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Notice of Rulemaking Hearing

Hearings will be conducted in the manner prescribed by the Uniform Administrative Procedures Act, T.C.A. § 4-5-204. For questions and copies of the notice, contact the person listed below.

Agency/Board/Commission:	Environment and Conservation
Division:	Water Resources
Contact Person:	Brad Harris
Address:	Davy Crockett Tower, 9th Floor 500 James Robertson Parkway Nashville, Tennessee
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Any Individuals with disabilities who wish to participate in these proceedings (to review these filings) and may require aid to facilitate such participation should contact the following at least 10 days prior to the hearing:

ADA Contact:	ADA Coordinator
Address:	Davy Crockett Tower, 6th Floor 500 James Robertson Parkway Nashville, Tennessee 37243
Phone:	615-532-0200 Hearing-impaired callers may use the TN Relay Service 1-800-848-0298
Email:	Ask.tdec@tn.gov

Hearing Location(s) (for additional locations, copy and paste table)

Address 1:	Conference Room 1-A
Address 2:	Davy Crockett Tower 500 James Robertson Parkway
City:	Nashville, Tennessee
Zip:	37243
Hearing Date:	11/09/2026
Hearing Time:	10:00 AM ☒ X CST/CDT ☐ EST/EDT

Alternate Hearing Option

Method 1:	You may also join electronically. Join by going to this link: https://tn.webex.com/tn/j.php?MTID=m214acc2bf506f4a606452fb2f209dd81 Meeting number (access code): 2313 577 7416 Meeting password: iTHnF3Jb5F7 (48463352 when dialing from a phone or video system)
Method 2:	Join by phone +1 615-747-4911 Webex Call-In +1-415-655-0001 US Toll

Additional Hearing Information:

If it is hard for you to read, speak, or understand English, TDEC may be able to provide translation or interpretation services free of charge. Please contact Ellen Sherril at (615) 532-0105 or tdec.titlevi@tn.gov for more information. Si le resulta difícil leer, hablar o entender inglés, TDEC puede proporcionar servicios de traducción o interpretación sin cargo. Comuníquese con Ellen Sherril at (615) 532-0105 o tdec.titlevi@tn.gov para obtener más información.

Public Chapter 876 (2026) requires the Commissioner of the Department of Environment and Conservation to promulgate rules applicable to the design and construction of decentralized wastewater systems using land application not later than July 31, 2027. These include spray and drip irrigation systems that do not discharge to surface waters. Public Chapter 876 states “At a minimum, the rules must define material revisions for purposes of § 68-221-109(c), address proper siting, soil characterization, soil mapping, hydraulic loading, redundancy and reserve area requirements, and long-term performance standards to ensure adequate protection of surface waters, groundwater, and public health.” Public Chapter 876 further obligates the Commissioner to promulgate rules that define what constitutes “material revisions” as it pertains to extensions to approved engineering reports, design documents, plans, and specifications.

An initial set of draft rules has been prepared for public review and comment. The draft rules may be accessed for review using at <https://www.tn.gov/environment/ppo-public-participation/ppo-public-participation/ppo-water>.

Oral or written comments are invited at the hearing. In addition, written comments may be submitted prior to or after the public hearing to: Tennessee Department of Environment and Conservation, Division of Water Resources; Attention: Brad Harris, Davy Crockett Tower, 9th Floor, 500 James Robertson Parkway, Nashville, Tennessee 37243; email: Brad.Harris@tn.gov. However, such written comments must be received by 4:30 PM CST, November 9, 2026, to assure consideration. For further information, please contact Brad Harris at the above email address.

Revision Type (check all that apply):

☐ Amendment
☒ New
☐ Repeal

Rule(s) (ALL chapters and rules contained in filing must be listed. If needed, copy and paste additional tables to accommodate more than one chapter. Please enter only **ONE** Rule Number/Rule Title per row.)

Chapter Number	Chapter Title
0400-40-09	Decentralized Wastewater Treatment Systems
Rule Number	Rule Title
0400-40-09-.01	Purpose.
0400-40-09-.02	Applicability.
0400-40-09-.03	Definitions.
0400-40-09-.04	Treatment and Effluent Standards.
0400-40-09-.05	Operational Requirements and Prohibited Conditions.
0400-40-09-.06	Monitoring, Reporting, and Inspections.
0400-40-09-.07	Soil Suitability and Loading Rates.
0400-40-09-.08	Construction Requirements.
0400-40-09-.09	Design Basis.
0400-40-09-.10	Variances.

Place substance of rules and other info here. Please be sure to include a detailed explanation of the changes being made to the listed rule(s). Statutory authority must be given for each rule change. For information on formatting rules go to <https://sos.tn.gov/publications/services/rulemaking-guidelines>.

Chapter 0400-40-09
Decentralized Wastewater Treatment Systems

New Rules

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0400-40-09-.01 Purpose.

This chapter establishes requirements for proper siting, soil characterization, soil mapping, hydraulic loading, redundancy and reserve area requirements, long-term performance standards, identification of material revisions, and variances for decentralized wastewater treatment systems that utilize land application for final treatment. The Commissioner's approval of plans pursuant to this chapter shall not be construed as creating a presumption of correct operation nor as warranting by the Commissioner that the approved facilities will reach the designated goals. Nothing in this chapter shall be interpreted as limiting the Commissioner's authority to order correction actions pursuant to T.C.A. § 69-3-109.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.02 Applicability.

- (1) Except as otherwise specified in this chapter, Rules 0400-40-09-.01 through 0400-40-09-.06 and Rule 0400-40-09-.10 apply to all decentralized wastewater treatment systems using land application, regardless of the date of construction or initial permitting.
- (2) Except as provided by paragraph (4) of this rule, Rules 0400-40-09-.07 (Soil Suitability and Loading Rates), 0400-40-09-.08 (Construction Requirements), and 0400-40-09-.09 (Design Basis) apply only to land application systems and land application areas associated with new decentralized wastewater treatment systems using land application approved after the effective date of this chapter. Existing permitted systems are not required to retrofit or redesign their facilities to meet these design or construction requirements unless undergoing a material revision that triggers reevaluation under this chapter, except as necessary to correct ongoing material noncompliance.
- (3) In the event of any conflict with Chapters 0400-40-02, 0400-40-06, 0400-45-06, or any other rule, the provision establishing the more stringent standard applies.
- (4) When an existing system undergoes a material revision, any portion of the system that is newly constructed, expanded, relocated, or reconfigured must comply with the applicable new-system requirements of Rules 0400-40-09-.06, 0400-40-09-.07, and 0400-40-09-.08.
- (5) This chapter does not apply to systems that discharge to surface waters, which are subject to the National Pollutant Discharge Elimination System requirements of Chapters 0400-40-05 and 0400-40-10 and water quality standards of Chapters 0400-40-03 and 0400-40-04.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.03 Definitions.

Unless otherwise stated in this chapter, all terms used herein have the same meaning as those found in the Water Quality Control Act of 1977, T.C.A. §§ 69-3-101 to -148, and in Chapter 0400-40-06. When used in this chapter and in permits issued pursuant to this chapter, the following terms have the meanings given below.

- (1) "Act" means the Tennessee Water Quality Control Act of 1977, as amended, T.C.A. §§ 69-3-101 to -148;
- (2) "Annual average concentration" means the arithmetic mean of all samples measured during the calendar-year, expressed in units of mass per volume, for any pollutant;

- (3) "Daily maximum concentration" means the highest concentration of a pollutant, expressed as mass per volume, measured during any calendar day. For flow-proportional composite samples, the daily maximum concentration is the concentration of the 24-hour composite sample. For other sampling methods, the daily maximum concentration is the arithmetic mean of equal volume samples collected during the day or sampling period;
- (4) "Effluent ponding" means liquid that contains wastewater standing on the surface of the ground;
- (5) "Full utilization of the land application area" means the complete, uniform coverage and proper spatial distribution of wastewater across the entire designated land application area to maximize the absorption capacity of the available soil profile;
- (6) "Grab sample" means a single sample collected at a specific moment in time;
- (7) "Industrial wastes" means any liquid, solid, or gaseous substance, or combination thereof, or form of energy including heat, resulting from any process of industry, manufacture, trade, or business or from the development of any natural resource;
- (8) "Inspection report" means a written record prepared by a certified operator or authorized designee following a physical inspection of a sewerage system and any associated land application area;
- (9) "Land application" means the application of wastewater effluent to soil;
- (10) "Land application area" means an area of soil used for the application of wastewater effluent to provide additional natural treatment and pollutant reduction;
- (11) "Material revision" means any change to a Commissioner-approved engineering plan, basis of design, or land application area that has the potential to affect system capacity, treatment performance, hydraulics, soil loading, reserve area requirements, or environmental or public health protection.
 - (a) Material revisions include, but are not limited to:
 - 1. Changes affecting system capacity or basis of design, including design flow, influent or effluent characteristics, loading rates, or treatment performance;
 - 2. Modifications to treatment processes or system components, including added, removed, relocated, or reconfigured units such as pumps, aeration equipment, chemical feed systems, disinfection systems, sludge handling units, tanks, or structural elements;
 - 3. Substantive alterations to collection, conveyance, or hydraulic systems, including changes in sewer or piping diameter or length, pump type or capacity, dosing cycles, distribution layout, drip zone configuration, manifolds, valve structures, or other components that affect flow distribution or system hydraulics;
 - 4. Changes to land application system configuration, including modifications to emitter spacing or type, dosing zones, drip field size or placement, buffer distances, emitter depth, reserve area allocation, or future expansion areas;
 - 5. Revisions to soil or site characteristics, including changes to soil loading values, soil classification or evaluation data, topography, site grading, drainage patterns, or any condition affecting soil suitability; and
 - 6. Changes that require updated engineering reports, specifications, supporting analyses, or permit documentation;
 - (b) Material revisions do not include:
 - 1. Administrative or clerical corrections;

2. Replacement of equipment with like-for-like components that do not alter design function; or
 3. Minor operational or monitoring adjustments that do not affect the approved design, capacity, or performance basis;
- (12) "Monitoring Report" means a submittal prepared by or on behalf of the permittee that documents all monitoring data, inspection findings, operational observations, and other information necessary to demonstrate compliance with permit conditions under Chapters 0400-40-06 and 0400-40-09;
 - (13) "Monthly average concentration" means the arithmetic mean of all samples collected in a calendar month, expressed in units of mass per volume, for any pollutant;
 - (14) "Persistent" as used to qualify saturated soil or ponded conditions, means a condition that results from land application area dosing. Conditions are persistent if observed outside of a 24-hour period during or following a one inch or greater precipitation event;
 - (15) A "quarter" means any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31;
 - (16) "Sanitary waste" means liquid or solid wastes originating solely from humans and human activities, such as wastes from toilets, showers, wash basins, cleaning, clothes washing, or food preparation, together with any waters mixed with or used to convey such wastes, provided that the waste or water is not mixed with industrial waste;
 - (17) "Setback" means a specified distance from surface waters, potential conduits to surface waters, property lines, public use areas, or other specific features as established by the Commissioner;
 - (18) "Sewerage system" means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, treated, or disposed;
 - (19) "STEG" means septic tank effluent gravity;
 - (20) "STEP" means septic tank effluent pump;
 - (21) "Wastewater" means "sewage" as defined in T.C.A. § 69-3-103;
 - (22) "Wastewater effluent" means partially-treated wastewater that has completed the final filtration step prior to land application; and
 - (23) "Waters" means any and all water, public or private, on or beneath the surface of the ground, that are contained within, flow through, or border upon Tennessee or any portion thereof, except those bodies of water confined to and retained within the limits of private property in single ownership that do not combine or effect a junction with natural surface or underground waters.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.04 Treatment and Effluent Standards.

- (1) Treatment Requirements.
 - (a) Wastewater Containing only Sanitary Wastes.

In support of system operability and longevity wastewater applied to a land application area shall, at a minimum, meet the effluent quality standards in Table 1. Wastewater effluent shall be sampled after the final filtration step and prior to pumping to the land application area.

Table 1. Effluent Quality and Monitoring Requirements

Parameter	Permit Limit	Minimum Monitoring Frequency	Metric	Type
BOD ₅ or CBOD ₅	45 (mg/L) or 40 (mg/L)	Semi-Annual	Daily Maximum	Grab
Total Suspended Solids (TSS)	45 (mg/L)	Semi-Annual	Daily Maximum	Grab
Total Nitrogen (TN) See Note 1	35 (mg/L)	Quarterly	Annual Average	Grab
Total Nitrogen (TN) See Note 1	45 (mg/L)	Quarterly	Daily Maximum	Grab
Ammonia as Nitrogen (NH ₃ -N)	20 (mg/L)	Quarterly	Daily Maximum	Grab
Influent flow See Note 2	Report (MGD)	Daily	N/A	Total
Effluent flow	Report (MGD)	Daily	N/A	Total
Connections See Note 3	Report	Quarterly	N/A	Quantity

Note 1. The sum of nitrate-N + nitrite-N + ammonia-N can be substituted for TN and compared to the annual average and daily maximum limits for TN in the table.

Note 2. Influent flow monitoring is required for systems permitted after the effective date of this rule. Systems permitted before the effective date of this rule are not required to monitor influent flow unless the Commissioner determines that such monitoring is necessary to ensure compliance with the Act. The Commissioner may require the installation of influent flow meters capable of operating composite samplers when seasonal variations, variable flow conditions, or specific wastewater constituents warrant additional monitoring to ensure the system is performing properly.

Note 3. Connections to be reported with respect to number of residential and commercial or other type.

(b) Wastewater Containing Industrial Waste.

1. Wastewater containing industrial wastes shall comply with the limits in subparagraph (2)(a) and any additional limits established by the Commissioner to ensure compliance with the Act.
2. For wastewater containing industrial wastes, all applications for new and renewed permits shall include monitoring results for all pollutants that may reasonably be expected to impact treatment performance or land-application operations. Each application shall further

provide a detailed description of the nature of the industrial waste component, including its physical, chemical, biological, and radiological characteristics. Use of a decentralized wastewater treatment system using land application for industrial waste is subject to all applicable requirements of Chapters 0400-45-06 and 0400-40-14.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.05 Operational Requirements and Prohibited Conditions.

- (1) The land application system shall be operated to ensure an aerobic environment suitable for the treatment of wastewater effluent. Land application areas shall be operated in a manner that prevents persistent saturation of the soil profile. Indications of persistent saturation of the soil profile include but are not limited to vegetation stress or death; development of wetland characteristics; soft, unstable soil surface; surface expression of wastewater effluent; and ponding of wastewater effluent. Observation of indications of persistent saturation of the soil profile shall be promptly investigated and mitigated to reestablish aerobic conditions.
- (2) The following land application area conditions are prohibited:
 - (a) Persistent soil saturation;
 - (b) Persistent wastewater effluent ponding;
 - (c) Overland flow of wastewater effluent within the land application area; and
 - (d) Overland flow of wastewater effluent leaving the land application area.
- (3) Observations of prohibited land application area conditions shall be investigated and documented in the Monthly Operations Report. Documentation shall include:
 - (a) The location of the condition;
 - (b) The cause or contributing factors;
 - (c) Corrective actions taken; and
 - (d) The date the condition was resolved.
- (4) Any observed instances of prohibited land application area conditions that are not corrected within three calendar days of the observation shall be reported to the appropriate Environmental Field Office within three calendar days.
- (5) Failure to resolve prohibited land application area conditions may result in a determination that the wastewater system is not authorized by paragraph (2) of Rule 0400-45-06-.14, and instead requires a permit per paragraph (5) of Rule 0400-45-06-.07.
- (6) Enclosure and Signage.
 - (a) All wastewater treatment facilities and land application areas shall be designed, constructed, and operated to restrict unauthorized entry and prevent public exposure or any condition that could interfere with proper system operation.
 - (b) The permittee shall post signage at the entrance to the land application area and on each outward-facing side of the area. These signs shall:
 1. Be durable and weather-resistant;
 2. Display the words "Wastewater System Land Application Area;"
 3. Include the operating utility's name and contact telephone number; and

4. Include the name and telephone number of the local Environmental Field Office.
- (7) The permittee shall not add hydraulic or pollutant loading, new service connections, or other inflows that exceed the design basis established in Commissioner-approved engineering plans. The permittee shall not introduce any loading or constituent not authorized by the permit unless prior written approval has been obtained from the Commissioner.
- (8) The permittee shall maintain vegetation on the land application area in a manner that ensures healthy, continuous vegetative cover capable of supporting effective nutrient uptake and preventing soil erosion. Vegetation shall be managed, mowed, or otherwise maintained as necessary to keep the land application area fully accessible and visible, thereby supporting complete and unobstructed inspection of system components and site conditions.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.06 Monitoring, Reporting, and Inspections.

- (1) Inspections.
 - (a) The sewerage system and land application area shall be inspected by a certified operator, or an authorized designee, at least once every 14 days unless the Commissioner has accepted a site-specific alternative inspection schedule in writing prior to the effective date of the permit. In no case shall the physical inspection frequency be less than once every 31 days.
 - (b) Each inspection report shall identify the inspector and shall address, at a minimum:
 1. The condition of all fencing and required signage;
 2. The operational status of mechanical and electrical components of the treatment system;
 3. The condition of the land application area, including any evidence of prohibited land application area conditions; and
 4. Any corrective actions taken or needed.
- (2) Monitoring and Reporting.
 - (a) The permittee shall monitor the treatment system and land application operations in accordance with the monitoring requirements established by the permit and this chapter.
 - (b) Monitoring reports shall document all analytical results, operational data, inspection findings, and system observations necessary to demonstrate compliance with Chapters 0400-40-06 and 0400-45-06, this chapter, and all permit conditions.
 - (c) Monitoring reports shall be submitted at the frequency specified in the permit and shall include all required analytical results, field measurements, flow data, and operational information.
- (3) Additional Monitoring Requirements.
 - (a) The Commissioner may require additional monitoring when necessary to evaluate system performance, verify compliance, assess potential impacts to waters of the state, or address noncompliance.
 - (b) Additional monitoring may include increased sampling frequency, installation of new monitoring equipment, monitoring of additional pollutants, monitoring of groundwater, or expanded documentation of operational conditions.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.07 Soil Suitability and Loading Rates.

(1) Soil Suitability.

- (a) The land application area(s) shall consist of suitable soil in an area large enough to accommodate at least two hundred percent (200%) of the daily design flow, thereby providing a one hundred percent (100%) reserve area. The applicant must demonstrate that the designated reserve areas are appropriately sized and located to function effectively as a land application area.
- (b) Soil suitability shall be demonstrated using an extra-high-intensity soil map as defined in Rule 0400-48-01-.02. The map shall be prepared by a soil consultant approved under Rule 0400-48-01-.18 and supported by soil profile descriptions prepared in accordance with part (6)(a)4 of Rule 0400-48-01-.15 and the Soils Handbook of Tennessee.
- (c) Approved soil consultants producing soil maps in support of Rule 0400-40-09 are subject to paragraph (2) of Rule 0400-48-01-.18.
- (d) The soil profile shall be described to a minimum depth of 36 inches, or to rock or fragipan if encountered at a shallower depth.
- (e) A minimum of two soil profile descriptions per acre is required, with at least one description located within each mapped soil unit proposed for use, unless the Commissioner approves an alternative frequency.

(2) Loading Rates.

- (a) Application rates shall ensure long-term assimilation of applied wastewater and maintenance of aerobic conditions within the soil profile.
- (b) The design hydraulic loading rate shall not exceed the loading rate corresponding to the soil texture and structure listed in Table 2 of this rule.
- (c) For systems receiving industrial wastewater, all relevant pollutants must be evaluated and addressed through appropriate characterization and effluent limitations.

Table 2
Maximum Hydraulic Loading Rates

Soil Texture	Soil Structure – Shape	Soil Structure – Grade	Hydraulic Loading Rate (GPD/ft ²)
Coarse Sand	NA	NA	NA – requires a special site investigation
Loamy Coarse Sand	NA	NA	NA – requires a special site investigation
Sand	NA	NA	NA – requires a special site investigation
Loamy Sand	Single Grain	Moderate, Strong	0.15
Fine Sand	Single Grain	Moderate, Strong	0.15
Loamy Fine Sand	Single Grain	Massive, Weak	0.15
Very Fine Sand	Single Grain	Massive, Weak	0.15
Loamy Very Fine Sand	Single Grain	Massive, Weak	0.15
Coarse Sandy Loam	Massive	Structureless	0.15
Coarse Sandy Loam	Platy	Weak	0.15
Coarse Sandy Loam	Platy	Moderate, Strong	Not Used
Coarse Sandy Loam	Blocky, Granular	Weak, Moderate, Strong	0.15
Sandy Loam	Massive	Structureless	0.15
Sandy Loam	Platy	Weak	0.15
Sandy Loam	Platy	Moderate, Strong	Not Used
Sandy Loam	Blocky, Granular	Weak, Moderate, Strong	0.15
Loam	Massive	Structureless	0.15
Loam	Platy	Weak, Moderate, Strong	Not Used

Soil Texture	Soil Structure – Shape	Soil Structure – Grade	Hydraulic Loading Rate (GPD/ft ²)
Loam	Blocky, Granular	Weak, Moderate, Strong	0.15
Silt Loam	Massive	Structureless	0.15
Silt Loam	Platy	Weak, Moderate, Strong	Not Used
Silt Loam	Blocky, Granular	Weak, Moderate, Strong	0.15
Sandy Clay Loam	Massive	Structureless	NA – requires a special site investigation
Sandy Clay Loam	Platy	Weak, Moderate, Strong	Not Used
Sandy Clay Loam	Blocky, Granular	Weak, Moderate, Strong	0.15
Clay Loam	Massive	Structureless	NA – requires a special site investigation
Clay Loam	Platy	Weak, Moderate, Strong	Not Used
Clay Loam	Blocky, Granular	Weak, Moderate, Strong	0.15
Silty Clay Loam	Massive	Structureless	NA – requires a special site investigation
Silty Clay Loam	Platy	Weak, Moderate, Strong	Not Used
Silty Clay Loam	Blocky, Granular	Weak, Moderate Strong	0.15
Sandy Clay	Massive	Structureless	Not Used
Sandy Clay	Platy	Weak, Moderate, Strong	Not Used
Sandy Clay	Blocky, Granular	Weak	Not Used
Sandy Clay	Blocky, Granular	Moderate, Strong	0.10
Clay	Massive	Structureless	Not Used
Clay	Platy	Weak, Moderate, Strong	Not Used
Clay	Blocky, Granular	Weak	Not Used
Clay	Blocky, Granular	Moderate, Strong	0.10
Silty Clay	Massive	Structureless	Not Used
Silty Clay	Platy	Weak, Moderate, Strong	Not Used
Silty Clay	Blocky, Granular	Weak	Not Used
Silty Clay	Blocky, Granular	Moderate, Strong	0.10

- (3) There shall be a minimum of 24 inches of suitable soil above the restrictive horizon or seasonal high-water table.
- (4) Soils Exhibiting Seasonal Wetness.
 - (a) Soils exhibiting seasonal wetness may be approved only when no soils with limiting factors—including redoximorphic features, fragic properties, or restrictive horizons such as fragipan, wetness indicators, heavy clay, or solid rock—occur within the upper 24 inches of the soil profile.
 - (b) Soils meeting the conditions in subparagraph (a) of this paragraph shall be limited to a maximum hydraulic loading rate of 0.075 gallons per day per square foot (GPD/ft²).
- (5) Slopes of 30% or less are suitable for land application sites. For sites with slopes between 30% and 50%, the engineer of record must certify that the linear loading analysis and slope stability is sufficient to support land application. Land application sites with slopes greater than 50% are prohibited.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.08 Construction Requirements.

- (1) Installation Requirements.
 - (a) Drip disposal lines shall be installed at a depth of six to twelve inches below the natural soil surface.
 - (b) Drip lines shall be installed at an elevation conforming to the natural ground surface contour of the site.

- (c) All components of the land application system shall be constructed of materials suitable for the conveyance and management of wastewater under expected operating conditions.
- (2) Protection of the Land Application Area.
- (a) All primary land application areas shall be protected from disturbance by fencing or equivalent barriers.
 - (b) The primary land application area shall be closed to public access.
 - (c) The primary land application area(s) shall not be used for parks, golf courses, institutional grounds, recreational areas, or any other public use.
 - (d) Reserve Land Application Area Use.
 - 1. A reserve land application area not currently in use for land application may be open to public access for passive, low-impact activities such as walking or nature observation.
 - 2. Active public uses—including parks, athletic fields, golf courses, institutional grounds, or other organized uses—are prohibited unless a soil scientist approved under Rule 0400-40-09-.07 certifies in writing that the activity will not impair soil suitability, hydraulic function, or any condition necessary for future land application use.
 - 3. Any construction within the reserve land application area is prohibited, including buildings, structures, utility infrastructure, grading or drainage modifications, or other activities that could limit or impair future land application use.
 - 4. The permittee shall have ownership rights of the reserve land application area consistent with subparagraph (4)(h) of Rule 0400-40-06-.05.
- (3) Construction Quality Assurance.
- (a) If material revisions are proposed, the owner or engineer of record shall submit revised plans, engineering reports, and specifications to the Commissioner for review and approval. Construction of any portion of a facility subject to material revisions is prohibited until the proposed material revisions have been approved by the Commissioner.
 - (b) The owner or engineer of record shall verify proper installation and testing of all treatment and dispersal system components prior to backfilling. This verification shall include confirming line depth, spacing, and alignment. Before requesting the final construction inspection required by Rule 0400-40-02, the owner or engineer of record shall submit an inspection report to the Commissioner.
 - (c) As-built drawings, certified by a professional engineer licensed in the State of Tennessee, shall be submitted to the Commissioner documenting all system components, including their location, dripline depth, spacing, alignment, system elevations, and total linear footage installed, prior to requesting a final construction inspection required by Rule 0400-40-02-.08.
 - (d) The permittee shall provide an electronic geospatial file, such as a shapefile, geodatabase feature class, or other Commissioner-approved format depicting the boundaries of land application areas, locations of drip or spray fields, system components, and any additional features required by the Commissioner. Geospatial data shall use a Commissioner-approved coordinate system and shall accompany the final as-built drawings.
 - (e) The permittee is prohibited from operating the system until the Commissioner's representative has inspected and approved the construction of the facility.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.09 Design Basis.

- (1) Design Flows.
 - (a) Design flows for residential developments shall be calculated using a minimum of 150 gallons per day (GPD) for a one-bedroom home; 300 GPD for homes with two to four bedrooms; and an additional 75 GPD for each bedroom beyond four.
 - (b) For short-term rental units, the design flow shall be based on 65 GPD per person, calculated using the maximum permitted occupancy with a minimum design flow of 150 GPD for any residential unit.
 - (c) For all other uses, design flow shall be based on generally accepted wastewater engineering practices.
- (2) Land Application Field Design.
 - (a) The land application system shall be designed and installed such that the area of influence of drip emitters, or spray distribution where authorized, achieves full utilization of the land application area.
 - (b) Land application systems shall be designed and installed such that the area of influence of the drip emitters or spray pattern covers the minimum square footage calculated for the application area. For drip dispersal system design, one emitter represents four square feet of application area, provided the emitters are not spaced more closely than two feet along the drip tubing or perpendicular to the drip tubing. The Commissioner may approve alternative emitter spacing if the applicant demonstrates that the configuration achieves full utilization of the land application area.
- (3) Setbacks shall be applied when determining the usable land application area. The minimum setbacks required for spray and drip systems are shown in Table 3.

Table 3. Land Application Area Minimum Setbacks (in feet)

Feature	Spray – Open	Spray – Forested	Drip
Property Line or Easement Boundary	300	150	10
Gullies, Ravines, Blue Line Streams, Drains, Drainageways, Cutbanks > 2 feet, and Sinkholes	150	75	25
Residences or Public Use Areas	300	150	10
Wells and Springs	150	75	50
Underground Utilities	10	10	10

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

0400-40-09-.10 Variances.

- (1) The Commissioner may grant a variance from the design and construction requirements of Rules 0400-40-09-.07, -.08, and -.09 when strict application of a provision would result in undue hardship and when site specific conditions demonstrate that the intent of the rule can be achieved through alternative measures providing an equivalent level of protection of public health and the environment. The Commissioner may not grant a variance that would result in a violation of the Act, or of any rules promulgated thereunder. A variance request will be submitted, reviewed, granted or denied through the plans review process set out in Chapter 0400-40-02.
- (2) A request for variance may be submitted as part of the plans review process set out in Chapter 0400-40-02 when:

- (a) Unique physical, environmental, or engineering constraints prevent full compliance with a specific requirement of this chapter;
 - (b) The proposed alternative demonstrates no increased risk to waters of the state, public health, or system reliability; and
 - (c) The alternative approach is supported by appropriate technical documentation, professional certification where applicable, and any supplemental studies requested by the Commissioner.
- (3) A complete variance request shall include:
 - (a) The specific rule provision for which the variance is sought;
 - (b) A clear description of the undue hardship and site-specific condition necessitating the variance;
 - (c) A detailed explanation of the proposed alternative method, practice, design, or safeguard;
 - (d) Supporting data demonstrating that the proposed alternative meets or exceeds the level of public health and environmental protection established by the rule; and
 - (e) Any additional information the Commissioner deems necessary to evaluate the request.
- (4) The Commissioner shall evaluate the variance request based on technical adequacy, environmental protection, and system performance considerations. The Commissioner may approve the variance, approve it with conditions, or deny the request. Approval of a variance does not constitute a precedent for other facilities.
- (5) If the Commissioner grants a variance, that variance may include more stringent monitoring, reporting, design, operational safeguards, or other conditions necessary to ensure that the alternative approach actually provides equivalent protection to the rule requirement. Further, if the Commissioner grants a variance, the applicant may be required to obtain an individual permit, rather than an authorization by rule, for underground injection pursuant to Chapter 0400-45-06.
- (6) A variance remains until modified or revoked. The Commissioner may modify or revoke a variance if conditions of approval are not met or if implementation of the alternative results in adverse environmental or public health impacts.

Authority: T.C.A. §§ 4-5-201 et seq. and 69-3-101 et seq.

I certify that the information included in this filing is an accurate and complete representation of the intent and scope of rulemaking proposed by the agency.

Date: September 17, 2026

Signature: *April Grippo*

Name of Officer: April Grippo

Title of Officer: Director of the Division of Water Resources

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Filed with the Department of State on: _____

Tre Hargett
Secretary of State