



# HAWKE'S BAY REGIONAL COUNCIL



SAFEGUARDING YOUR ENVIRONMENT + KAITIAKI TUKU IHO



**Change 3 - Regional Resource Management Plan**

## **On-site wastewater**

**Operative Date: 1 October 2012**



(Approved by Council 29 August 2012)



## REGIONAL RESOURCE MANAGEMENT PLAN RULES 35 - 37 AMENDED BY CHANGE 3:

Rule	Activity	Classification	Conditions/Standards/Terms	Matters for Control/Discretion	Non-notification
35 Existing <sup>1</sup> sewage systems  <i>Refer to POL 16, 71, 75</i>	Except as provided for by Rule 36, the discharge of contaminants onto or into land, and any ancillary discharge of contaminants into air, from any existing sewage system.	Permitted	<ul style="list-style-type: none"> <li>a. The rate of discharge shall not exceed 2 m<sup>3</sup>/d, averaged over any 7 day period.</li> <li>b. The discharge shall not occur over the Heretaunga Plains unconfined aquifer as shown in Schedule Va.</li> <li>c. There shall be no surface ponding as a result of the discharge, or direct discharge into any water body.</li> <li>d. There shall be no increase in the concentration of pathogenic organisms in any surface water body as a result of the discharge.</li> <li>e. Either: <ul style="list-style-type: none"> <li>i. The point of discharge shall be no less than 600 mm above the highest seasonal groundwater table; or</li> <li>ii. The discharge shall not result in, or contribute to, a breach of the "Drinking Water Quality Standards for New Zealand" (Ministry of Health, 2005 (Revised 2008)) in any groundwater body after reasonable mixing.</li> </ul> </li> <li>f. The discharge shall not cause any emission of offensive or objectionable odour, or release of noxious or dangerous gases (including aerosols) beyond the boundary of the subject property.</li> <li>g. Either: <ul style="list-style-type: none"> <li>i. discharges from pit privies shall be from privies constructed in soil with a soil texture category of 2 to 6 as per AS/NZS 1547 that has an infiltration rate not exceeding 150 mm/h; or</li> <li>ii. all other discharges shall be into a land treatment field that complies with the requirements specified in Figure 6.</li> </ul> </li> <li>h. Compliance with any conditions of a resource consent held for the activity.</li> <li>i. The wastewater treatment and land application system shall be maintained in accordance with the manufacturer's instructions, or if no manufacturer's instructions exist, in accordance with the best management practice as described in AS/NZS 1547, or TP58: On-site Wastewater Systems: Design and Management Manual (Auckland Regional Council Technical Publication No. 58), or other alternative recognised on-site wastewater design manuals. A schedule of</li> </ul>		

<sup>1</sup> Any existing sewage system that is modified or replaced after 1 January 2012 is considered to be a 'new' system and must be assessed in accordance with Rule 37.

NOTE: Rule 35 means that once a system has been lawfully established, the system's continued operation is permitted under this rule. No ongoing consent is required for the operation of lawfully established discharges provided the conditions of this rule are met.

Rule	Activity	Classification	Conditions/Standards/Terms	Matters for Control/Discretion	Non-notification
			<p>maintenance shall be kept, and this schedule shall be available for inspection by the Regional Council upon request.</p> <p>j. The discharge shall not be disposed of by way of spray irrigation.</p>		
<p><b>36</b></p> <p><b>Existing high discharge volume sewage systems</b></p> <p><i>Refer to POL 16, 17, 18, 71, 75</i></p>	<p>The discharge of contaminants onto or into land, and any ancillary discharge of contaminants into air, from any existing sewage-system with a discharge volume exceeding 2m<sup>3</sup>/day averaged over any 7 day period.</p>	<p><b>Restricted discretionary</b></p>	<p>a. The discharge shall not occur over the Heretaunga Plains or Ruataniwha Plains unconfined aquifer as shown in Schedule IV.</p> <p>b. There shall be no surface ponding as a result of the discharge, or direct discharge into any water body.</p> <p>c. There shall be no increase in the concentration of pathogenic organisms in any surface water body as a result of the discharge.</p> <p>d. Either:</p> <p>i. The point of discharge shall be no less than 600 mm above the highest seasonal groundwater table; or</p> <p>ii. The discharge shall not result in, or contribute to, a breach of the "Drinking Water Quality Standards for New Zealand" (Ministry of Health, 2005-(Revised 2008)) in any groundwater body after reasonable mixing.</p> <p>e. The discharge shall not cause any emission of offensive or objectionable odour, or release of noxious or dangerous gases (including aerosols) beyond the boundary of the subject property.</p>	<p>a. Method of treatment.</p> <p>b. Method of disposal.</p> <p>c. Effluent application rate.</p> <p>d. Need for reserve area.</p> <p>e. Buffer zone requirements.</p> <p>f. Duration of consent.</p> <p>g. Review of consent conditions.</p> <p>h. Compliance monitoring</p> <p>i. Proximity to registered drinking water supplies</p> <p>j. Maintenance of system</p>	
<p><b>37</b></p> <p><b>New<sup>2</sup> sewage systems</b></p> <p><i>Refer POL 16, 71, 75</i></p>	<p>Except as provided for in Rule 35 or Rule 36, the discharge of contaminants (including greywater) onto or into land, and any ancillary discharge of contaminants into air, from a new sewage system.</p>	<p><b>Permitted</b></p>	<p>a. Where the wastewater receives no more than advanced primary treatment, the discharge shall be onto or into a property with a land area of no less than 2500m<sup>2</sup>.</p> <p>aA. Where the wastewater receives more than advanced primary treatment then:</p> <p>i. the discharge shall be onto or into a property with a land area of no less than 1000m<sup>2</sup>; and</p> <p>ii. the net site area to discharge volume ratio shall not be less than 1.5 m<sup>2</sup> per litre per day<sup>3</sup>.</p> <p>b. The rate of discharge of sewage (including greywater) shall not exceed 2 m<sup>3</sup>/d, averaged over any 7 day period.</p> <p>c. The treatment and disposal system shall be designed to cater for the peak daily loading.</p>		

<sup>2</sup> NOTE: New sewage systems include those systems installed after this Plan becomes operative, as well as those lawfully established sewage systems that have been modified or replaced since 1 January 2012.

<sup>3</sup> NOTE: The net site area to discharge volume ratio can be calculated by dividing the net site area by the expected daily wastewater volume. If the answer is less than 1.5, the discharge does not comply with this condition. e.g. a 1000 m<sup>2</sup> property with a three bedroom home on it with maximum daily discharge volume of 1200 L (6 people at 200 L/p/d) has a ratio of 0.83 (1000/1200). This discharge would not comply with this condition.

Rule	Activity	Classification	Conditions/Standards/Terms	Matters for Control/Discretion	Non-notification
			<ul style="list-style-type: none"> <li>d. The discharge shall not occur over the Heretaunga Plains or Ruataniwha Plains unconfined aquifer as shown in Schedule IV.</li> <li>e. The discharge and land treatment field shall not be within 20 m of any surface water body (including any stormwater open drain or roadside drain), or any tile drain or within 1.5 metres of any property boundary.</li> <li>eA. The system shall be designed and installed in accordance with the requirements specified in Figure 6.</li> <li>f. There shall be no surface ponding as a result of the discharge, or direct discharge into any water body.</li> <li>g. The discharge shall be distributed evenly over the entire disposal area.</li> <li>h. There shall be no increase in the concentration of pathogenic organisms in any surface water body as a result of the discharge.</li> <li>i. At the time of installation and commencement, the discharge shall not occur within 30 m of any bore drawing groundwater from an unconfined aquifer into which any contaminant may enter as a result of the discharge.</li> <li>j. The point of discharge shall be no less than 600 mm above the highest seasonal groundwater table.</li> <li>k. The discharge shall not result in, or contribute to, a breach of the "Drinking Water Quality Standards for New Zealand" (Ministry of Health, 2005 (Revised 2008)) in any groundwater body after reasonable mixing.</li> <li>l. The discharge shall not cause any emission of offensive or objectionable odour, or release of noxious or dangerous gases (including aerosols) beyond the boundary of the subject property or on any public land.</li> <li>m. For discharges using pit privies: <ul style="list-style-type: none"> <li>i. the privy shall be constructed in soil with an infiltration rate not exceeding 150 mm/h, and</li> <li>ii. the privy shall not be the primary wastewater system for any permanently occupied dwelling.</li> </ul> </li> <li>n. The system shall be designed, constructed, operated and maintained in a manner which ensures that there is no clogging of the disposal system or soils.</li> </ul>		

Rule	Activity	Classification	Conditions/Standards/Terms	Matters for Control/Discretion	Non-notification
			<p>nA. The discharge shall not be into a trench or bed disposal system constructed in category 5 or 6<sup>4</sup> soil except where wastewater receives at least secondary treatment.</p> <p>o. Where the wastewater receives secondary treatment or better, the discharge shall not exceed 20 g/m<sup>3</sup> of BOD, and 30 g/m<sup>3</sup> of suspended solids.</p> <p>p. The wastewater treatment and land application system shall be maintained in accordance with the manufacturer's instructions, or if no manufacturer's instructions exist, in accordance with the best management practice as described in AS/NZS 1547, or TP58: On-site Wastewater Systems: Design and Management Manual (Auckland Regional Council Technical Publication No. 58), or other alternative recognised on-site wastewater design manuals. A schedule of maintenance shall be kept, and this schedule shall be available for inspection by the Regional Council upon request.</p> <p>q. The discharge shall not be disposed of by way of spray irrigation.</p> <p>r. The discharge shall not be into a raised bed.</p>		

**ADVISORY NOTE:**

**Non compliance with rules** - If all relevant conditions of Rule 35, 36, or 37 cannot be complied with then the activity is a discretionary activity under Rule 52.

<sup>4</sup> A category 5 soil is a light clay, permeability ( $K_{sat}$ ) can range generally between 0.5 m/d (strongly structured) and <0.06 m/d (weakly structured or massive) and the soil is poorly drained. Clay content of approximately 35-40%. Category 6 soils are medium to heavy clays that are very poorly drained. The permeability of category 6 soils is generally less than 0.06 m/d. Clay content of over 40%.

## FIGURE 6: Design specifications for sewage systems

### 6.1 Design Flow Allowances for sewage systems

Source	Minimum wastewater flow allowance in L/person/day	
	On-site roof water tank supply	Reticulated community/bore water supply
Households	180	200
Households (blackwater only)	60	60
Households (greywater only)	90	120
Motels/hotels		
- Guests, resident staff	220	220
- Non-resident staff	30	30
- Reception rooms	20-30	20-30
- Bar trade (per customer)	20	20
- Restaurant (per diner)	25-30	25-30
Community halls		
- Banqueting	20	30
- Meetings	10	15
Tea rooms (per customer)		
-Without restroom facilities	10	15
-With restroom facilities	15	25
School (pupils plus staff)	15-30	15-30
Rural factories, shopping centres	30	50
Camping grounds		
- fully serviced	100	130
-recreation areas	50	65

NOTE: For the purposes of determining building occupancy, Hawke's Bay Regional Council adopts an occupancy of 2 people per room, excluding bathrooms, kitchens, laundries and any other room that cannot feasibly be used as a bedroom

## 6.2 Irrigation Systems

### 6.2.1 Maximum design irrigation rates for irrigation systems

Soil category	Soil texture	Design irrigation rate (mm/day)
1	Gravels and sands	5
2	Sandy loams	5
3	Loams	4
4	Clay loams	3.5
5	Light clays	3
6	Medium to heavy clays	2

### 6.2.2 Design specifications for Irrigation systems

- a) Irrigation lines placed on the surface shall be pinned to the surface and covered with at least 100 mm depth of media.
- b) Subsurface irrigation lines shall be installed at a maximum depth of 200 mm below ground level and covered with at least 100 mm depth of cover.
- c) Maximum spacing of 600 mm in Category 1 and 2 soils and 1000 mm in all other soil categories, as defined by AS/NZS 1547.
- d) Secondary treated wastewater shall be applied evenly across the entire land treatment field.
- e) On sloping ground the design irrigation rate (DIR) shall be decreased to ensure that effluent migration down slope is taken up adequately within the top soil and plant root system. Required reductions according to slope are as follows:
  - i) Flat slopes and up to 10% - no reduction;
  - ii) 10% to 20% - reduction in DIR value of 20%;
  - iii) 20% to 30% - reduction in DIR value of 50%; and
  - iv) >30% - specialist advice required.



### 6.3 Trenches or Beds

#### 6.3.1 Maximum design loading rates for trenches and beds

Soil category	Soil texture	Structure	Design loading rate		
			Primary treated effluent		Secondary treated effluent (mm/d)
			Conservative rate (mm/d)	Maximum rate (mm/d)	
1	Gravels and sands	Structureless	20 (see note 1)	35 (see note 1)	50 (see note 1)
2	Sandy loams	Weakly structured	20	35	50
		Massive	15	25	50
3	Loams	High/mod structure	15	25	50
		Weakly structured / Massive	10	15	30
4	Clay loams	High/mod structure	10	15	30
		Weakly structured	6	10	20
		Massive	4	5	10
5	Light clays	Strongly structured Mod structured / Massive	Consent required – see Rule 37(nA)	Consent required – see Rule 37(nA)	Consent required – see Rule 37(nA)
6	Medium to heavy clays	Strongly structured Mod structured / Massive	Consent required – see Rule 37(nA)	Consent required – see Rule 37(nA)	Consent required – see Rule 37(nA)

Note 1: The treatment capacity of the soil and not the hydraulic capacity of the soil or the growth of the clogging layer govern the effluent loading rate of category 1 soils. Category 1 soils require special design.

#### 6.3.2 Design specifications for trenches or beds

- Trenches must be at least 400 mm deep and 300 mm wide and have a depth of aggregate of 200 mm to 400 mm.
- They shall be no longer than 25 m long, and there must be a spacing of at least 1000 mm between adjacent trench walls
- Beds must be at least 1000 mm wide, with a minimum spacing of 1000 mm between adjacent bed walls
- Multiple distribution lines to be included where beds are more than 1.5 metres in width
- Both trenches and beds must be backfilled with distribution media and covered with a minimum 150 mm of topsoil
- The discharge shall be pumped, or dosed in fixed quantities so that the wastewater is applied evenly across the entire land treatment field
- Gravity drainage to trench and beds is not permitted unless a specifically designed siphon system is used to provide dose loading and distribution over the entire trench or bed area at any one time
- Trenches or beds shall not be constructed on slopes of greater than 15 degrees (approximately 27 % slope).

## REGIONAL RESOURCE MANAGEMENT PLAN GLOSSARY ADDITIONS BY CHANGE 3:

### **Advanced primary treatment**

in relation to the treatment of wastewater, means primary treatment with the addition of an effluent outlet solids control device (outlet filter).

### **AS/NZS 1547**

means the Australian/New Zealand Standard for On-site domestic wastewater management, published 24 February 2012 and referred to as AS/NZS 1547:2012.

### **Net site area (NSA)**

means a single contiguous area of a property set aside for the exclusive use of its owners, leasees or tenants and shall exclude all common use areas, access lots or access strips and entrance strips.

### **On-site wastewater system**

See 'on-site sewage treatment system.'

### **Raised bed**

means an area that wastewater is discharged into/onto that has been raised above surrounding ground level by the importation of additional soil/fill. For the purposes of this definition, raised beds include Wisconsin Mounds and ETA/ETS design where these are built up above the existing ground level.

### **Wastewater**

means all water or other liquid including waste matter in solution or suspension from any source which is to be discharged into a wastewater system. Wastewater includes sewage, greywater and blackwater.

### **Wastewater system**

means a system for the collection, treatment and disposal of wastewater. It includes on-site sewage treatment systems, and reticulated wastewater systems.

## REGIONAL RESOURCE MANAGEMENT PLAN GLOSSARY AMENDMENTS BY CHANGE 3:

### **On-site sewage treatment system**

A system used for the collection, treatment and land application of wastewater within the boundary of the same property title that generate that wastewater. Treatment systems include basic septic tank units, alternative septic tank units, dry vault units (e.g. pit privies), wet vaults (e.g. septic closet) systems for blackwater with separate greywater disposal (e.g. sullage tanks), aerated wastewater treatment systems, sand media and alternative filters, wetlands etc. Disposal systems include soakage trenches and beds, modified trench and bed systems relying in full or in part on evapo-transpiration, subsurface and surface irrigation systems, absorption wells/infiltration pits, and above ground treatment/disposal (fill and mound) systems.

See also definitions of 'blackwater', 'greywater', 'septic tank' and 'sewage.'

### **Point of discharge**

in relation to a drainage system, means the location in a system that the drainage system operator ceases to control the discharge to the environment.

in relation to on-site sewage treatment systems, means the depth below or above ground level that a distribution line is placed, or if a trench or bed is used, the base of that trench or bed (not the depth at which the distribution line is placed within the trench or bed).