

## **10.6. DRAFT ON-SITE SEWAGE MANAGEMENT STRATEGY - ATTACHMENTS**

Attachment Titles:

1. Draft On-site Sewage Management Strategy SVC-RP-STY-007-01

**Attachment 1 - DRAFT Onsite Sewer Management Strategy - SVC-RP-STY-007-01**



<b>Policy Title</b>	Draft Onsite Sewer Management Strategy
<b>Policy Category</b>	Legislative
<b>Number &amp; Version</b>	SVC-RP-STY-007-01
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**1. STRATEGIC PURPOSE**

This strategy applies to all land within the SVC LGA that is not serviced by the reticulated sewerage infrastructure; this includes all existing and proposed installations of on-site sewage management systems.

**2. POLICY STATEMENT**

This Strategy addresses specific treatment systems, management practices, environmental monitoring and regulatory regimes in complying with the environment and public health principles of the Local Government (General) Regulation, 2021. Where cumulative effects from failing on-site sewage management systems result in degradation of the environment, this Strategy incorporates the principles of Ecologically Sustainable Development (ESD), Total Catchment Management (TCM), Water Cycle Management (WCM) and protection of public health to mitigate the long-term impacts.

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## Background

The landscape and its water.

There are many competing uses on the waterways that flow through the Snowy Valleys Council (SVC) local government area (LGA) with this including water catchment, hydro power diversions, industry, agricultural and recreational and these are consistent with requiring access to a clean and a healthy water resource. Up to 80% of the upper Murray catchment remains forested, much of which is national park and state forest, encompassing diverse environments from alpine grasslands and wetlands to heavily timbered forest. The eastern section of the upper Murray catchment is rugged mountain country and about 100 km from the Murray's source; the mountains give way to steep hills and deep alluvial valleys used for dryland grazing, dairying, forestry and niche horticultural crops. The Snowy Mountains Hydro-electric Scheme is also located in the upper Murray and Murrumbidgee catchments.

The waterways in the SVC LGA form are an important part of the Murray-Darling basin with the upper River Murray catchment taking in the headwaters of the Murray and its many tributaries extend about 300 km to the Hume Dam; the Murrumbidgee River winds through the alpine regions of Kosciuszko National Park and the Monaro High Plains, with the Tumut River forming the largest tributary to the Murrumbidgee River. Most upland streams receive flow from fractured granite and sedimentary rock aquifers and alluvial groundwater and this is associated with the floodplains of some streams and rivers.

The upper River Murray rises at an elevation of over 1,000 m where snow lies on alpine meadows for several months each year. Average annual rainfall at the head of the catchment is about 1,500 mm. Other creeks and rivers that rise and merge in the mountains, meet the Murray River as it flows through the foothills, with this including the main tributaries of Swampy Plain and Tooma rivers and the Tumbarumba Creek.

## Regulatory

SVC was established on the 12 May 2016 following an amalgamation of Tumbarumba and Tumut Shire councils. In addition to the SVC's reticulation network the LGA has an extensive number of on-site sewage management systems. There was a number of environmental constraints identified in the Tumbarumba and Tumut Local Environment Plans that potentially place limitations on onsite sewage management systems with these including topography and slope; flooding and drainage (all settlements to some extent); and drinking water catchment considerations.

In approving the design, operation and maintenance of sustainable on-site sewage management systems and combining this with regular monitoring for early detection of failing systems it is expected that this will assist in minimising contaminated water flows. Preservation and protection of catchment areas is a paramount consideration of the onsite sewage management strategy in developing sustainable environmental and good public health outcomes.

**Scope**

This strategy applies to all land within the SVC LGA that is not serviced by the reticulated sewerage infrastructure; this includes all existing and proposed installations of on-site sewage management systems.

Under *the Local Government Act 1993*, an on-site sewage management system or a sewage management facility is defined as:

- a human waste storage facility; or
- a waste treatment device intended to process sewage, and includes a drain connected to such a facility or device.

Consequently, this Strategy incorporates the following on-site sewage management systems:

- a) chemical closets;
- b) combustion closets;
- c) wet composting closets;
- d) waterless composting closets;
- e) septic closets;
- f) septic tanks;
- g) holding tanks used for the receipt and storage of effluent (other than those intended to be emptied after each use, such as chamber pots);
- h) waste treatment devices designed to comminute or macerate and discharge sewage to a sewerage system;
- i) waste treatment devices that mechanically recirculate sewage through a bed of sand to produce treated effluent;
- j) waste treatment devices that receive and treat sewage before discharging effluent to a common effluent drainage scheme;
- k) Aerated wastewater treatment systems (AWTS) devices that use aeration to produce treated bio-solids and effluent from sewage;
- l) any other kind of sewage management facility specified in a notice published in the Gazette by the Director-General for the purposes of clause 40 of the Local Government (General) Regulation, 2021.

## **Principles**

This Strategy addresses specific treatment systems, management practices, environmental monitoring and regulatory regimes in complying with the environment and public health principles of the Local Government (General) Regulation, 2021. Where cumulative effects from failing on-site sewage management systems result in degradation of the environment, this Strategy incorporates the principles of Ecologically Sustainable Development (ESD), Total Catchment Management (TCM), Water Cycle Management (WCM) and protection of public health to mitigate the long-term impacts.

### Ecologically Sustainable Development

The precautionary principle, states if there are threats of serious irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. Ecologically Sustainable Development (ESD) is development that seeks to conserve and protect ecological processes, on which all life depends, whilst meeting the wants and needs of the community, ensuring that the total quality of life, both now and in the future, can be maintained and improved.

### Water Cycle Management

Water cycle management involves decision making which integrates all the natural components of the water cycle including rainfall, rivers, oceans and groundwater and the physical links between these, such as evapotranspiration and surface run-off. It also includes managed components of the water cycle including the supply of water for domestic, industrial and agricultural purposes, and the treatment and release of sewage and stormwater.

On-site sewage management systems can potentially have a significant impact on the water cycle through the contamination of ground and surface waters with microorganisms and nutrients. Consequently, all policies and decisions regarding on-site sewage management systems need to consider these impacts.

### Catchment Management

Catchment management involves the coordination, sustainable use and integrated management of land, water, vegetation, and other natural resources on a water catchment basis. Thus, the implication of providing and managing wastewater services on a catchment wide basis is considered.

### Protection of Public Health

The recognition that clean water sources are a valuable and in demand resource has led to increasing campaigns to reuse wastewater. It is essential that wastewater reuse is practiced and managed with the primary focus being towards maintaining public health standards.

### Standards and Guidelines

The following Acts, Regulations, Standards, Guidelines, Policies, and Strategies govern the installation, operation and maintenance of on-site sewage management systems:

- *Local Government Act 1993*
- Local Government (General) Regulation 2021
- *Protection of the Environment Operations Act 1997*
- Australian/New Zealand Standard AS/NZS) 1546.3:2017- Secondary Treatment Systems
- Australian/New Zealand Standard (AS/NZS) 1547:2012 – On-Site Domestic Wastewater Management
- NSW Department of Health Certificates of Accreditation for Septic Tanks
- NSW Department of Health Greywater Reuse in Sewered Single Domestic Premises.

#### Local Government Act 1993

*The Local Government Act 1993* provides the legal framework for the management of on-site sewage systems in New South Wales (NSW). This Act delegates responsibility to Council's for the administering some regulatory systems under this Act, such as the Local Government (General) Regulation 2021. Further, this Act also makes allowances for the issuing of orders and penalties. In relation to on-site sewage management, Council may issue an order Under Section 124 of the LGA:

- To do or refrain from doing such things as are specified in the order to ensure that land is, or premises are, placed or kept in a safe or healthy condition;
- Not to use or permit the use of a human waste storage facility on premises after a specified date; or
- To comply with an Approval.

#### Local Government (General) Regulation 2021

The Local Government (General) Regulation 2021 governs the operation of on-site sewage management systems in NSW, identifying:

- a) What information is to be provided to Council to determine an application for Approval to install; providing accreditation of sewage management facilities;
- b) Minimum performance standards for on-site sewage management systems, i.e. 20/30/10 standard: indicating an effluent quality of  $\leq 20\text{mg/L}$  BOD,  $\leq 30\text{mg/L}$  suspended solids, and  $E. coli \leq 10 \text{ cfu}/100\text{mL}$ .
- c) Requiring owners:
  - i. To ensure regular inspections are undertaken on their system, and
  - ii. To apply to Council for an Approval to Operate.

The Regulation also provides the following regulatory meaning:

Approval required to operate a system of sewage management:

- Meaning of 'operate a system of sewage management'.
- Prescribed activity under section 68 of the Act.
- Matters considered in determining an application for approval of a system of sewage management.

Operation of system of sewage management:

- Performance standards for operation of system of sewage management.



- Further conditions in relation to operation of system of sewage management.
- Approval to operate system of sewage management to extend to concurrent owners and occupiers.
- Transitional provision of temporary exemptions in relation to operation of system of sewage management.
- Transitional provision of temporary exemption for purchaser of land.

#### Protection of the Environment Operations Act 1997

*The Protection of the Environment Operations (POEO) Act 1997* came into effect on 1 July 1999, superseding the Clean Waters Act, Clean Air Act, Noise Control Act, Waste Management and Minimisation Act, and the Environmental Offences and Penalties Act.

This Act is the pivotal mechanism for reducing pollution and protecting the environment in NSW, enhancing regulatory powers to Authorised Officers, and augmenting the costs of penalties.

Under this legislation, an on-the-spot fine (tier 3 offence) for pollution of waters is \$750.00 for an individual and \$1,500.00 for a corporation. Further, it is an offence not to report a pollution incident, with penalties of up to \$250,000.

#### Australian Standards / New Zealand Standards

Australian New Zealand Standards (AS/NZS) 1546 and 1547 provide design criteria for septic tanks, and the sizing and selection of effluent disposal areas. AS/NZS 1547:2012 has been broadened in scope to:

- a) Include performance statements necessary to define outcomes and to accommodate new technologies.
- b) Provide the basic performance provisions for septic tanks (AS/NZS 1546.3:2017) and introduce performance requirements to cover all types of wastewater-treatment units and land-application systems.
- c) Set out the administrative and managerial responsibilities, and the education and training needed to ensure that on-site domestic-wastewater systems could be effective long-term options.
- d) Give guidance for on-site evaluation.
- e) Give guidance on soil assessment.
- f) Provide options for on-site domestic wastewater-treatment and land-application systems.
- g) Give guidance on design, construction and installation.

#### NSW Department of Health

The NSW Department of Health issues annual certificates of accreditation for septic tanks, collection well and other wastewater treatment systems. These certificates validate quality assurance, compliance with AS 1546 and the Local Government (Approvals) Regulation. Under the Local Government (General) Regulation, only NSW Health accredited septic tanks, holding tanks, pump stations, treatment tanks, composting toilets and worm farm systems may be installed.

The NSW Department of Health has released a policy for *Greywater Reuse in Sewered Single Domestic Premises* (2007). This document considers greywater in single domestic premises in seweraged areas based primarily on public health considerations according to the characteristics of greywater. The main purpose of the guideline is to outline the practices and conditions for seweraged residential premises using greywater treatment systems and manual bucketing and greywater application to land.

### Approval and Assessment of New Systems

Prior to installation or alteration of an on-site wastewater system a landowner must apply by application on the NSW Planning Portal. To lodge an application, you must first register an account on the NSW Planning Portal website:

<https://www.planningportal.nsw.gov.au/onlineDA>

Once logged onto the NSW Planning Portal website you will be prompted to select a S.68 form that constitutes an application form. Other documentation required with your application includes an 'Onsite Wastewater Management Report' covering the issues discussed below; a plumber's report (where the alterations can be constituted as minor) and an Owner's Consent Form. Once a Council officer has reviewed your application in the portal to make sure all the required information is uploaded, you will be notified. Following this the application is checked and accepted for lodgement and a 'fee estimate' generated; all fees are required to be paid prior to your application being formally lodged in Council's system. Only then is an assessment and decision made on an application.

The septic system must be installed as per the 'Approval to Install' permit and upon completion of the installation and an inspection for compliance with these install conditions will be undertaken prior to the issue of an 'Approval to Operate' permit. This is an essential pre-cursor before the Council or principal certifier can issue an Occupation Certificate.

The application for a new or amended 'Onsite Wastewater Management Report' will cover the following:

#### Sewage Management Facility

Under Clauses 40 and 41 of the Local Government (General) Regulation 2021 a local council can only approve a sewage management facility if it has been accredited by the NSW Ministry of Health. The types of sewage management facilities that accreditation applies to includes septic tanks, collection wells, aerated wastewater treatment systems, greywater treatment systems and composting toilets. Information on the type of sewage management facility to be installed and the designed onsite wastewater disposal system should be indicated in the Onsite Wastewater Management Report.

#### Site plans

A Plan (map) Showing the following setback distances to 'The System' of not less than 1:200:

- a) Any existing system, including drainage lines and disposal areas;
- b) The location of the septic system and extent of the effluent application area(s), i.e. the absorption trenches or irrigation field;
- c) The position of a cut-off drain for diverting surface waters;
- d) Buildings & structures, within 100 metres of the system;
- e) Setback between building and a septic system, 1.5 metre minimum;
- f) Any cut or fill at the system site or within 20 metres;
- g) Groundwater bores within 250 metres of effluent application area;
- h) Dams and ponds within 100 metres of the effluent application area;
- i) Natural or constructed drainage lines - (these can be wet or dry at the time);
- j) Property boundaries;
- k) Trees in the vicinity of the system;
- l) Roads, tracks, driveways, access gates;

- m) Fencing in the near vicinity of the system;
- n) Grazing areas in the vicinity of the system;
- o) Slope at the system location, given as a ratio e.g. 1:20; and
- p) 'North' point.

The Plan must be titled with the owners' names, the physical address and the legal description (Lot and DP) and be drawn to a metric scale.

#### Soil testing and water balance analysis

Soil testing and water balance analysis will be carried out prior to the installation of new systems. This will be carried out by a suitably qualified and competent person; such as a member of the Australian Society of Soil Science (Certified Professional Soil Scientist), an environmental scientist/engineer who is recognised by their industry body as being proficient or alternatively, has completed a suitable level of training in on-site wastewater management.

A soil assessment requires an observation of the soil profile, to a depth at least 600 mm below the bottom of the proposed effluent disposal method. In the case of trenches, that depth is about 1100 mm, whereas for a surface irrigation system it is 600 mm. Where the soil profile suggests that a lower horizon may continue to the depth suggested above, a shallower depth may suffice, or to heavy clay or refusal.

The soil profile description will include sufficient detail to accurately assess:

- a) The various horizons and the depths of each (typically three);
- b) The field texture for each horizon;
- c) The structure of each horizon (or an estimate);
- d) A description of soil colour for each horizon, including description of mottles;
- e) The identification of a limiting horizon on which a water balance will be based;
- f) The permeability of the soil, based on the limiting horizon, by a method set out in the AS 1547:2012;
- g) The soil chemical properties pH, electrical conductivity, salinity for each horizon;
- h) The results of the Emerson Aggregate Test;
- i) An indication of the soil sodicity;
- j) Depth to seasonal water table (observation or soil colour indicators); and
- k) Depth to end-of-hole, or refusal.

For the purpose of soil examination, a back-hoe pit, a soil auger hole or hand-dug hole in the area where the effluent will be discharged, is sufficient. The number of holes required will depend upon the changing soil type across the proposed land application area. Where the soil is variable, one hole at either extremity of the land application area and one in the middle may suffice. Where the soil profile is similar for each, only one profile will require testing and reporting.

#### Water Balance

A monthly water balance using at a minimum the average long term monthly rainfall and evaporation for the official recording station nearest the site can be used. Assumptions of runoff coefficients, crop factors and long-term absorption rates must also be stated. Median rainfall data are not acceptable.

Calculations set out in Appendix C have been adjusted for the rainfall and evaporation in the Council area. These values may be used in Option 1, in which case a separate water balance is not required. Additional rainfall values may be obtained from the Bureau of Meteorology.

**Buffer Distances for Effluent Disposal Areas (m)**

Table 1

Feature	Subsurface		Absorption System		Spray Irrigation	
	Upslope	Downslope	Upslope	Downslope	Upslope	Downslope
Dwelling	6	3	6	3	15	15
Driveway	6	3	6	3	6	3
Path	6	3	6	3	3	3
Pool	6	3	6	3	6	6
Permanent waters	100	100	100	100	100	100
Intermittent water	40	40	40	40	40	40
Property boundaries	6	3	6	3	12	6
Bores	250	250	250	250	250	250



Figure 2 – The Goobarrandra River; a pristine waterway in summer (P McCarthy / Snowy Valleys Council)

**Operation of AWTS**

AWTS are small sewage treatment plants that require regular servicing and maintenance. The owner is therefore, required prior to installation of the approved system to provide



Council in addition to the other information outlined in the 'Onsite Wastewater Management Report', provided the following:

- a) The owner must be required to enter into an annual service contract with a service agent authorised by the local council.
- b) The service agent must be able to provide service within 24 hours of being notified of a system malfunction.
- c) The service agent should offer an annual service contract of four services at 3-monthly intervals. Each 3-monthly service should include a check on all mechanical, electrical and functioning parts of the AWTS.

Manufacturers Specifications and Accreditation Certificate should include the:

- Full specifications of the on-site sewage management system to be installed.
- A copy of the current Certificate of Accreditation from the NSW Health Department.

Under the provisions of Clauses 40 and 41, Local Government (General) Regulation 2021, a local council must not approve of the installation of certain sewage management facilities unless they have been accredited by the NSW Department of Health. This is the only statutory role of NSW Health in on-site single domestic wastewater management.



Figure 3 – Polymer septic tank discharging into unmaintained and overgrown absorption trenches (Photo: P McCarthy / Snowy Valleys Council)

### Existing Systems

All on-site sewage management systems in the SVC LGA are subject to inspection after they have been approved and installed to ensure they still operate as conditioned and do not pose a risk to public health and the environment. The owner and occupier should be aware of the

operation and maintenance requirements for their system and must ensure that the necessary service contracts are in place. The owner or occupier must notify Council if their on-site sewage management system is failing and prior to having necessary repairs or replacement of the system ensure that they comply with Council compliance requirements. Written approval must be obtained from Council prior to commencing a modification or alteration to an existing system; as this will normally require a S.68 application to be submitted via the Planning Portal along with all of the necessary documentation previously outlined to enable a detailed assessment of the proposal.

The inspection frequency is determined by a risk classification as follows:

The level of risk will determine the frequency of inspection:

- **High Risk** systems expect to be inspected every two (2) years.
- **Medium Risk** systems expect to be inspected every five (5) years.
- **Low Risk** Systems expect to be inspected every ten (10) years.

All on-site sewage management systems will be allocated a risk rating according to their type, location and proximity to waterways and property boundaries as follows:

#### High Risk Systems

Septic Systems located within 100 meters of a permanent watercourse or within 12 metres of a property boundary or another residential dwelling.

Septic Systems located on commercial properties including cabins, caravan parks, bed & breakfasts, hotels, mines, etc.

#### Medium Risk Systems

Septic Systems on land 5 Hectares and less in size.

#### Low Risk Systems

Septic systems located on rural land greater than 5 Hectares provided they are not located within 100 meters of a permanent watercourse or within 12 metres of a property boundary or another residential dwelling.

Council inspectors will examine the following aspects of each of the components of an on-site wastewater system:

#### Wet systems

- The system is installed in accordance with relevant Approvals;
- The system is watertight and vermin proof;
- Stormwater does not enter the system;
- The treatment system does not overflow;
- The primary treatment system functions as required;
- The effluent quality appears acceptable limits;
- The system does not indicate unacceptable sludge or scum accumulation.

#### Aerated Wastewater Treatment Systems

- Current contract with servicing agent;
- Servicing is up-to-date;
- Servicing reports received by Council, as required.



AWTS systems are considered by Council as low risk systems, unless the setbacks are insufficient as outlined in the table 1 buffer distances and as long as the systems are being serviced.

The land application area:

- No obvious saturated soil or wet spots due to effluent rising;
- Land application area is well maintained;
- Irrigation system, where installed, meets conditions of relevant approval;
- Land application area is adequately fenced and has not been adversely impacted e.g. vehicle traffic impacts;
- Buffer distances are adequate and observed as per relevant approvals.



Figure 4 – Goobarragandra River photographed from the road towards Rock Flat camp site (P McCarthy/Snowy Valleys Council)

#### Small Lots

Homes on small lots of land less than 4000m<sup>2</sup> in unsewered areas should adopt the principles of efficient resource use when considering the options for onsite wastewater management. Reducing the volume of wastewater can be achieved by installing high water efficient fittings (minimum '3 stars' for appliances and minimum '4 stars' for fittings and fixtures) i.e. water efficient clothes washing machines, dual-flush toilets, water efficient dishwashers, aerated taps, hot and cold water mixer taps, hot water system fitted with a 'cold water diverter' which recirculates the initial flow of cold water until it is enough for a shower.

The feasibility of providing a reticulated sewerage system should be a consideration in the development of individual lots for subdivision proposals and where this leads to allotments smaller than 10,000 m<sup>2</sup> (1 hectare). This area should not be seen as a minimum lot size but a risk threshold, as lots smaller than 10,000 m<sup>2</sup> may be unable to retain all wastewater onsite.

### **Identification of Unsatisfactory Systems**

On-site sewage management systems are complex and can fail at any time if they are not designed, sited, installed, operated or maintained correctly. Improper operation and maintenance, possibly through a lack of awareness of how on-site sewage management systems function are common means by which systems fail.

Where a Council Officer or an accredited contractor undertakes an inspection, an unsatisfactory system can be identified as:

- surfacing or ponding wastewater above or near the disposal area;
- wet or boggy spots above the disposal area;
- sewage smells emanating from the tank or disposal area;
- excessive vegetation growth below the disposal area;
- drains and toilets running slowly or backing-up;
- broken or missing septic tank lid;
- septic tank requires desludging;
- wastewater (greywater and/or blackwater) diverted from the septic tank; and
- connecting pipework is faulty or broken.

The back flow of wastewater from the trench to the tank is also an indicator of system failure. This may indicate insufficient fall from the septic tank to the trench, or inadequate trench length.

Whilst an on-site sewage management system may be classified as 'satisfactory' (not displaying the above parameters). Such systems may still require the following works to be undertaken:

- Common repairs include re-fitting the on-site system with new inflows and outlets, locating an alternative drain field, upgrading or extending the existing drain field, or the use of other alternative technologies;
- Improper functioning is usually associated with the soil absorption field. The most common reason for failure of the absorption field is hydraulic overload. One retro-fitting option involves construction of a completely new disposal field, or a back-up absorption field which provides the ability to route tank water to either field.

### Failing Systems

Should your on-site wastewater disposal system be failing, the following steps should be immediately undertaken to rectify the problem:

- Seek advice from a qualified plumber or consultant to determine the source of the failure.
- Contact Council's Compliance Officers for advice on what upgrades are needed.
- Where required apply to amend/modify an onsite wastewater system by a S.68 approval via the NSW Planning Portal.



### **Council Responsibilities**

SVC's responsibilities include:

- Ensuring approval is sought for the implementation and operation of on-site sewage management systems within the Council area.
- Assessing applications for proposed systems.
- Identifying the potential risk posed by systems and classifying systems, as well as identifying sensitive areas from conducted site inspections.
- Enforcing compliance with operational standards, to protect public health and the environment, including orders and penalties for non-compliance.
- Determining renewal of approvals to operate an on-site sewage management system.
- Responding to complaints and pollution incidents.
- Considering long term goals and solutions for enhanced protection of public health, the environment and community amenity.
- Monitoring and reporting on the overall impact of on-site sewage management systems within the LGA through State of Environment Reporting.
- Development and maintain a register of on-site sewage management systems within the Council area.

### **Council Records**

#### Register

SVC's records will include a register of all on-site sewage management systems that have undertaken registration. The owner of an on-site sewage management system is required to register their system and obtain an 'Approval to Operate a System of Sewage Management'.

#### Education

SVC recognises its responsibility to provide appropriate information to owners. This will be through a program of inspections; information uploaded onto Council's website regarding onsite wastewater systems and via the distribution of information and fact sheets. It will also involve information to be provided for service agents, plumbers, builders and developers to ensure a consistent approach in inspection and certification.

Householders need to have a full knowledge of:

- System operation and maintenance requirements;
- Their responsibilities under the regulations;
- System selection and design of effluent application areas;
- The health risks involved if there is a systems fail;
- Emergency numbers if the system fails;
- Waste and water used minimisation principles and techniques;
- Managing the environmental impacts of wastewater; and
- Where to get further information.

**Glossary of Terms****Aerated wastewater treatment systems**

Aerated wastewater treatment systems treat all household wastewater and have several compartments. The first is a septic tank, but in the second compartment air is mixed with the wastewater to assist bacteria in the breakdown of solids. A third compartment allows for the settling of more solids before disinfection and discharge.

**Blackwater**

Human excreta and water grossly contaminated with human excreta.

**Catchment**

An area of land with natural features such as hills or mountains, from which all runoff water flows into a creek, river, lake, or ocean.

**Ecological Sustainable Development**

Development that improves the quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends.

**Effluent**

Wastewater discharging from a sewage management system.

**Effluent Application Area**

An area of land specifically designed for the application of effluent either by sub-surface absorption or by surface irrigation.

**Greywater**

Domestic effluent excluding toilet waste.

**Groundwater**

All naturally occurring underground waters.

**Human Excreta**

Human faeces and urine.

**LGA**

Local Government Area.

**On-Site Sewage Management System (OSSM)**

Any facility that stores, treats and/or disposes of sewage and wastewater on-site.

**Reticulated sewer**

Centralized sewerage system, consisting of a wastewater transport network, pumping stations, and treatment facilities designed to service multiple users concurrently.

**Regulation**

Local Government (General) Regulation 2021.

**Run-off**

The part of the precipitation of irrigated effluent that becomes surface flow because it is not immediately absorbed into or detained in the soil.

**Sewage**

Human wastewater and matter which usually passes through the reticulated sewer or an on-site sewage management system.

**Sewage Management**

Any activity carried out for the purpose of holding, processing, reusing, or otherwise disposing of sewage or by-products.

**Total Catchment Management**

Total Catchment Management is the coordinated and sustainable use and management of land, water, vegetation and other natural resources on a catchment basis so as to balance resource utilisation and conservation.

**Wastewater**

Blackwater and/or Greywater.

**HISTORY**

Date	Action	Name	Policy Number	Resolution Date	Resolution Number
29/09/2010	Supersede	On- site Sewerage Management Code	RP.02 v1.4	29/09/2010	
		Onsite Sewer Management Strategy	SVC-STY-007-01		

**References**

Bathurst Regional Council On-site sewage management strategy

Coffs Harbour On-site sewage management strategy

Lithgow City Council On-site sewage management strategy

Standards Australia/Standards New Zealand AS/NZS 1547:2012

<https://www.mdba.gov.au/water-management>