

CHAPTER 65

PRIVATE SEWAGE DISPOSAL SYSTEMS

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65.01 PURPOSE. The purpose of this chapter is to safeguard public health and protect water quality by minimizing the impact of private sewage disposal systems (septic systems) by promoting the maintenance of existing systems and employing best technology for new system installation.

65.02 APPLICABILITY. The provisions contained herein apply to any system that provides for the treatment or disposal of domestic sewage from four or fewer dwelling units or the equivalent of less than 16 individuals on a continuing basis, including domestic waste, whether residential or nonresidential, but not including any industrial waste of any flow rate except for on-farm food processing provisions described in Environmental Protection (567) IAC Chapter 68 *Commercial Septic Tank Cleaners*.

65.03 ADOPTION OF STATE CODE. Pursuant to the authority granted in Section 137.104 of the *Code of Iowa*, the Board of Health adopts, in its entirety, by reference,

65.04 DESIGNATED AGENCY. Pursuant to Chapter 137 of the *Code of Iowa*, the Story County Environmental Health Department (EH) is the designated agency to interpret, monitor and enforce the rules contained in Environmental Protection (567) IAC Chapter 69 *Private Sewage Disposal Systems* and Story County Ordinance Chapter 65 *Private Sewage Disposal Systems*.

65.05 ADDITIONAL RULES. Pursuant to Section 137.104 of the *Code of Iowa*, the Board of Health adopts the additional rules contained in this and supports the Story County Board of Supervisors adopting this chapter to the Story Code of Ordinances.

65.06 DEFINITIONS.

1. Bedroom means a private room where people usually sleep for the night. Story County does not have a building code, so there are no specific items, such as an egress, a closet, minimum room size, minimum height, etcetera, that make a room a bedroom. Residential septic system sizing is based on the number of bedrooms and soil type. A bedroom, for septic sizing, accommodates two people. Owners, in the process of selling a house, shall disclose the total number of bedrooms used for sizing the septic system, as stated on the permit, in an effort to inform buyers of the wastewater generation capacity.

2. Certified Installer means a person who qualifies as a Certified Installer of On-site Wastewater Treatment Systems (CIOWTS). Certification, recertification, and continuing education for CIOWTS is accredited by the Iowa On-site Waste Water Association (IOWWA). Continuing education credits for CIOWTS certification obtained prior to January 1, 2018 may continue to be tracked with the National Environmental Health Association (NEHA) or IOWWA. If the IOWWA board members have good reason to believe the certified installer is not meeting the standards of a CIOWTS contractor, the IOWWA board has the authority to revoke a certification, with an appeal process available for the contractor. Refer to the IOWWA *Certified Installer On-site Wastewater Treatment Systems Credentialing Handbook*.

3. Maintenance contract means a binding document between the property owner and a septic system maintenance contractor. A maintenance contractor has been trained by the system's manufacturer to service, monitor, make minor repairs, and report on said manufactured system. For systems no longer being manufactured, a person may service a septic device via permission granted by a variance issued by the EH. Maintenance contractors are not required to be a Certified Installer.

4. Professional Septic System Evaluator and Designer (Professional Evaluator)

A. Includes a person who is able to successfully:

1. Demonstrate knowledge and skill in soil morphology, observing attributes such as color, mottling, reduction-oxidation, texture, structure, and compaction.
2. Identify seasonal groundwater levels and other limiting layers.
3. Identify soil loading rates.
4. Identify topography and landforms and complex slopes as they relate to wastewater treatment.
5. Identify the optimum type and placement and depth of disposal systems.

6. Design systems as per the requirements of IAC Chapter 69 “Private Sewage Disposal Systems” and this ordinance.
 7. Identify the proper use of pumps, tanks, distribution boxes, drop boxes, valves, plumbing, piping, grease traps, holding tanks, and aggregate.
 8. Demonstrate knowledge of wastewater strengths.
- B. Professional Evaluators include (but not limited to):
1. Licensed engineers in the State of Iowa. A minimum of three years of experience in onsite wastewater treatment system design and soil evaluations are required.
 2. Individuals with a bachelor’s or associate’s degree from an accredited postsecondary education institution in Soil Science, Environmental Science, Agronomy, or related field. A minimum of three years of experience in onsite wastewater treatment system design and soil evaluations are required.
 3. The Story County Sanitarian
- C. A person wanting to work in Story County as a Professional Evaluator shall submit an application and supporting documentation to EH. Application forms shall be provided by EH. An interview may be requested by EH to aid in determining if a person is qualified to be a Professional Evaluator in Story County. An appeal for denials may be requested in writing to the BOH within thirty days of EH’s decision.
- 5. Stream** means any watercourse listed as a “designated use segment” in rule IAC Chapter 61 567-61.3 (455B) which includes any watercourse that maintains flow throughout the year or contains sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community. Designated use segments include:
- A. Class 'A1' water, as per the State of Iowa water classifications, also referred to as a primary contact recreational use water, means waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risk of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.
 - B. Class 'A2' water, as per the State of Iowa water classifications, also referred to as a secondary contact recreational use water, means waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. Such uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.
 - C. Class 'A3' water, as per the State of Iowa water classifications, also referred to as a children's recreational use water, means waters in which recreational uses by children are common. Such waters are water bodies having definite banks and bed with visible evidence of the flow or occurrence of water. This type of use would primarily occur in urban or residential areas.

65.07 ABBREVIATIONS.

1. BOH Story County Board of Health
2. CBOD5 Carbonaceous biochemical oxygen demand (five-day) means the amount of oxygen consumed in the biological processes that break down carbonaceous organic matter in water by aerobic biochemical action in five days at 20°C
3. CIOWTS Certified Installer of Onsite Wastewater Treatment Systems
4. EH Story County Environmental Health Department personnel

5. EPA Federal Environmental Protection Agency
6. IDNR Iowa Department of Natural Resources
7. IOWWA Iowa On-site Wastewater Association
8. NEHA National Environmental Health Association
9. NOI Notice of Intent to discharge
10. NPDES National Pollutant Discharge Elimination System
11. TSS Total Suspended Solids

65.08 SETBACKS. Setbacks more stringent than the IDNR requirements have been established by Story County to enhance water quality protection. The current setback requirements for the IDNR are shown in parentheses in the table below. The more stringent setbacks apply to all new septic installations in Story County installed after January 1, 2021. Owners who have limited options for system placement may request, in writing, a variance for this requirement to the Sanitarian. Appeals of the Sanitarian’s decision will be heard and voted on by the BOH.

Table 1

Minimum Horizontal Distance in Feet From	Closed Portion of Treatment System *	Open Portion of Treatment System **
Private water supply well	50 (50)	100 (100)
Shallow public water supply well ***	200 (200)	400 (400)
Deep public water supply well ****	100 (100)	200 (200)
Groundwater heat pump borehole	50 (50)	100 (100)
Lake or reservoir	50 (50)	100 (100)
Stream (Class A1, A2, and A3) or pond	25 (25)	50 (25)
Edge of road ditch	10	10
Edge of drainage district ditch	25 (10)	50 (10)
Dwelling or other structure	10 (10)	20 (10)
Property lines (unless a mutual easement recorded)	10 (10)	10 (10)
Other type of subsurface treatment system	5 (5)	10 (10)
Water lines continually under pressure	10 (10)	10 (10)
Suction water lines	50 (50)	100 (100)
Foundation drains	10 (10)	10 (10)
Subsurface drainage tiles	25 (10)	50 (10)

* Includes septic tanks, aerobic treatment units, fully contained media filters, holding tanks, and impervious vault toilets.

** Includes subsurface absorption systems (secondary and tertiary treatment), mound systems, intermittent sand filters, constructed wetlands, open bottom media filters.

*** Shallow well means a well located and constructed in such a manner that there is not a continuous layer of low-permeability soil or rock (or equivalent retarding mechanism acceptable to IDNR) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

**** Deep well means a well located and constructed in such a manner that there is a continuous layer of low-permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

65.09 SHARING OF SEPTIC SYSTEMS PROHIBITED.

1. The sharing of a septic system by two or more wastewater sources not owned by the same person or entity is prohibited with the following exceptions:
 - A. Parcels within a residential subdivision that have been preapproved by EH, and designed by an engineer.
 - B. Shared private septic systems that are in existence on January 1, 2021, and are in proper working condition.
2. Alterations of existing systems (distribution box or septic tank replacements) are allowed on shared systems with approval from EH. For those shared systems not located in a subdivision, efforts shall be made to change them over to individual systems.
3. A failed system discovered as a result of a time of transfer inspection or a complaint shall result in requiring individual systems be installed for each parcel.

65.10 WHEN SEPTIC CONSTRUCTION PERMIT NEEDED:

1. New construction with wastewater generation.
2. An existing system not large enough to treat a proposed increase for wastewater loading and/or wastewater strength. Examples include, but are not limited to:
 - A. A new home business such as, but not limited to a daycare, restaurant, beauty salon.
 - B. An increase in the number of bedrooms that the existing septic system is undersized to treat.
3. Replacement or enlargement of the secondary system.

65.11 DOCUMENTS NEEDED FOR SEPTIC CONSTRUCTION PERMIT:

1. Environmental Health's application form with payment.
3. Professional Evaluator's site evaluation and design diagram if applicable.
4. Maintenance contract if required.
5. Easement rights if required (easements shall be recorded with the Story County Recorder).

65.12 WHEN SEPTIC ALTERATION PERMIT NEEDED:

1. Septic tank or pump chamber replacement.
2. Distribution box replacement.
3. New wastewater generation is being directed to an existing system.

65.13 DOCUMENTS NEEDED FOR SEPTIC ALTERATION PERMIT:

1. Environmental Health's application form.
2. Fee payment.

65.14 APPLICATION FOR SEPTIC CONSTRUCTION OR ALTERATION PERMITS. Any person, firm, or corporation wishing to construct or reconstruct, or alter a septic system in Story County shall submit an application for a construction permit or alteration permit with EH. Application shall be made on forms provided by EH. Information provided shall contain, at a minimum: name of property owner, name of applicant, parcel identification, type of facility and/or anticipated wastewater volumes, number of existing and proposed bedrooms, number of buildings that have wastewater generation, name of certified septic installer, name of Professional Evaluator

conducting the site evaluation if applicable, property owner's permission for EH to enter premises, and any additional information requested by EH.

65.15 NEW WASTEWATER GENERATION THAT IS TO BE DIRECTED TO AN EXISTING SEPTIC SYSTEM.

1. A wastewater stream from a new house or building may be directed to an existing system (remaining from a house or building that was removed or destroyed) only if all of the following are true:

- A. The existing system is a permitted system.
- B. The existing system is large enough (based on the current septic sizing requirements of IAC Chapter 69) to accommodate the total wastewater load, existing and new.
- C. The existing system has been inspected by an IDNR certified time of transfer inspector, and found to be in good condition.
- D. An alteration permit has been obtained from EH.

2. A new wastewater stream from a second source (such as a workshop) may be directed to the existing septic system only if all of the following are true:

- A. The existing system is a permitted system.
- B. The existing system is large enough (based on the septic sizing requirements of IAC Chapter 69 when the system was originally installed) to accommodate the total wastewater load, existing and new.
- C. An alteration permit has been obtained from EH.

65.16 FEES. An application for permit must be accompanied by an application fee, as set by the Board of Health. Fees shall be payable to the Story County Treasurer, and directed to EH.

65.17 SITE EVALUATION. Site evaluations are required prior to issuance of a construction permit, and shall be conducted by a Professional Evaluator. When site evaluations are conducted by the Sanitarian, the Sanitarian may request that the owners, at their expense, provide assistance with soil coring when the ground is too difficult to probe (owner may hire a backhoe operator for digging holes, or hire a Professional Evaluator in lieu of the Sanitarian).

65.18 SITE EVALUATION REPORT CONTENT. The site evaluation report shall include, at a minimum:

- 1. Descriptions of the soil cores to at least 60", or to the depth of the identified limiting layer.
- 2. Soil core locations, shown on a map or diagram.
- 3. Depth to limiting layer and type of limiting layer.
- 4. Soil loading rates and or percolation rates.
- 5. Recommended septic system type.
- 6. Options for system location.
- 7. Easements required for the construction, placement, or maintenance of the septic system not located on the septic owner's property.
- 8. Diagram showing the location and setbacks of existing/proposed water wells, geothermal wells, horizontal geothermal loops, buildings, waterways, subsurface tiles, buried utilities, known locations of buried rubble, existing easements that may impact the construction of the septic system.

65.19 SOIL PROTECTION. As per the findings of the site evaluation, the proposed wastewater soil absorption area(s) shall be cordoned off to prevent soil compaction from construction traffic. This is the responsibility of the property owner and or the builder.

65.20 HOLDING TANKS. The use of holding tanks shall be limited as much as possible. If EH issues a permit for a holding tank, a maintenance contract for proper monitoring and servicing shall be established between the owner and a Commercial Septic Tank Cleaner. A maintenance contract is required for the life of the installed holding tank. The homeowner is responsible for ensuring that the contract guarantees the removal of the tank contents before overflow or any discharge.

65.21 SUBDIVISION PLANNING FOR WASTEWATER TREATMENT.

1. Soil-based treatment is the preferred method of treatment and septic system placement shall be a key part of the planning phase for subdivisions. Establishing lot sizes, lot lines, green spaces, easements, and road placement for a subdivision shall consider the soils, slope, waterways and sensitive environmental areas, providing for soil-based wastewater treatment as much as possible. Cluster systems (multiple houses using a shared system) are recommended for subdivisions in close proximity to a municipal sanitary sewer service area with potential to be incorporated within the city's growth area. Cluster systems shall have a maintenance contract for the life of the system.
2. The final plat for a subdivision shall show the area proposed for the septic system for each lot, based on soil maps, contours, waterways, setbacks, proposed wells, and probable house placement. Soil coring is not required for this step. Prior to any construction, or earth moving in the subdivision, the septic system area shall be cordoned off to protect the soil from construction related compaction.

65.22 SUBDIVISION LOT SITE EVALUATIONS.

1. For any subdivision of three lots or more, a Professional Evaluator, other than the Sanitarian, must be hired to conduct the site evaluation for each lot. The evaluation shall prioritize using the area identified as the lateral field location on the final plat.
2. The subdivision developer shall obtain a site evaluation report for each lot. The developer may pass this responsibility, in writing, to the buyer of a lot in said subdivision. The site evaluation shall be submitted to the Environmental Health Department prior to house construction.
3. The Sanitarian will review all site evaluations for subdivision lots for accuracy prior to issuing a septic permit.

65.23 ENGINEER'S DESIGN. EH may require a State of Iowa Licensed Professional Engineer's design for system proposals for commercial, institutional, or public service facilities with special wastewater treatment needs or large wastewater volumes. Official design plans shall include the engineer's name & signature, date, and license renewal date.

65.24 SEPTIC CONSTRUCTION PERMIT TO BE ISSUED BY EH. Upon receipt and EH approval of the application, payment, site evaluation report (if applicable), easement documents (if required) and maintenance contract (if required), EH shall issue a permit using information obtained from the site evaluation report, soil survey, flood maps, permit application, and other pertinent information. EH may apply policy or variations of design, which have been approved or recommended by the BOH, the Professional Evaluator, EPA, IDNR, or the University Extension Engineering Specialists in efforts to enhance wastewater treatment or increase the system's longevity. The permit

shall outline the basic construction design and minimum system size as defined in 567 IAC 69, along with any restrictive conditions or requirements. Mandatory system maintenance and monitoring requirements, easements, and other special conditions shall be stipulated on the permit.

65.25 DENIAL OF PERMIT. EH may deny issuing a permit if the application is incomplete or any factors for defining the wastewater treatment system are absent or shown to be inadequate.

65.26 VOIDING OF PERMIT. The septic system specifications, stipulated in the Story County BOH Permit, shall be followed. Any variation from that which is defined in the permit voids the construction or alteration permit.

65.27 PERMIT EXPIRATION. A permit for construction shall expire two calendar years from the date of issuance. EH may extend the expiration date as deemed necessary.

65.28 CERTIFIED INSTALLER. All septic installations, construction, reconstruction, and alterations shall be conducted by contractors who qualify and are in good standing as a Certified Installer of On-site Wastewater Treatment Systems (CIOWTS).

65.29 REQUEST FOR FINAL INSPECTION. The installer shall notify EH at least eight working hours, between 8:00 a.m. and 4:30 p.m. before the completed system is to be available for final inspection.

65.30 FINAL INSPECTION. All newly constructed or altered private sewage disposal systems shall be inspected by EH. The installer shall leave enough of the system exposed so that a thorough inspection of the system may be conducted. A certified installer shall be available to discuss details of the installation. EH will inform the installer of any concerns with the system installation that need to be remedied. The purpose of the final inspection is to collect field data in order to document the system's description and location, to determine if the permit intent was accomplished, and to assess the workmanship. A final as-built drawing shall be made as part of the final inspection.

65.31 CERTIFICATE OF COMPLETION. Upon completion of the final inspection of the newly constructed or altered private sewage disposal systems, EH shall issue a Certificate of Completion to the permittee or agent of the permittee if reasonable assurance is evident that the septic system was built according to applicable requirements as specified in the construction permit. The certificate shall include, at a minimum, the parcel identification, permit number, date, name of certified installer, and name of EH inspector.

65.32 INSPECTION NO RELIEF FROM RESPONSIBILITY. The purpose of the final inspection is to collect field data in order to document the system's description and location, to determine if the permit intent was accomplished, and to assess the workmanship. The field data collected during the inspection documents the conditions at the time of the inspection, but does not necessarily sanction a system as being in compliance with the requirements of 567 IAC 69. This ordinance shall not be construed to relieve from or lessen the responsibilities of any person, partnership, or corporation

owning, operating, or installing septic systems, construction, or equipment, for the damage to property or persons injured by any defect therein. Nor shall Story County or any agent thereof be deemed to assume any such liability by reason of the inspection authorized herein or the certificate of installation issued by the EH. It is the responsibility of the certified installer to ensure that all septic system installations are performed in accordance with the provisions of Environmental Protection (567) IAC 69 and Story County Ordinance Chapter 65.

65.33 MINIMUM LEVEL OF SEPTIC SYSTEM MAINTENANCE REQUIRED. The individual sewage treatment system and all components must be maintained in compliance with this chapter and the septic system manufacturer's requirements.

1. Septic tanks and pump chambers shall be pumped at least every five years, or more frequently, if required by the system's manufacturer.
2. Septage shall be disposed of in accordance with state, federal, and local requirements.
3. The owner of a property with a septic system, or a person, working in Story County who is a licensed Commercial Septic Tank Cleaner as defined in Environmental Protection (567) IAC 68.2(455B) shall maintain the following records and submit them to EH:
 - A. Location (address) of the serviced tank.
 - B. Method of septage disposal (land applied or municipal treatment plant).
 - C. Volume of septage disposed.
 - D. General condition of the system (good, fair, poor).
4. EH shall maintain a tracking system for the information above.

65.34 SYSTEMS THAT REQUIRE MAINTENANCE CONTRACTS:

1. All owners of systems that require a maintenance contract as per Environmental Protection (567) IAC 69, or Story County Ordinance Chapter 65, shall demonstrate to EH that the contract is current by submitting a copy of the contract to EH during the month of January of every year the system is in use, or having the maintenance contractor submit a list of current contracts during the month of January of every year the system is in use.
2. The property owner shall follow the system manufacturer's requirements for maintenance.
3. Upon purchasing property that has a system that requires a maintenance contract, the new owner shall submit a copy of the maintenance contract to EH within 30 days of the time of transfer.

65.35 DISCHARGING SYSTEMS.

1. Septic systems that are designed to discharge effluent as per specifications of this ordinance shall meet effluent parameters identified below. Septic systems with laterals as tertiary treatment are not considered discharging systems, and do not need to be sampled. There are two classifications of discharging systems, based on where they discharge:

- A. If the system discharges to a designated surface water of the state or a subsurface drainage tile, the owner of the septic system shall submit a Notice of Intent to the IDNR, and obtain a National Pollutant Discharge Elimination System (NPDES) General Permit #4. These septic systems shall meet the effluent parameters identified in the permit issued by IDNR.
- B. Those septic systems that DO NOT discharge to a designated surface water of the state or a subsurface drainage tile shall meet the effluent parameters identified in Table 2, below. Sampling is

required upon request by the Sanitarian to verify that a discharging system is properly treating the effluent, or for a time-of-transfer inspection. Annual sampling is not required.

Table 2

Effluents Discharging To	E. coli cfu/100 mL	CBOD5 mg/L	TSS mg/L
Class “A1”, “A3” waters	235	25	25
Class “A2” waters	2880	25	25
Ground surface	2880	25	25

2. Sampling location and procedure.

A. Effluent samples must be collected from an approved sampling port (accessed from ground surface) or from the end of the discharge pipe (if accessible) following the final treatment component of the system. Sample results shall be sent to EH.

B. If the system is not discharging at the time of sampling, but appears to have been discharging, water must be added to the system through the building plumbing to create a discharge.

3. Only a “qualified sampler” shall conduct effluent sampling for compliance monitoring. “Qualified samplers” include the following:

A. EH personnel - fees for sampling conducted by EH shall be set by the Board of Health.

B. An Iowa-certified wastewater treatment operator.

C. An individual who has received training approved by IDNR.

D. IDNR certified Time of Transfer inspectors.

4. Effluent samples must be analyzed by an Iowa certified lab. A list of certified laboratories is available from the State Hygienic Lab. Sample containers provided by the laboratory must be used for the sample. The sample must be collected from a free-falling effluent pipe or sampling port where the effluent is flowing. Samples shall not be taken from a pooled location. Sample submission shall follow the lab’s instruction.

5. If a sample does not meet the effluent limits stated in Table 2 above, the owner must work with EH to investigate the potential causes of the problem, and a repeat sample must be taken within 30 days for the specific parameter that was out of compliance. If the second sample is noncompliant, the owner must take corrective actions to bring the system into compliance.

65.36 VARIANCES. Variances to this ordinance may be granted by EH provided sufficient information is submitted to substantiate the need for and propriety of such action. Requests for variances and justification shall be in writing, filed with EH. Appeals shall be decided by the BOH. Septic permits will list any approved variances.

65.37 SEVERABILITY CLAUSE. If any section, provision, or part of this ordinance should be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.

65.38 EFFECTIVE DATE OF THIS ORDINANCE. These regulations go into effect January 1, 2021.