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Introduction

There are approximately 6000 properties within the Shire of Nillumbik that are not connected to mains sewerage and are serviced by an onsite wastewater disposal system (septic tank system). Wastewater if not properly managed can impact on both public health and the environment.

The purpose of this guide is to provide information to residents on Council’s requirements for onsite domestic wastewater treatment and disposal systems.

The document sets out the process for obtaining approval for your septic system.

It is divided into five parts

Part 1: Development on properties not connected to sewer: planning considerations
Part 2: Types of septic tank systems
Part 3: Submitting an application to install a septic tank system
Part 4: Obtaining a certificate to use a septic system
Part 5: Using and maintaining the septic system
Part 1: Development on properties not connected to sewer: planning considerations

When a property is located in an area that is not serviced by sewer, an approval from Council (Environmental Health) will be required for the septic system.

If the dwelling or proposal is located in an unsewered area the planning application will be referred to an Environmental Health Officer. Extensions, including studios or Dependent Person's Units may increase the waste load on an existing treatment system, therefore conditions will be placed on the permit to ensure that the septic system is able to cope with the new development/proposed extension. It must be noted that permission is required from Council prior to any installation or alteration of a septic tank system, even if a building permit or planning permit is not required.

Information for your planning application

When designing the septic system and indicative effluent disposal area the future use of the land must be considered. The location must meet the minimum setback distances to boundaries, watercourses (including dams), other buildings, swimming pools, tennis courts and driveways. These distances are found in Appendix 3.

The keeping of livestock and proximity of nearby trees and native vegetation should also be considered.

Along with the information required by planning, owners must consider the following details:

- location of existing septic system (this is so Council can be satisfied that the system will not be disturbed or built on)
- capacity (L) of existing septic tank: whether it is an all waste system (toilet waste and sullage) or a split system
- length and location of existing absorption trenches or irrigation area
- whether effluent is discharged offsite (into the stormwater drain)
- other relevant information such as the location of outbuildings, dams, creeks and fences
- location of effluent envelope – an effluent envelope may be designated on the site as part of the planning permit or Section 173 Agreement. All wastewater must be disposed of within this envelope unless consent has been given for disposal to occur in another location
- Land Capability Assessment (LCA) if required (see section on LCA, page 10).

In older dwellings, the wastewater disposal system may be required to be upgraded, or a new system installed, to comply with current requirements.

If a planning permit is required for the proposal it will have conditions in relation to wastewater disposal. Check the permit for these conditions and provide this information to the licensed plumber undertaking the work.
Part 2: Types of septic tank systems

All septic tank systems must be designed and installed in accordance with the Environment Protection Act 1970, State Environment Protection Policies, EPA Code of Practice, Australian Standards and other relevant publications.

Before any septic tank system can be used in Victoria, it must be approved by EPA. A list of EPA approved septic tanks are detailed online at www.epa.vic.gov.au/your-environment/water/onsite-wastewater Council only allows the installation of EPA approved septic tank systems.

Septic tank (primary treatment)

Septic tanks are generally made of concrete, have a 3200 litre capacity and are fitted with a baffle. All wastewater is gravity fed to a buried septic tank. Solids settle to the bottom, scum forms at the surface and anaerobic digestion of organic solids occurs. Refer to diagram below.

Effluent is discharged by either gravity or pump to absorption trenches. Septic tanks have no moving parts and generally require no power.

Sludge build-up or scum thickness reduces the available capacity for wastewater retention and should be pumped out every three to eight years. Failure to pump out the septic tank can result in solids passing into the absorption trenches, causing odour problems and the trenches to fail.

Use a stick with a strip of towelling attached to check sludge level in tank

Reasonably clear effluent is discharged to the disposal area for further treatment

Use a stick to clear any obstructions or blockages that may occur

When the scum is within 100mm of bottom of inlet and/or sludge is within 200mm of bottom of outlet, desludging of the tank is required to prevent any solids passing untreated and so clogging the disposal area
Septic tank and sand filter (secondary treatment)

The septic tank operates by passing effluent from a septic tank through a sand filter. Micro-organisms then aerobically oxidate the organic matters, which dissolve and suspend, resulting in secondary treatment. The surface area of the sand filter will be 18m² unless otherwise approved. Effluent can then be disposed by either gravity or pump to absorption trenches or subsurface irrigation. Refer to diagram below.

**Sand filter diagram**

![Diagram of sand filter installation]

**General arrangement of sand filter installation**

**Filter sand specification**
- Sand must be clean
- Effective size must be between 0.25mm and 0.6mm
- The uniformity coefficient must not be greater than 4
Aerated wastewater treatment system (secondary treatment)

Aerated wastewater treatment systems (AWTS) pass effluent from the septic tank into another tank where it is aerated by electrically powered blowers. Clarification and disinfecting chambers are commonly included in the aeration tank with sludge return to the septic tank. Aeration systems require regular maintenance by a suitable service technician, as well as a reliable power supply. The tank requires pumping out approximately every five years. See diagram below.

Alternative wastewater treatment systems

There are a number of EPA approved septic systems different to septic tanks and AWTS. These systems use a variety of methods to treat wastewater and aim to treat and retain water within property boundaries in an environmentally sustainable manner. A few of these methods are listed below. Refer to www.epa.vic.gov.au/your-environment/water/onsite-wastewater for the complete list of approved alternative systems.

Composting toilets

Composting toilets discharge waste into composting bins where heat is applied to remove liquid and remaining solids; the remaining waste must then be buried onsite. The unit requires a power supply and the composting toilet is only suitable for toilet waste. A separate treatment system such as a greywater treatment system is required to treat kitchen, laundry and bathroom wastewater.

Worm farm systems

Worm farms are single chamber composting units that use worms to treat effluent. They can treat all household waste including toilet, kitchen, bathroom and organic waste such as food scraps, cardboard and newspapers.
Effluent disposal types

A suitable effluent disposal area for your property is designed based on the type of system you have installed, soil type and amount of wastewater generated in the dwelling.

Absorption trenches

Absorption trenches are suitable for use on flat (usually parallel distribution) or slightly sloping sites (usually serial distribution) with good soil absorption. They can be used with all types of primary and secondary wastewater treatment units. Generally medium to heavy clay, gravels and sands are not suitable for absorption trenches.

Absorption trenches are excavated and the bottom filled with aggregate or crushed rock. Perforated (slotted PVC) piping or self-supporting arch trenching is placed in the trench. The piping is layered over with geotextile fabric or newspaper and then soil. Effluent flows into the trenches where it is absorbed through the trenching material and into the surrounding soil. The absorption process and the action of bacteria in the soil treat the effluent. Refer to diagrams below.
Subsurface irrigation

Subsurface irrigation is used when domestic wastewater is treated to a secondary level. It is distributed via flow emitters evenly spaced along a flexible low density polyethylene drip line.

The drip line is buried between 100-200mm below the ground and effluent is distributed slowly and uniformly over a large surface area. Good quality topsoil is spread over the area to assist in the absorption of the effluent and the growth of lawn is encouraged to assist in the transpiration of effluent. Refer to diagram below.
Low pressure effluent distribution
Low pressure effluent distribution (LPED) is a newer method of effluent distribution approved in the Australian Standards AS 1547:2012. This type of effluent distribution can work for primary treated (septic tank) effluent, whereas subsurface irrigation needs to be secondary treated effluent. Using even dosing of effluent into the trenches absorption and evaporation is more effective.

Where an irrigation system is used:
- recycled water must not make contact with edible parts of herbs, fruit and vegetables
- standard household hose taps and garden fittings must not be used. All irrigation pipe work and fittings must comply with AS 2698 and be purple in colour for easy identification

Pump wells
A pump well is required where:
- there is insufficient fall to allow the effluent to reach the disposal area via gravity
- the effluent disposal area is located a significant distance from the treatment system
- the effluent disposal area is located at a point higher than the treatment system

A pump is installed in a pump well and fitted with a visual or audio alarm which activates when the pump fails. Pump sets should be submersible and driven by motors rated at 0.2 kw or more, or as specified by the manufacturer. The storage capacity of a pump well must be equal to the pump’s ability to handle the peak hourly flow from the septic tank plus emergency storage.

Cartridge filter
All irrigation systems installed in the Shire of Nillumbik are required to include an approved filter. The filter is to be installed on the pump discharge line to protect pipe work from any effluent solids being carried over from the sewage treatment plant into the irrigation lines.

The filter must:
- have a minimum of 40mm inlet and outlet diameter pipe fittings
- have a filtration mesh size that meets the irrigation line manufacturer’s specifications
- be mounted to enable easy accessibility for maintenance.

The filter needs to be cleaned out regularly. Refer to image on the right. Reference: AS/NZS 1547:2012
Part 3: Submitting an application to install a septic tank system

There are several steps involved in preparing the application to install or alter a septic tank system.

Septic tank application form

The application form is completed by the licensed plumber undertaking the works. The permit to install the septic tank system is issued to the person nominated as the applicant.

The application form must be completed and signed by both the plumber and the owner. Being submitted with the correct information and accurate plans depicting any conditions of the planning permit will lead to a timely site inspection and issue of permit. Incomplete application forms will be returned to the applicant resulting in a delay. Council has a maximum of 42 days to respond to an application to install/alter a septic system.

Permit applications can be submitted to Council by either:
- in person to Nillumbik Shire Offices, Civic Drive, Greensborough
- by post: Environmental Health, PO Box 476, Greensborough, VIC, 3088

Fees

Fees payable upon submission of the certificate application include:
- fee to install a new septic tank system; or
- fee to alter a septic tank system

The Certificate to Use a Septic Tank System is included as part of the application fee.

Contact Council for the current fee amounts if not included on the application form.

The septic tank system must be installed within two years of the permit issue date. The owner is able to apply to extend the septic application for a maximum of 12 months for an additional fee.
Site plans
A detailed site plan (scale – no less than 1:500) showing the location and design of the septic tank system must be provided. Refer to Appendix 1. The site plan must include:
• all boundaries (showing names of abutting streets if applicable)
• all buildings or proposed buildings (including floor layout),
• streams, dams, gullies, significant vegetation, water tanks, swimming pools, excavations/embankments, stormwater drains, water pipes and driveways
• details of the proposed septic tank system, including the tank and the dimensions of the effluent disposal area
• if the application is to alter an existing septic tank system, details and location of the existing septic tank and effluent disposal
• location of any easements affecting the property
• a north direction indicator.

Soil testing
In areas where soil permeability is poor or where there are identified areas of high levels of clay or rock, a soil permeability or soil assessment test must be conducted in accordance with the Australian Standards AS1547.

A soil test confirms the limitations in soil profile for the proposed effluent disposal area and is used to determine the size, and the most appropriate type of disposal method. Contact Council's Environmental Health Unit to confirm if a property requires a soil test to be conducted.

Land Capability Assessment
During the planning process, Council may request a comprehensive land assessment to establish the capability of the site to manage wastewater, within the allotment boundaries, in a sustainable manner. This is called a Land Capability Assessment (LCA).

A LCA may be required for both new dwellings and alterations to existing dwellings if the following site restrictions are present
• small size allotments (less than 6,000 square metres)
• lots heavily constrained by vegetation
• steep topography, poor draining soils, shallow depth to bedrock, flood prone areas
• building or effluent disposal located close to waterways, dams, gullies or drainage lines
• high loading due to large dwelling size (significant number of habitable rooms)

Where one, or more, of these site restrictions apply to a property, a LCA must be submitted. The MAV Land Capability Assessment Framework must be undertaken in accordance with the www.mav.asn.au/policy-services/environment/water/domestic-wastewater/Pages/default.aspx. This is to ensure all wastewater generated can be contained within the property boundaries with minimal risk to the environment or human health.

A qualified geotechnical engineer or soil-testing assessor must complete the LCA. The assessor should be aware of current requirements for LCA's. The report will recommend a location and design for the septic system and disposal method based on results from the assessment. Council assesses each LCA submitted as part of the application process. Where the LCA is deemed to be inadequate or the requirements of the above framework have not been fulfilled Council may reject the LCA or request an amended report be provided.

A range of soil testing and geotechnical companies perform these assessments. It is the responsibility of the property owner to be satisfied that the LCA assessor has the relevant skills and experience in completing these reports and that they have adequate professional indemnity insurance. Council recommends obtaining a number of quotes before commissioning any LCA due to wide variations in experience and training of assessors and the cost of reports.
Plumbers and drainers
A septic system and/or the disposal method must only be installed or altered by a licensed plumber or drainer. It must be completed in accordance with the conditions on the Permit to Install and the approved site plan.

Plumbing work must also conform to the requirements of the EPA - Code of Practice Onsite Wastewater Management (891.3) and Australian Standard 1547. The Victorian Building Authority requires plumbers to provide a Compliance Certificate to owners for all works equal to, or greater than, $750. Further information on plumbing regulations is available from the Victorian Building Authority. A copy of this Compliance Certificate must be forwarded to Council upon completion of the works.

Site inspections
Council’s Environmental Health Officers will organise a site inspection of the property upon receipt of an application to install/alter a septic system. The officer may contact the owner for permission to enter the property and/or organise to meet the plumber onsite.

Once the inspection has been completed and all requirements fulfilled, a Permit to Install will be issued. Once the permit has been issued the septic system can be installed. The Permit to Install will have conditions required for the satisfactory installation of the system. Ensure that these conditions are complied with.

Process to obtain a permit to install or alter a septic tank system

To obtain a permit to install or alter a septic tank system you need to:

1. check your planning permit for any conditions relating to the septic system and effluent disposal area
2. discuss the types of septic tank systems available (see Part 2) and the best type of system to meet your needs with your licensed plumber
3. if required, a soil permeability test or LCA may be conducted. A copy of this report must be forwarded to Council with the application documents. This may have already been done as part of the planning approval process
4. liaise with the licensed plumber to submit the application to Council to install or alter a septic tank system, and ensure the relevant documentation and fee accompanies the application; a site plan of the proposed system must be included with the application
5. ensure the application form is signed by both the owner of the property, and the licensed plumber employed to undertake the works
6. an Environmental Health Officer from Council will assess the application and conduct a site inspection to verify the information provided in the application is correct, and note any additional installation requirements that may be relevant to your site
7. where all requirements have been met a Permit to Install a septic tank system will be issued to the nominated plumber. A copy of the permit will also be forwarded to the property owner upon request.
Part 4: Obtaining a certificate to use a septic system

To obtain a certificate to use a septic tank system to the following will need to be undertaken:

- a final inspection of the works
- Required documents

Final inspection

Once the septic system has been installed and before it has been completely backfilled, a final inspection must be conducted. The licensed plumber will contact Council a minimum two days before works are due to be completed to organise an inspection time.

An Environmental Health Officer will conduct the inspection and assess the following:

- installation of septic tank, treatment plant, composting units (whichever is applicable)
- installation of distribution pits/trenches, irrigation lines/valves, mounds (whichever is applicable)
- system is constructed as per Permit to Install
- construction of sand filters (where relevant)
- location of the septic tank and effluent disposal has been installed as per the approved plan
- pumps, connections and any other additional system requirements

Where the requirements of the Permit to Install (including proposed installation plan) have not been met, Council may request additional works to be undertaken. This may involve:

- additional effluent disposal being installed where the correct length/size have not been completed
- re-installation of either septic tank or effluent disposal where it has been installed contrary to permit conditions, or the approved installation plan, or without prior approval by Council
- additional inspections to be undertaken to confirm works. Where more than one final inspection is required additional inspection charges will be incurred. A Certificate to Use will not be issued until all outstanding fees have been paid in full

Required documents

Once the final inspection has been completed, the licenced plumber and manufacturer (depending on system) is required to provide the following documentation before the Certificate to Use can be issued:

- an as-constructed plan
- Victorian Building Authority (VBA) compliance certificate
- Commissioning Certificate
- copy of maintenance contract

As-constructed plan

An as-constructed plan should be similar to the site plan but show the final installation of the system, contain more specific information and measurements. Refer to Appendix 2. The detailed plan (scale – no less than 1:500) should include the following:

- location of the installed septic tank system and effluent disposal layout, including measurements from the building to system and from the system to the effluent disposal area, sand filters, pumps and valves
- floor layout plan of dwelling
- all buildings, streams, dams, gullies, significant vegetation, water tanks, swimming pools, excavations, stormwater drains, water pipes and driveways
- a north direction indicator.
Compliance Certificate
The plumbing Compliance Certificate is a legal document that must be completed by a registered plumber and lodged with the Victorian Building Authority (VBA).

Correctly completed certificates of compliance are a benefit to both plumbers and property owners by:
1. certifying that the plumbing work and equipment as documented on the certificate complies with the requirements under Australian Standard 1547 and EPA specifications for the septic tank system
2. specifying exactly what plumbing work has been carried out to distinguish it from work done by others
3. assuring the customer that the plumber is licensed or registered to perform the work that they have completed. A Compliance Certificate acts as insurance against defective work. It is important to confirm the details on the Compliance Certificate are correct.

To check Compliance Certificate details the following are required:
- Compliance Certificate number; and
- Compliance Certificate PIN

In relation to septic tank systems, compliance certificates must be supplied by a licensed plumber for:
- Work completed that is over the value of $750.
- Construction, installation or alteration of any below ground sanitary drain or associated gullies

The licensed plumber or drainer must lodge a Compliance Certificate for the installation and circle category 2, septic tank installation and category 3 drainage (below ground sewer) on the compliance certificate.

Commissioning Certificate
Commissioning Certificates are provided when a treatment system has been installed that includes electrical components. The commissioning process usually involves testing AWTS to ensure that all components have been properly installed. Items assessed as part of commissioning may include joins, extensions, pipework, control panels, power supply and other connections to the treatment system. It is essential that a competent licensed electrician carries out the electrical installation in strict accordance with the manufacturer’s instructions. Testing these components helps to ensure that the system will be able to provide treated wastewater to the quality required by the EPA.

Prior to the use of a treatment plant, the property owner should receive a Commission Certificate from the installer. A copy of this report must be provided to Council.

Service/maintenance agreement
A copy of the service agreement or maintenance contract is required to be submitted to council.

Certificate to Use
When this paperwork has been received the Certificate to Use will be finalised and sent to the property owner along with a copy of the as-constructed plan and educational information about septic systems.

It is an offence under the Environment Protection Act 1970 to use a septic system before a Certificate to Use has been issued. This may result in Council issuing a Penalty Infringement Notice (PIN) to the property owner.
Part 5: Using and maintaining the septic system

Maintenance/service contracts
The wastewater treatment system must be operated and maintained in accordance with the conditions in the Council Certificate to Use, the EPA Certificate of Approval (CA) and EPA Code of Practice Onsite Wastewater Management. Where a property is serviced by an all waste treatment system (AWTS), it is mandatory that the property owner has a service contract with an accredited and trained service technician.

Council may fine a property owner under section 53N and Schedule A of the Environmental Protection Act 1970 for failing to have the treatment system regularly serviced in accordance with permit.

Protecting and maintaining the effluent disposal area
To avoid damage to the septic tank system and the effluent disposal area the following requirements must be met:

- traffic or vehicles must not travel over the septic tank or effluent disposal areas
- equipment and materials must not be stored on the effluent disposal areas
- horses and livestock should not have access to the area
- storm and surface water must be diverted away from the disposal area
- the disposal area must not be covered by; with paving, concrete, swimming pools, sheds or other building structures.
- the disposal area must not be covered with clay or plastic
- root killing additives must not be used in the disposal area
- check effluent area regularly for signs of failing
- plant shallow rooting, water tolerant grasses and/or shrubs that are suitable for local conditions in the disposal area.

Water conservation
Water conservation in the home reduces the load on your septic system. Dual flush toilets, low flow showerheads, water efficient tap-ware, dishwashers and front load washers are just some of the products available to conserve water. Always check for current A, AA or AAA water conservation-rating labels and select AAA wherever possible.

Council encourages property owners to reduce the amount of water used in the dwelling. However reduced water loading as a result of these fixtures does not come into consideration when assessing applications, and will not contribute to a reduction in the size of an effluent disposal area.
Failing septic system: what are the warning signs?

Failing effluent disposal area indicators can include, but are not limited to:

- effluent disposal area is wet or soggy with wastewater pooling on the ground
- lush green grass down slope of effluent disposal area
- the smell of sewage near the septic tank or absorption area is noticeable
- drains and toilets run slowly.

Decommission of existing septic tank systems

When a septic tank is no longer required it may be removed or rendered unusable.

Septic tanks and treatment plants that are no longer being used as an onsite wastewater system must be decommissioned. The decommissioning must be noted on the VBA Certificate of Compliance.

A licensed plumber must disconnect the tank from the premises and from the absorption trench system. The inlet and outlet pipes on the tank must be permanently sealed or plugged.

To demolish a tank, the bottom of the tank is broken and then the lid and those parts of the walls that are above ground are collapsed into the tank. The tank is then filled with clean earth or sand. Secondary treatment systems must also be decommissioned by a licenced plumber.

Homeowners and occupiers are legally responsible to keep their onsite wastewater system in good working order. Further information can be found in Council’s Septic Information Series.

Alterations to existing septic tank systems

Any alteration to an existing septic tank system requires approval from Council prior to work being completed. Where maintenance work is designed to replace ‘like for like’ and no additions are planned for the system, a permit to alter the septic tank system is not required from Council. Such maintenance may include reinvigorating effluent trenches, replacing sand in sand filters, replacing effluent irrigation lines. This maintenance work still needs to be completed by a licenced plumber.

Where the alteration to the existing system includes installing additional effluent disposal or relocating tanks or effluent disposal then a permit to alter the septic tank system must be issued by Council prior to any work commencing. It is an offence under the Environment Protection Act to alter any component of a septic tank system without obtaining the relevant permit from Council and could result in an infringement notice being issued.
## Appendix 3 – setback distances

<table>
<thead>
<tr>
<th>Landscape feature or structure</th>
<th>Setback distance for primary treated effluent</th>
<th>Setback distance for secondary treated and greywater effluent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Building</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wastewater field up-slope of building</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Wastewater field down-slope of building</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Wastewater up-slope of cutting/escarpment</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>Allotment boundary</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wastewater field up-slope of adjacent lot</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Wastewater field down-slope of adjacent lot</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water supply pipe</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Potable supply channel (wastewater field up-slope)</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Potable supply channel (wastewater field down-slope)</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Gas</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Underground water tank</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Stormwater drain</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td><strong>Recreational areas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children’s grassed playground</td>
<td>6</td>
<td>3^16</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>6</td>
<td>3^16</td>
</tr>
<tr>
<td><strong>Surface waters (up-slope from)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dam, lake or reservoir (potable includes water for food production)</td>
<td>300</td>
<td>150^4</td>
</tr>
<tr>
<td>Stream, river, waterways (potable water supply catchment)</td>
<td>100</td>
<td>100^4,17</td>
</tr>
<tr>
<td>Dam or reservoir (stock and non-potable)</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>Stream or channel (continuous or ephemeral, non-potable)</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td><strong>Groundwater bore</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category 1 and 2a soils</td>
<td>NA^11</td>
<td>50^5</td>
</tr>
<tr>
<td>Category 2b to 6 soils</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>
The setbacks 1,2,6,10,19 listed are the minimum values set by the Code of Practice – Onsite Wastewater Management [www.epa.vic.gov.au/our-work/publications/publication/2013/february/891-3](http://www.epa.vic.gov.au/our-work/publications/publication/2013/february/891-3). A minimum buffer or setback distance between the wastewater disposal field and other specific sites and sensitive features help to reduce potential pollution and protect public health.

These distances must be measured from the closest boundary of the disposal/irrigation area. They do not apply to effluent disposal areas that are adjacent to these features and there is no reasonable chance of interference.

1. distances must be measured horizontally from the external wall of the treatment system and the boundary of the disposal/irrigation area, except for the ‘watertable’ category which is measured vertically through the soil profile. For surface waters, the measuring point shall be from the “bank-full level”.

2. primary water-based sewerage systems must only be installed in unsewered areas; secondary sewerage systems must only be installed and managed in sewered areas by water corporations; secondary greywater systems can be installed in sewered and unsewered areas (see Section 3.12.3 of Code of Practice).

3. advanced secondary treated greywater of 10/10/10 standard.

4. the setback distances are conditional on the following requirements (otherwise the setback distances for primary effluent apply):
   - effluent is secondary treated to 20/30 standard as a minimum
   - effluent is applied to land via pressure-compensating sub-surface irrigation installed along the contour and
   - a maintenance and service contract, with a service technician accredited by the manufacturer, is in place to ensure the system is regularly serviced in accordance with the relevant CA and Council Septic Tank Permit conditions

5. the setback distance to a groundwater bore in category 1 and 2a soils can be reduced to 20 m where treated and disinfected greywater or sewage (20/30/10 or better standard) is applied via pressure-compensating sub-surface irrigation and the property owner has a service contract

6. effluent typically contains high levels of nutrients that may have a negative impact on native vegetation and promote the growth of weeds. When determining setbacks, Council should consider not only the potential impact of nutrients from the proposed onsite wastewater management system, but the cumulative impact of the existing onsite wastewater management systems in the area

7. establishing an effluent disposal/irrigation area upslope of a building may have implications for the structural integrity of the building. This issue is beyond the scope of this Code and should be examined by a building professional on a site by site basis

8. does not apply to dams, lakes and reservoirs located above ground-level which cannot receive run-off

9. means a waterway as defined in the Water Act 1989

10. the setback distances for flat land are equivalent to ‘down-slope’ setback distances

11. see Table 9 in Code of Practice for other land application options for category 1 and 2a soils.

12. cutting or escarpment from which water is likely to emanate

13. applies to land, adjacent to a dam, lake, reservoir or waterway that provides water for a public potable water supply, which is: a. subject to a Planning Scheme Environmental Significant Overlay (ESO) that designates maintenance of water quality as the environmental objective to be achieved (contact the relevant water authority to determine whether the ESO is in a potable water supply catchment) and b. within a Special Water Supply Area listed in Schedule 5 of the Catchment and Land Protection Act 1994

14. it is recommended that any primary or secondary treatment system and its associated land application system are installed downslope of an in-ground water tank

15. means a school, council, community or other children’s grassed playground managed by an organisation which may contain play equipment

16. sub-surface irrigation only

17. where an intermittent stream on a topographic or orthographic map is found through ground-truthing to be a drainage line (drainage depression) with no defined banks and the bed is not incised, the setback distance is 40 m (SCA 2010). The topography of the drainage line must be visually inspected and photographed during the LCA site inspection and reported upon in writing and photographs in the LCA report

18. the highest seasonal water table occurs when the water table has risen up through the soil profile and is closest to the ground surface. This usually occurs in the wettest months of the year

19. see Section 3.9 (Code of Practice) for more details on setback distances.