

# Onsite Wastewater Management Systems (OWMS)

Past and present key documents and research

## P A S T

1991

### Resource Management Act (RMA)

The discharge from an on-site system is subject to Section 15 of the RMA, which is administered by regional councils and controlled through rules in regional plans.

2002

### Local Government Act

Section 125 of the Local Government Act 2002 places a requirement on local authorities to carry out water and sanitary services to assess the current state of wastewater treatment systems in communities not serviced by reticulated wastewater treatment systems.

2004

### On-site Wastewater Systems: Design and Management Manual.

Auckland Regional Council. Technical Publication No. 58 (TP 58)

<http://www.aucklandcity.govt.nz/council/documents/technicalpublications/TP58%20On-site%20wastewater%20systems%202004%20Chapters%201-8.pdf>

Contact: Robyn Floyd (Auckland Council)

[robyn.floyd@aucklandcouncil.govt.nz](mailto:robyn.floyd@aucklandcouncil.govt.nz)

2006

### Bay of Plenty On-site Effluent Treatment Regional Plan (updated

August 2014) Bay of Plenty Regional Council

<https://www.boprc.govt.nz/media/424961/operative-osep-plan-2006-clear-copy-incorporating-pc2-permanent-version-small-website-no-maps-pdf-updated-22-04-15.pdf>

Contact: Terry Long (BOPRC) [terry.long@boprc.govt.nz](mailto:terry.long@boprc.govt.nz)

2006

### Potential impacts of on-site sewage disposal on groundwater.

<https://www.hbrc.govt.nz/assets/Document-Library/Publications-Database/Potential-Impacts-of-On-site-Sewage-Disposal-on-Groundwater.pdf>

Contact: Brent Gilpin (ESR) [brent.gilpin@esr.cri.nz](mailto:brent.gilpin@esr.cri.nz)

2008

### On-site Effluent Treatment (OSET) testing facility established

The testing programme undertakes performance testing of ex-factory on-site wastewater treatment units at its testing facility located within the Rotorua City Wastewater Treatment Plant site.

<https://www.waternz.org.nz/OSET>

Contact: Ray Hedgland (Technical Manager) [ray@hedgland.co.nz](mailto:ray@hedgland.co.nz)

2008

### Proposed National Environmental Standard for On-site Wastewater: Discussion document

<https://www.mfe.govt.nz/publications/rma/nes-onsite-wastewater-systems-discussion-jul08>

*Please note: the document has since been withdrawn*

2010

### Guidelines for separation distances based on virus transport between on-site domestic wastewater systems and wells

<https://envirolink.govt.nz/assets/Envirolink/Guidelines-for-separation-distances-based-on-virus-transport-.pdf>

Contact: Murray Close (ESR) [murray.close@esr.cri.nz](mailto:murray.close@esr.cri.nz)

2009

### Proposed National Environmental Standard for On-site Wastewater Systems: Report on submissions

<https://www.mfe.govt.nz/sites/default/files/nes-on-site-wastewater-systems.pdf>

2012

### On-site Wastewater Systems: Maintenance Guidelines for Homeowners

Document was produced by SWANS-SIG, the Small Wastewater And Natural Systems Special Interest Group of Water New Zealand.

[https://www.waternz.org.nz/documents/signs/swans/120215%20onsite\\_wastewater\\_maint%20booklet.pdf](https://www.waternz.org.nz/documents/signs/swans/120215%20onsite_wastewater_maint%20booklet.pdf)

Current chair: Ulrich Glasner (QLDC) [ulrich.glasner@qldc.govt.nz](mailto:ulrich.glasner@qldc.govt.nz)

2012

### AS/NZS 1547:2012 On site domestic wastewater management

This document provides guidance on dwelling occupancy, the calculation of flows, size of septic tanks and methods of disposal. It also provides information for owners of systems and those who service them.

<https://www.standards.govt.nz/news/media-releases/2012/mar/on-site-domestic-wastewater-management-revised-standard-published/>

2013

### On-site Wastewater Groundwater Quality Risk, July 2013. Environment Southland

[https://www.es.govt.nz/Document%20Library/Research%20and%20reports/Groundwater%20reports/on-site\\_wastewater\\_groundwater\\_quality\\_risk.pdf](https://www.es.govt.nz/Document%20Library/Research%20and%20reports/Groundwater%20reports/on-site_wastewater_groundwater_quality_risk.pdf)

Contact: Ewen Rodway (ES) [ewen.rodway@es.govt.nz](mailto:ewen.rodway@es.govt.nz)

2015

### Groundwater contamination risk, septic tank density and distribution within Otago August 2015. Otago Regional Council

<https://www.orc.govt.nz/media/1654/groundwater-contamination-risk.pdf>

Contact: Sean Leslie (ORC)

2017

### Understanding and taking care of your On-site Wastewater Management System (OWMS) for domestic wastewaters.

November 2017. Water New Zealand.

[https://www.waternz.org.nz/Attachment?Action=Download&Attachment\\_id=2976](https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=2976)

Contact: Noel Roberts (WaterNZ) [noel.roberts@waternz.org.nz](mailto:noel.roberts@waternz.org.nz)

2019

### Choosing an On-site Wastewater Management System, OWMS, for home owners.

[https://www.waternz.org.nz/Attachment?Action=Download&Attachment\\_id=3741](https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=3741)

Contact: Andrew Dakers (ecoEng Ltd) [andrew@ecoeng.co.nz](mailto:andrew@ecoeng.co.nz)

2019

### Domestic On-site Wastewater: Real needs and relative risks

[https://www.waternz.org.nz/Attachment?Action=Download&Attachment\\_id=1350](https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=1350)

Contact: Andrew Dakers (ecoEng Ltd) [andrew@ecoeng.co.nz](mailto:andrew@ecoeng.co.nz)

# Onsite Wastewater Management Systems (OWMS)

Key documents and research

## P R E S E N T

Below is a summary of the current key national and international research projects and documents which are underway on OWMS.

July 2018

**Guidance Document: On-site Wastewater Management in the Auckland Region** Auckland Regional Council (GD06)  
If adopted GD06 will replace TP58.

<http://content.aucklanddesignmanual.co.nz/regulations/technical-guidance/Documents/GD06%20-%20On-Site%20Wastewater%20Management.pdf>

Contact: Gretel Silyn Roberts (Auckland Council)  
[gretel.roberts@aucklandcouncil.govt.nz](mailto:gretel.roberts@aucklandcouncil.govt.nz)

18 February 2019

**On-site Wastewater workshop - Christchurch**

Commitment by Water New Zealand is for the development of a **Best Practice Guide for On-site Wastewater Management** which will focus on a "whole of system" approach. Andrew Dakers of ecoEng in Christchurch presented a case for an approach that went beyond reliance on just the performance testing on treatment units as is carried out at Rotorua under the OSET-NTP (On-site Effluent Treatment National Testing Programme). Andrew advocates a whole of system approach involving evaluation and mitigation of individual site risks associated with the both the treatment unit and land application system, and including design, installation operation and maintenance.

Other issues raised at the workshop included a warrant of fitness for on-site wastewater systems, and national certification for installers and designers.

Contact: Noel Roberts (Water NZ) [noel.roberts@waternz.org.nz](mailto:noel.roberts@waternz.org.nz)

July 2019

**Revitalisation of the Small Wastewater And Natural Systems Special Interest Group of Water New Zealand (SWANS-SIG)**

First conference call occurred on 29th July 2019

Contact: Ulrich Glasner (QLDC) [ulrich.glasner@qldc.govt.nz](mailto:ulrich.glasner@qldc.govt.nz)

2019

Review of the microbial inputs to the:

**Guidelines for separation distances based on virus transport between on-site domestic wastewater systems and wells**

Contact: Murray Close (ESR) [murray.close@esr.cri.nz](mailto:murray.close@esr.cri.nz)

2019/2020

**Instrumentation of an On-site Wastewater Management System in Canterbury**

Site selection and experimental design currently underway

Contact: Louise Weaver (ESR) [louise.weaver@esr.cri.nz](mailto:louise.weaver@esr.cri.nz)

## OWMS Journal Resources

2003

**Borchardt, M.A et al.** 2003. Septic system density and infectious diarrhea in a defined population of children. *Environmental Health Perspectives*. Vol 111, No 5.

2003

**Pang, L. et al.** 2003. Estimation of septic tank setback distances based on transport of *E. coli* and F-RNA phages. *Environmental International*. 29:907-921.

2006

**Nokes, C. et al.** 2006. Rural subdivision and development - cumulative impact on groundwater quality. *The NZWWA Journal*, October 2006

2006

**Pang, L. et al.** 2006. Modeling the impact of clustered septic tank systems on groundwater quality. *Vadose Zone Journal*. 5:599-609.

2016

**Blaschke, A.P, et al.** 2016. Setback distances between small biological wastewater treatment systems and drinking water wells against virus contamination in alluvial aquifers. *Science of The Total Environment*. Vol 573 - OPEN ACCESS

<https://www.sciencedirect.com/science/article/pii/S0048969716317685>

For any of these journals articles please contact Bronwyn Humphries:

[bronwyn.humphries@esr.cri.nz](mailto:bronwyn.humphries@esr.cri.nz)

## On-Site NewZ - Blog

On-site Domestic Wastewater Management

<https://onsitewwz.wordpress.com/>



On-Site NewZ is an information service for the on-site domestic wastewater management industry in New Zealand. It was launched by Ian Gunn in July 2006 as a 4-articles per year blog.