

§ 171.021 GENERAL DEFINITIONS

PUBLIC SEWER. A sewer that is part of an Illinois Environmental Protection Agency regulated wastewater treatment and disposal system that is owned and/or operated by a governmental body or public utility.

(Ord. [Bd of Health Ord., Art. V], passed 11-12-1996; Ord. [Bd of Health Ord., Art. V], passed 11-12-2013; Ord. 17-0605, passed 6-13-2017)

GENERAL REQUIREMENTS

§ 171.035 GENERAL.

(A) *Authority.* The Health Officer, in order to protect and promote the health, safety, and general welfare of the people of Lake County, Illinois, and other affected communities, is authorized and directed to develop procedures, practices and policies; to interpret and enforce these rules and regulations establishing minimum standards for sewage discharges, the location, installation, alteration, operation, maintenance, and monitoring of all onsite wastewater treatment systems, so as to protect land, water, groundwater and other natural resources within the County of Lake from impairment, pollution, or destruction; to minimize the risk of spreading communicable diseases, and to prevent and avoid other health and ecologic hazards, as well as illicit discharges and chemical contamination of lands and waters.

(B) *Minimum standards.* This chapter establishes minimum standards to minimize the risk that onsite wastewater treatment systems:

- (1) Contaminate any drinking water supply;
- (2) Are accessible to insects, rodents, or other possible carriers of disease that may come into contact with human food or drinking water;
- (3) Pollute or contaminate the water of any bathing beach or surface waters used for public or domestic water supply or recreational purposes;
- (4) Give rise to a nuisance due to odor or unsightly appearance; and
- (5) Violate any other laws or regulations governing control of water pollution or sewage disposal.

(C) *Onsite wastewater treatment system construction.* No person shall construct a new or replacement onsite wastewater treatment system, or repair an onsite wastewater treatment system without prior approval of the Health Officer, which shall include the approval of the site plan for the onsite wastewater treatment system, and the issuance of construction approval, with the exception that construction approval shall not be required for a repair to an onsite wastewater treatment system.

(D) *Alterations or additions to properties.* No person shall alter, expand, remodel, replace or add to a dwelling or non-residential building served by an onsite wastewater treatment system without prior approval of the Health Officer.

(E) *Subdivision of property.* No property, where onsite wastewater treatment systems are proposed to be used, shall be subdivided into two or more lots, nor shall there be a change or rearrangement of lot lines without prior approval of the Health Officer.

(F) *Public sewer availability.* The Health Officer shall refuse to issue approval for a site plan to install, replace, or repair an onsite wastewater treatment system where a public sewer, ~~or another Illinois Environmental Protection Agency regulated wastewater treatment and disposal system~~ is available. A public sewer shall be deemed available when the nearest property boundary line of the property to be served is located within a reasonable distance of the public sewer connection point, and the connection is permitted by the controlling authority of the public sewer. Investigation of public sewer availability shall be conducted by the licensed onsite wastewater system installation contractor or designer and shall be indicated on a plan submitted with an application

for approval.

(1) *Reasonable distance.* A reasonable distance shall be **250-300** feet from the nearest property boundary of a single family dwelling, and 1,000 feet from the nearest property boundary of a non-residential, multi-family, or proposed subdivision property boundary, except where the subdivision does not result in the creation of an additional parcel or parcels. The distance shall be measured along the proposed route of the sewer, as required by the controlling authority or by other persons or agencies having authority to determine the route of the sewer.

(Ord. [Bd of Health Ord., Art. V], passed 11-12-1996; Ord. [Bd of Health Ord., Art. V], passed 11-12-2013; Ord. 17-0605, passed 6-13-2017)

§ 171.068 APPROVAL CONDITIONS FOR ALTERATIONS TO PROPERTIES.

(A) General.

(1) *General.* No building or property served by an onsite wastewater treatment system may be added to or altered without prior approval of the Health Officer.

(2) *Building and site plans.* A proposal to the Health Officer for an alteration or addition to a property served by an onsite wastewater treatment system must include a building plan depicting the existing and proposed final floor plan, and must also indicate any proposed site alterations.

(B) Approval for alterations not requiring replacement of system components. When the Health Officer determines that the proposed property alteration project does not conflict with the setback distances in Appendix D, and does not otherwise impact the onsite wastewater treatment system by increasing water usage, wastewater flow, or the strength of the wastewater, the Health Officer shall approve the project without requiring replacement of onsite wastewater treatment system components, and in accordance with the requirements of this section.

(1) *Proposals not resulting in increased water usage.* Proposals for an alteration or addition to a dwelling or non-residential building that will not result in increased water usage, as defined in this chapter, shall be approved when the following requirements are met:

(a) A site plan indicates the proposal meets the required setbacks to all existing components of the primary onsite wastewater system and reserve soil treatment area, if applicable, as established by Appendix D.

(b) A search of Lake County Health Department records indicates satisfactory past performance of the onsite wastewater treatment system, and that any required system management activities and reports are up-to-date, current and indicate that the system is functioning in a satisfactory manner.

(2) *Proposals to replace building – primarily in the same building footprint.* Proposals to replace an existing dwelling or non-residential building when the dwelling or nonresidential building is proposed primarily in the same building footprint location as the existing structure shall be approved when the requirements of this section are met. A proposal shall be deemed to be primarily in the same building footprint if 80% or more of the proposed building footprint square footage falls within the original building footprint. An existing non-compliant setback distance shall not be increased. In the case of a catastrophic loss caused by fire, flooding, wind, collapse, and/or life safety issues, the owner of record at the time of loss shall submit a proposal for replacing the lost building within one year of the occurrence of the damage to the building.

(a) A site plan indicates the proposal meets the required setbacks to all existing components of the primary onsite wastewater treatment system and reserve soil treatment area, if applicable, as established by Appendix D, or a site plan indicates the proposal does not meet the required setbacks to all existing components of the primary onsite wastewater treatment system and reserve soil treatment area, if applicable, as established by Appendix D, but the proposal meets the requirements of § 171.067(B). A system component that does not meet the setback requirements established by Appendix D may be replaced in accordance with the requirements of § 171.069.

(b) The new dwelling or non-residential building will not result in increased water usage, as defined in this chapter.

(c) A search of Lake County Health Department records indicates satisfactory past performance of the onsite wastewater treatment system, and that any required system management activities and reports are up-to-date, current and indicate that the system is functioning in a satisfactory manner.

(d) All of the existing wastewater disposal system components will continue to be used.

(e) A report prepared by a licensed septic system installation contractor or designer, signed and dated, detailing the size of the components of the system, current performance and integrity of all tanks, controls and distribution system is submitted and approved. The report shall indicate that in the professional judgment of the evaluator, the building project will not negatively impact the overall functioning of the onsite wastewater treatment system.

(Ord. [Bd of Health Ord., Art. V], passed 11-12-1996; Ord. [Bd of Health Ord., Art. V], passed 11-12-2013; Ord. 17-0605, passed 6-13-2017)

§ 171.126 SITE PLAN SPECIFICATIONS FOR A NEW, REPLACEMENT, OR ALTERATION-REPLACEMENT ONSITE WASTEWATER TREATMENT SYSTEM, OR AN ONSITE WASTEWATER TREATMENT SYSTEM WITH ATYPICAL WASTEWATER FLOW.

(A) *Minimum standards.* A site plan submitted for approval for a New Onsite Wastewater Treatment System, Replacement Onsite Wastewater Treatment System, Alteration-Replacement Onsite Wastewater Treatment System or an Onsite Wastewater Treatment System with Atypical Waste Water Flow shall meet minimum standards as established in this section.

(B) *Other required information.* A proposal to construct or replace an onsite wastewater treatment system, or to construct an onsite wastewater treatment system with atypical wastewater flow shall be submitted in accordance with the requirements of §§ 171.125 through 171.128 on forms provided by the Lake County Health Department, and shall include the following information unless otherwise determined by the Health Officer:

(1) *Soil evaluation.* A soil evaluation report, prepared in accordance with the requirements of §§ 171.085 through 171.089.

(2) *Projected wastewater flow calculation.* A calculation of the projected wastewater daily flow.

(3) *Building plans.* A building plan depicting the proposed and/or existing floor plan.

(4) *Component capacity.* A calculation of the capacity of the components of the onsite wastewater treatment system, including the soil treatment component.

(5) *Length calculation.* A calculation of the bed length of a Type 3, 4, or 5 system in accordance with §§ 171.104(A)(8), 171.105(A)(7), and 171.106(A)(7).

(6) *Low pressure pipe distribution system calculation.* A calculation of low pressure pipe distribution system size and configuration in accordance with the requirements of §§ 171.100 through 171.111.

(7) *Other information.* Reports from engineers, wetland consultants, or other professionals, as required by the Health Officer to establish stormwater drainage, wetland delineations, surface water elevations, floodplain or other information necessary for the evaluation of the proposal.

(8) *Plat of survey.* An accurate Plat of Survey of the property prepared by a licensed surveyor.

(C) *Licensed designer.* The site plan shall be prepared by a person licensed as a Lake County licensed onsite wastewater treatment system designer, in accordance with the requirements of §§ 171.180 through 171.186.

(D) *Topographical survey.* The site plan shall be drawn on a topographical survey, as defined in § 171.021, to

provide accurate contour lines depicting each one foot change in elevation. If approved by the Health Officer, a topographical study may be submitted by a licensed onsite wastewater treatment system designer in lieu of a topographical survey.

(E) *Site plan size, scale.* The site plan shall be drawn on a minimum size sheet of 11-1/2" by 17" and to a scale of 1" = 10', 1" = 20' or 1" = 30', unless otherwise approved by the Health Officer.

(F) *Readable copies.* The site plan shall be prepared and copied so as to be easily readable.

(G) *Number of copies.* Five copies of the site plan shall be submitted.

(H) *Site information.* The site plan shall properly locate and specify dimensions, when applicable, for the following:

(1) *Property lines.* All property lines and dimensions.

(2) *Improvements.* All existing and proposed buildings, driveways and other improvements.

(3) *Utilities.*

(a) All utility easement locations and dimensions;

(b) All underground utility and service lines, and any overhead utility lines within 25 feet of the proposed well location.

(4) *Water wells.* All existing, proposed or sealed water wells, or closed loop wells on the property or within 75 feet of a property line of the subject property.

(a) The distance from all existing, proposed or sealed water wells, or closed loop wells to proposed components of a proposed onsite wastewater treatment system shall be dimensioned.

(b) A 75-foot radius for any proposed water well shall be contained on the subject property, whenever possible.

(5) *Onsite wastewater treatment systems.* All existing and proposed onsite wastewater treatment systems on the subject property or within 75 feet of a property line of the subject property.

(6) *Drainage.* All drainage features including but not limited to ditches, streams, swales, storm sewers and other stormwater pathways.

(7) *Surface waters/wetlands.* All surface waters or wetlands on the subject property or within ~~50~~ 25 feet of a property line of the subject property.

(I) *Onsite wastewater treatment system specifications.* The site plan shall properly locate and provide dimensions or specifications for the proposed onsite wastewater treatment system as follows:

(1) *Onsite wastewater disposal system components.* Location and size of all onsite wastewater treatment system components and features, including:

(a) Septic tanks, pretreatment units and lift stations and piping to these components;

(b) Piping to the soil treatment component;

(c) Distribution boxes, drop boxes, diverter valves;

(d) Soil treatment components;

(e) Distribution piping;

(f) Gravel application beds in mound systems; and

(g) Areas of approved filling.

(2) *Soil evaluation.* Location of all soil evaluation points.

(3) *Storage/traffic.* Location for material storage and a pathway for construction traffic.

(J) *Specific elevations.* The site plan shall provide specific elevations, referenced to the topographical survey as follows:

(1) *Benchmark.* The elevation of a permanent benchmark.

(2) *Floodplain.* The Base Flood Elevation, if applicable.

(3) *Sewer/septic.* The elevation of the invert(s) of the inlet(s) of the septic tank and other pretreatment units.

(4) *Distribution box.* The elevation of the invert of the distribution box, except when a lift station is proposed.

(5) *Distribution line.* The elevation of any low pressure lateral distribution line.

(K) *Detailed cross section.* A detailed cross section of the soil treatment component specifying original grade and the relative placement of fill material, gravel, piping and cover material.

(L) *Required additional information.* The site plan shall include additional information as follows:

(1) *Legal description.* A legal description of the property.

~~(2) *Property location.* A geographical sketch of the property location.~~

(Ord. [Bd of Health Ord., Art. V], passed 11-12-1996; Ord. [Bd of Health Ord., Art. V], passed 11-12-2013; Ord. 17-0605, passed 6-13-2017)

§ 171.258 VARIANCES.

(A) *Variance requests.* When compliance with the requirements of this chapter is impossible or impractical, an applicant may request a variance as follows:

(1) *Written requests.* Variance requests shall be in writing and shall detail those conditions where compliance is considered impossible or impractical.

(2) *Supporting data.* Variance requests shall include pertinent data from an appropriately licensed or credentialed person to support the requested waiver of the requirements of this chapter and shall be consistent with the responsibility of the Health Officer to protect and provide for the health, safety, and general welfare of the people and the environment of Lake County and of other affected communities.

(a) *Public ~~sewer-sewer~~ availability.* A variance request to install, replace or repair an onsite wastewater treatment system on a property where a public sewer is available, as described in § 171.035 (F), shall include documentation that the controlling authority of the public sewer does not object to the granting of the variance and the approval of a OWTS site plan.

(B) *Review process.* The Health Officer shall review variance requests and shall approve or refuse to approve the request within ten working days.

(C) *Notification.* The Health Officer shall notify the person requesting a variance in writing of the approval or denial of the request, and shall state the reasons for the decision.

(D) *Recording approval of variance.* The document issued by the Health Officer approving a variance shall be recorded with the property with the Lake County Recorder of Deeds and shall run with the land.

(E) *Fee.* A fee in accordance with the current fee schedule adopted by the County Board as codified in § 178.01 shall be submitted with a variance request.

Table B.2 - Maximum Wastewater Loading Rates

System types 1 and 2, and drip distribution systems shall use the most limiting soil loading rate ~~between the invert of the distribution piping and 2 feet-18 inches~~ below the wastewater application point to size the soil absorption component. System Types 3, 4 & 5, and the Illinois Raised Filter Bed, shall use the most limiting soil loading rate in the upper 12 inches of soil to size the soil absorption component.

	<i>Till/ Lacustrine</i>	<i>Outwash</i>
Gravelly coarse sand	0.00	0.00
Moderate or strong platy structure	0.00	0.00
Sandy clay loam, silty clay loam, or finer, and weak platy structure	0.00	0.00
Moist soil consistence stronger than firm or any cemented class	0.00	0.00
Sandy clay, clay, or silty clay texture and weak or massive structure	0.00	0.00
Sandy clay loam, clay loam, silty clay loam, silt, loam or silt loam texture and massive structure	0.00	0.00
Sandy clay, clay, or silty clay texture of low clay content and moderate or strong structure	0.20	0.20
Sandy clay loam, clay loam, silty clay loam or silt loam texture with weak structure	0.20	0.30
Clay loam, silty clay loam, or silt loam texture and moderate or strong structure	0.40	0.50
Sandy loam or loam texture and weak structure	0.40	0.50
Sandy clay loam, sandy loam, or loam texture and moderate or strong structure	0.50	0.70
Fine sand, very fine sand, loamy fine sand, or loamy very fine sand	0.60	0.70
Loamy sand, sand, or coarse sand texture	0.80	0.80

Table B.3 – Soil Treatment Credit

The relationship between the system type (wastewater application point) and the depth to a limiting layer shall be as follows:

<i>Depth to Limiting Layer in inches</i>	<i>Septic Tank Effluent (greater than 10,000 FC organisms/100 ml) Minimum Twenty-four inches (24") Separation Required</i>	<i>Secondary Treated Effluent(less than 10,000 FC organisms/100 ml) Minimum Sixteen inches (16") Separation Required</i>	<i>NSF Standard 350 Effluent (less than 240 E. coli MPN/100ml) Minimum Twelve inches (12") Separation Required</i>
Less than 6	NA	NA	NA
6 to <10	Mound with increased sand (a)	Drip in fill (b), Mound (a)(c)	Drip in fill (b), Mound Mound (c), Modified Mound
10 to <16	Mound (minimum 12" depth to limiting layer), Mound with increased sand (a)	Mound, Drip on grade/in fill (b), Modified Mound (a), Illinois Raised Filter Bed	All the above, Drip on grade, Illinois Raised Filter Bed, At-grade
16 to <24	Mound, Modified Mound (d)	All the above, Drip in ground/on grade, In-ground trenches (h), At-grade	All the above, in-ground trenches (h), (g)
24 to <28	All the above, At-grade	All the above, In-ground trenches (g)	All the above
28 to 36	All the above, In-ground trenches (f)(g)(h)	All the above, In-ground trenches (e)(g)	All the above
36 and above	All the above	All the above	All the above

Footnotes:

- a. Maximum 4 gallon per day per linear foot loading rate, single bed or separated un-stacked multiple beds, time dosing.
- b. Acceptable fill is coarse sand (USDA texture 0.5mm to 1.0 mm). Proper depth of fill needed for separation distance and cover over the drip piping must be placed before installation of distribution system. A minimum of ten inches (10") of soil cover, four (4) of which must be coarse sand fill, must be placed over the drip piping for protective cover.
- c. Drip distribution acceptable with sand footprint sized according to sand loading rate and mound basal area sized according to least permeable (lowest SLR) soil horizon in existing soil above the limiting layer.
- d. Limiting layer must be at least eighteen inches (18").
- e. Limiting layer must be at least twenty-eight inches (28") using a twelve inch (12") standard gravel trench, less if using a state approved, less than twelve inches (12") thick, low profile proprietary infiltration product.
- f. Limiting layer must be at least thirty-six inches (36") using a twelve inch (12") gravel trench, less if using a state approved, less than twelve inches (12") thick, low profile proprietary infiltration product.

g. Protective topsoil cover needed when the top of the infiltration trench gravel or infiltration product is zero inches (0") to less than six inches (6") below original grade or top of sand fill. Depth of soil cover over a proprietary infiltration product shall be in accordance with the manufacturer's specifications.

h. When the sidewall of the infiltration trench will extend above existing grade, the soil treatment area shall be plowed and filled in accordance with § 171.142 and § 171.143 and the minimum depth of sand fill shall be ten inches (10"). The ten inch (10") depth sand fill material shall extend a minimum of ten feet (10') beyond all seepage trenches before sloping. A minimum of one-half of the depth of the infiltration trench shall be installed into existing grade. Distribution of wastewater shall be by low pressure piping designed in accordance with § 171.102(F) and § 171.103(A)(12). Low pressure piping is not required for NSF Standard 350 effluent.

(Ord. [Bd of Health Ord., Art. V], passed 11-12-1996; Ord. [Bd of Health Ord., Art. V], passed 11-12-2013; Ord. 17-0605, passed 6-13-2017)

APPENDIX D: MINIMUM SETBACK DISTANCES

Minimum Setback Distances of Components of OWTS to Site Features

<i>Distance (in feet) From:</i>	<i>Component Part of System</i>			
	<i>Building Sewer, Force Main , or effluent conveyance pipe from pretreatment tanks to soil absorption component</i>	<i>Septic Tank, Holding Tank, Aerobic Treatment Unit, Media Filter, Lift Station, Grease Interceptor</i>	<i>Primary and Reserve Soil treatment Area (basal area, mantle, edge of in-ground trench/bed, drip tubing, constructed wetland)</i>	<i>Large Capacity Septic System⁵</i>
Wells ¹ or Suction Lines	50 ²	50	75	200
Water Supply Line Under Pressure, In-ground swimming (water edge)	10	10	25	25
Above Ground Swimming Pool, hot tub, lined decorative pond	5	5	10	10
Surface Waters, Retention Facility (ordinary high water mark)	25	25	25	25
Wetlands	10	25	25	25
Detention Facility High Water Line	10	10	25	25

Building with Foundation Footing Drain	NA	10	20 ³	10
Building Without Foundation Footing Drain	NA	5	10	10
Property Line, Fence Posts, Structure Support Posts, Patios, Sidewalks, Retaining Wall	3	3	5	5
Driveways, Patios, Sidewalks, Retaining Wall	NA	5	10 ⁴	10 ⁴
Agricultural Drain Tile, Perforated Pipe	10	10	10	10
Drainage Easement, Open Ditches, Road Cuts, Storm Sewer Pipe	5	5	5	10
Utility Easements	5	5	5	5
Sealed Well	5	10	25	25
Upslope or Sideslope of Soil Treatment Area for System Types III, IV and V, Soil Treatment Area for All Other System Types	NA	5	NA	NA
Clearwater Conveyance Pipe	NA	5	10	10
Downslope of Soil Treatment Area for System Types III, IV and V	NA	10	NA	NA

Footnotes:

1- For separation distances to closed loop wells see 77 111. Adm. Code 920.180

2- A building sewer may be located to within 10 feet of a well or suction line from the pump to the well when cast iron pipe with mechanical joints or Schedule 40 PVC pipe with watertight joints is used for the building sewer. A force main may be located to within 10 feet of a well or suction line from the pump to the well when Schedule 40 PVC pipe with watertight joints is used.

3- The distance to the upslope edge of the basal area of a Type 3, 4 and 5 system can be reduced by 50% on sites where the soil treatment area is on a slope of 2% or greater.

4- This distance can be reduced by 50% if the soil treatment area is the edge of a trench/bed (System Type 1 or 2), drip tubing, or upslope or sideslope side of a soil treatment area.

5- Large Capacity Septic Systems, which are classified as Class V Injection Wells, are described and defined in the Illinois Pollution Control Board rules. They are typically a shallow well used to place fluids below the land surface. See 35111. Adm. Code 704.105, 704.106 and 704.280.

~~6- Sidewalk/patio constructed of landscaping bricks/stones place on the ground surface are exempt.~~

(Ord. [Bd of Health Ord., Art. V], passed 11-12-1996; Ord. [Bd of Health Ord., Art. V], passed 11-12-2013; Ord. 17-0605, passed 6-13-2017)