuesday, 11 March 2025 9:07 am

To: Evie Wallace <ewallace@doc.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Donna Caddie <donna.caddie@taumataarowai.govt.nz>

Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>

Subject: RE: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Evie

Thank you for your email – yes I can confirm that as we discussed in January, we do not intend for the wastewater standards as proposed to apply to onsite systems, including those with primary, secondary and disinfection treatment, as well as septic tanks.

Yes we would be very happy to have a further discussion soon. Would the week commencing 24 March be good for you, or the following one?
Can I suggest that you provide us with information in advance on the infrastructure that you want to discuss, so that we are able to be fully across the detail?

Ngā mihi
Janelle

From: Evie Wallace <ewallace@doc.govt.nz>
Sent: Thursday, 6 March 2025 2:29 pm
To: Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>; Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>
Cc: James Brooks <jbrooks@doc.govt.nz>; Gavin Smith <grsmith@doc.govt.nz>
Subject: Wastewater standards - DOC RE: DOC wastewater treatment examples

Kia ora Janelle, Simone and Michael,

Thank you again for the time mid January with James and I to discuss the DOC wastewater treatment examples and the wastewater standards. You gave a verbal indication during our meeting that all of the wastewater system examples we provided (which were all some form of onsite system with discharge to land) were intended to be excluded from the standards. We also talked about the need for the definition of onsite systems to be clear in the standards. For clarity, are you still able to formally respond and confirm the outcome of those previous discussions please.

We provided some short initial feedback to DIA during the agency consultation period on the standards, and it looks like some of our feedback was incorporated into the discussion document (Section 3 Page 8, expansion of the definition of on-site systems) which is great to see thank you. However we think further clarification of this definition is still required. Now that we have seen the proposed standards, there are a number of other types of treatment and discharge arrangements that DOC has that will require clarification of where these should sit relative to the standards, e.g. small oxidation ponds that discharge to land. We would like the opportunity to please continue our discussions and feedback directly within the next 2 months. Would it be possible to schedule another meeting with you in March/April to discuss?

Ngā mihi,
Evie

Evie Wallace

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From: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>
Sent: Wednesday, 8 January 2025 12:09 pm
To: James Brooks <jbrooks@doc.govt.nz>; Evie Wallace <ewallace@doc.govt.nz>
Cc: Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>; Michael Petherick <michael.petherick@taumataarowai.govt.nz>
Subject: FW: DOC wastewater treatment examples

Hi James

Happy new year – hope you had a restful break.

Thank you so much for sending the below, that is all really useful.
I'll send through an invite for a quick catch up early next week to discuss those examples.

Thank you
Janelle

From: James Brooks <jbrooks@doc.govt.nz>
Sent: Friday, 20 December 2024 8:24 am
To: Janelle Eagleton <janelle.eagleton@taumataarowai.govt.nz>; Isobel Oldfield <Isobel.Oldfield@taumataarowai.govt.nz>; Simone Blackburn <Simone.Blackburn@taumataarowai.govt.nz>
Subject: DOC wastewater treatment examples

Hi Janelle, Isobel and Simone,

Just following up from our earlier chat about upcoming wastewater standards and implications for DOC. As we discussed, I've compiled some examples of DOC wastewater treatment facilities which should help in our further conversations if you would like to meet up again in the new year. I've also attached the wastewater discharge consents for Whakapapa and Aoraki Mt Cook systems as you requested.

Regards and Merry Christmas
Jim

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