

Current Section	NEW Section	Current	Revision	Implications/justification
Table of contents		<p>Appendix C Detailed Cross Section drawings</p> <p>Appendix D Falling head permeameter</p>	<p>Appendix C Falling head permeameter</p> <p>Appendix D Detailed Cross Section drawings</p>	<p>Reduce confusion related to appendix C labeling. Contour trenches are C1, C2, C3 and were previously Appendix C, this created some confusion.</p>
1 &2		<p>(1) This Standard describes the minimum requirements for selection, design, and installation of an on-site sewage disposal system or its parts.</p> <p>(2) The repair or alteration of an existing on-site sewage disposal system must be carried out by a certified installer in accordance with this Standard.</p>	<p>(1) This Standard applies only to the requirements for an on-site sewage system which handles sewage that is composed primarily of human waste and grey water from bathrooms, sinks and kitchens but not does include any significant volume of wastewater from an industrial source.</p> <p>(2) This Standard describes the minimum requirements for selection, design, installation, repair and alteration of an on-site sewage disposal system, or its parts.</p>	<p>This change clarifies the applicability of the Standard that does not include industrial wastewater.</p> <p>Any on-site sewage system for the treatment of industrial wastewater would require an approval from NSE.</p>
2 (1)		<p>Relies on definition of adverse effect in Act.</p>	<p>Addition of definition (matches Act)</p> <p>"adverse effect" means an effect that impairs or damages the environment or changes the environment in a manner that negatively affects aspects of human health;</p>	<p>Clarifies wording related to a malfunctioning system.</p>

Current Section	NEW Section	Current	Revision	Implications/justification
2 (1)		Building sewer line defined	Building sewer line definition removed	Building sewer line is not considered part of the on-site sewage system as it is captured under the <i>Building Code Regulations</i> and <i>National Plumbing Code</i> . This change will clarify the scope of the Standard.
2 (1)		Terms were not previously defined	<p>“distribution trench” means the highly porous section of a system that is level, typically consists of aggregate surrounding perforated pipe, or arch-shaped chambers, and spreads effluent from a septic tank or ATU across the length of the disposal field;</p> <p>“impervious geomembrane” means a very low permeability synthetic liner or barrier intended for use within subsurface soils to control fluid migration;</p> <p>“malfunction” means a release of untreated or partially treated sewage that causes or may cause an adverse effect;</p> <p>“selected system” means a system chosen according to the specifications in Appendix A of the Standard;</p> <p>“soil effective depth” means the depth of</p>	Improves clarity and intent of existing wording throughout the Standard.

Current Section	NEW Section	Current	Revision	Implications/justification
			unsaturated permeable soil beneath the organic layer minus the depth of soil required to prevent saturation above the invert distribution pipe;	
3 (1)		...residential applications	The term “applications” was replaced with “use” throughout the Standard	Clarifies intent and confusion related to “applications for approval”
Table 1			Addition of terms “base flow” and “additional flow” and text “additional flow can only be used in addition to base flow”.	Clarifies intent of flow determination for selected systems
Table 2			<p>Addition of 0.6 m vertical clearance requirement for a distribution trench receiving treated effluent from an Advanced Treatment Units (ATUs).</p> <p>Addition of descriptors (water-tight and non-water-tight portion of system) and more inclusive list of system components.</p>	<p>Applies consistency to all approved ATUs: some ATUs were granted permission for reduced vertical clearance previously, this change will treat all ATUs the same.</p> <p>Improves clarity and applicability of clearance distance requirements.</p>
4(2)			Addition of reference to ATU in description of where clearance distances are measured from.	Improves clarity.
4(3)		<p>Water tight, impervious membrane</p> <p>Reference to system components</p>	<p>Changed to water-tight & impervious geomembrane</p> <p>Reference to system components changed to “water-tight portion of system”.</p>	Improves consistency, clarity and intent.

Current Section	NEW Section	Current	Revision	Implications/justification
5(5)a		..examine at least one test pit	Addition of, “at the proposed distribution trench location”	Improves clarity and intent.
Table 3		Errors in hydraulic conductivity ranges	Errors corrected	Improves clarity.
5(6)b		..total soil depth requirements	Addition of reference to term “D” as required by system selection tables.	Improves clarity.
5(8)	NA	<p>A professional engineer must do one of the following:</p> <p>(a) select or design a system that uses a soil type with a permeability class of ‘Acceptable’ as set out in Table 3;</p> <p>(b) design a system that uses a soil type with a permeability class of ‘Low’ as set out in Table 3 if the system meets the requirements of the section of this Standard titled “Advanced on-site sewage treatment technologies.”</p>	Section deleted	Allows professional engineer to use their own judgement and expertise related to soils used in system design.
8 & 9		The riser cover must be a minimum of 100 mm above	Riser must meet all of the following; Addition of	Clarifies intent and addresses complaints from industry and

Current Section	NEW Section	Current	Revision	Implications/justification
		finished grade and installed so that the area around the cover is graded to divert surface drainage.	8(d) it must be visible to provide ease of location. The riser cover must be at or above finished grade and installed so that the area around the cover is graded to divert surface drainage.	landowners related to requirement of riser 100mm (4”) above finished grade.
Table 4	Table 4 & S. 11	No design requirements for septic tank capacity for systems with high flows (greater than 5 bedrooms not captured by Table 4)	Section 11 added, Septic tanks for uses not listed in Table 4 must have a minimum capacity of at least 2 times the average daily flow.	Clarifies intent, standard design requirement for system design. Covers situations not captured by Table 4.
19 & 20	20 & 21	An effluent chamber must have sufficient discharge capacity to distribute effluent over the entire length of the distribution trench and fill the distribution pipe during each dose. A pressure-fed system must have a dosing frequency of at least two times per day.	An effluent chamber must have sufficient discharge capacity to spread effluent equally over the length of the distribution trench during each dose. A pressure-fed system must be selected or designed to have a dosing frequency of at least two times per day.	Minor wording revisions to improve clarity and intent.
21	NA	A pump chamber must provide liquid storage capacity equal to one day’s flow.	Section deleted, relies on Table 5 for selected systems.	Allows professional engineer to design a system with various pump chamber capacities to meet site specific needs.

Current Section	NEW Section	Current	Revision	Implications/justification
Table 5			Added to table title, “for selected systems”	Clarifies applicability of Table 5 for selected systems only, allows professional engineer some design flexibility.
29	NA	Building sewer line section	Section deleted, relies on <i>Building Code Regulations & National Plumbing Code</i> requirements.	Clarifies applicability of Standard
30	29	<p>(1) Crushed rock or gravel in a distribution and interceptor trench must be washed, screened, and free of fine material.</p> <p>(2) Ninety-eight percent by weight of the crushed rock or gravel in a distribution and interceptor trench must be able to pass through a 35 mm screen and unable to pass through a 12 mm screen.</p>	<p>Term “washed” was changed to “clean”.</p> <p>Reference to interceptor was deleted.</p>	Clarifies intent and allows qualified person or professional engineer to specify any aggregate for the interceptor trench (aggregate is not required to meet distribution trench specifications).
Figure 1		Error in angle of hole reference	Error was fixed to consistently reference 60° from invert	Improves consistency and clarity
38	37	..reference to Figure 1 related to	Addition of reference to vent holes as illustrated	Improves clarity

Current Section	NEW Section	Current	Revision	Implications/justification
		hole spacing	in Figure 1.	
40	39	Maximum particle size of 10mm	Changed to 25mm as intention is to reflect absolute max particle size.	<p>Relies more on subsections (2) & (3) related to the hydraulic conductivity of the sand as determined by the falling head permeameter test.</p> <p>Saves existing sand manufacturers time and money by allowing them to continue using same equipment provided sand passes permeameter test.</p>
43	42	<p>An interceptor trench must meet all of the following:</p> <p>(a) it must be at least 300 mm in width and filled with aggregate that conforms to the requirements of Section 30 of this Standard;</p>	Reference to aggregate specifications removed to align with previous revision.	<p>Clarifies intent and applicability of Standard.</p> <p>Allows flexibility in aggregate used in interceptor trench.</p>
44 & 45	43 & 44	Impervious liner	Changed to “impervious geomembrane” to be consistent with previous wording.	Improves consistency, clarity and intent.
46	45	...impervious liner referred to in Section 45.... must meet all of	Sub-section (a) deleted	Relies on definition of impervious geomembrane and improves clarity.

Current Section	NEW Section	Current	Revision	Implications/justification
		the following.. (a) it must be a 20 mil HDPE or LDPE geomembrane with all seams overlapped a minimum of 0.3 m with an appropriate sealant between the overlap; (b) it must be installed along the bottom of the interceptor trench; (c) it must be installed up the vertical face of the downslope side of the trench	(a) it must be installed along the bottom of the interceptor trench; (b) it must be installed up the entire vertical face of the downslope side of the trench.	
52(2)	51(2)	..lowest hydraulic conductivity	Changed to “lowest acceptable hydraulic conductivity”	Improves clarity and intent.
61	NA	Flow equalization must be included as part of the ATU or be incorporated into the system design.	Section removed as most ATUs include flow equalization if required.	Relies more on professional engineer designing the system and the ATU design manual specifications.
NA	73	Clause missing related to design flow associated with a malfunction replacement	Addition of “If it is not possible to meet clearance distances specified in Section 4, system design capacity must be less than or equal to the design	Clarifies intention that if a professional engineer is designing a malfunction replacement system and is unable to maintain all clearance distance

Current Section	NEW Section	Current	Revision	Implications/justification
		system.	capacity associated with the existing conditions.”	requirements, that an increase in design flow would not be permitted under the notification process (in previous technical guideline).
75	74	A professional engineer must consider site specific conditions and incorporate protective measures in the system design to ensure that the repair or replacement will not cause an adverse effect to the environment or human health.	A professional engineer must consider site specific conditions and incorporate protective measures in the system design to ensure that the repair or replacement will not increase the risk of an adverse effect.	Simplifies language and clarifies intent related to risk of adverse effect.
Appendix C-5 through C-9	Appendix D-5 through D-9	Minimum depth of sand below distribution trench missing.	Addition of “-600mm min depth of sand below distribution trench” reference in cross section diagrams for C3 and Mounds.	Clarifies intent and previous requirement from technical guidelines.