

Desludging of Septic Tanks on CWMS

Testing has demonstrated that septic tanks on Community Wastewater Management Systems may be desludged based on a risk-based approach rather than adhering strictly to the four-yearly schedule specified in the Onsite Wastewater Systems Code.

The risk matrix is intended as a decision support tool to guide that approach. It should be applied at a catchment wide level and interpreted in conjunction with the Council or Water Industry's overall risk appetite. This matrix will be subject to ongoing review and refinement as additional data and results become available.

This is a two-staged assessment process. Step 1 involves a screening assessment to determine whether a catchment is suitable for consideration for an extended pump out frequency. Step 2 applies a scoring assessment to evaluate the overall risk level associated with the catchment.

Additionally, it is recommended that a CCTV inspection be undertaken of the existing gravity drains (or at least part of the network) prior to any change occurring.

Step 1

If the answer is **YES to any** of the following questions, the desludging frequency should not be changed from 4 yearly:

- Is the catchment in a critical area?
e.g. in an environmentally sensitive, highly trafficked or populated area?
- Would a spill/surcharge in the catchment area result in a volume that constitutes a Priority Type 1 or Type 1 Notifiable incident under the EPA reporting criteria?
Any untreated wastewater surcharge to an area with general public access and potential for high risk exposure (e.g. drinking water source, childcare facility, schools, aged care facilities, markets, commercial food preparation areas and recreational areas) where public access is not controlled. Or, Discharge of > 100kL of wastewater with controlled public access
- Are there any trade waste customers with a high potential for generation of FOG (fats oils and grease) within the catchment area?
e.g. fast-food outlets, pubs, commercial kitchens?

- Does the catchment consist of Vitrified Clay pipes (VC)?
- Is there a high ground water table or highly reactive soils?

Only Proceed if all answers are No

Step 2

Assess the catchment on each risk factor as outline in the following tables and tally up the total points.

Based on the total score review the desludging frequency for the catchment area.

Total Score	Suggested Frequency
≤ 10	8 year desludging frequency can be trialled
≤ 12	8-year desludging frequency may be trialled based on Council's risk appetite (noting increased risk to downstream infrastructure)
> 12	Change in frequency not recommended

Risk Factor	Low Risk (1 point)	Medium Risk (2 points)	High Risk (3 points)	Score
Occupancy & Usage Patterns	Primarily permanent residents, stable wastewater generation. Good user education on flushables.	Mixed occupancy, some seasonal peaks. Some holiday homes with risk of intermittent high loads. Some user education on flushables.	High variation in wastewater generation (e.g. rental properties, seasonal influx) High proportion of holiday homes with wet wipes, fats, oils, and grease Poor user education on flushables	
Septic Tank Age	<20 years (Newer tanks, minimal root ingress and deterioration)	20-35 years (Moderate age, potential for some root ingress)	>35 years (Old tanks, higher risk of root ingress, cracks, and structural deterioration). Smaller residential septic tanks if pre-1988.	
Scour Velocity in Gravity Drains calculated at Hydraulic Design Load (HDL)	Achieves self-cleansing velocity > 0.6 m/s ¹	Velocity between 0.4 - 0.6 m/s ²	Velocity < 0.4 m/s ³ <u>or</u>	
Blockage history in past 4 years (catchment wide)	0 blockages	< 1 blockage per 1000m pipe	>1 blockage per 1000m pipe	
Pump Station Type	Network is predominantly centrifugal pumps (typically submersible pumps underground)	Network is combination of centrifugal and positive displacement pumps or positive displacement pumps with macerators	Network is predominantly positive displacement pumps (typically above ground in a shed or directly above the sump) with no macerators	
Scour Velocity in Rising Mains	>0.9m/s and Macerator pumps fitted	Between 0.5m/s and 0.9m/s STEDS/sewer or Macerator pumps fitted	<0.5m/s ⁴	
Treatment Type	Inlet screen and balance tank installed prior to any mechanical treatment. Disc filtration prior to irrigation.	Inlet screen <u>or</u> balance tank installed prior to any mechanical treatment. Facultative lagoons with no screening.	No Inlet screen <u>or</u> balance tank installed prior to any mechanical treatment. No filtration prior to irrigation.	
Access Points for Cleaning and Maintenance	Good accessibility.	Some missing/buried IPs but generally accessible.	Poor accessibility. Limited, missing or IPs that have been covered.	
Total Points				

¹ DN100 @ 0.4% with HDL > 0.8 L/s or DN150 @ 0.5% with HDL > 2.0 L/s

² DN100 @ 0.4% with HDL between 0.5 - 0.8 L/s or DN150 @ 0.5% with HDL between 1.0 - 2.0 L/s

³ DN100 @ 0.4% with HDL < 0.5 L/s or DN150 @ 0.5% with HDL < 1.0 L/s

⁴ Cleansing velocity for STEDS systems per Section 6.3.3 of LGA CWMS Design Criteria 2019