The Board of Supervisors met on 11/18/20 at 6:30 p.m. in the Story County Administration Building. Members present: Linda Murken, Lisa Heddens, and Lauris Olson, with Murken presiding. (all audio of meetings available at storycountyiowa.gov). Murken read the special note to the public: due to recommendations for social distancing in order to help slow the spread of the COVID-19 virus, and will be provided via Zoom originating from the Story County Administration Building.

ADOPTION OF AGENDA: Olson moved, Heddens seconded adopting the agenda as presented. Motion carried unanimously (MCU) on a roll call vote.

Murken reported on the background of the proposed ordinance. She provided an overview of how the meeting will proceed using Zoom, and asked that the agenda be displayed.

PROPOSED SEPTIC ORDINANCE – Margaret Jaynes, Environmental Health Director, reported on the stakeholders meeting, clean water initiative, and proposed regulations. The proposed effective date is 1/1/21. Jaynes reviewed the proposed changes to current regulations, including setbacks, subdivisions, and mandatory pumping every five years. She reviewed the relevant federal and state guidance. Jaynes provided maps of both impaired waterways and septic systems in Story County. She stated the intent of the updated regulations is to improve water quality and protect public health. Heddens clarified the number of residences without permits is 900, and asked questions about cost to bring them into compliance. Olson questioned time of transfer. Murken asked about loopholes with time of transfer and the cost of assessment if a tank did not need pumping every five years. Jaynes stated $100.00 but also recommends the five-year schedule for all tanks. Heddens asked about shared septic systems in the County. Jaynes gave examples and stated there are exceptions, and a timeframe can be added. Heddens asked about public outreach. Jaynes stated letters will be sent in the spring. Olson stated an outreach plan is needed.

WRITTEN COMMENTS RECEIVED BY STORY COUNTY – Murken summarized and acknowledged all the people who submitted comments. The Board has reviewed the comments; comments will be part of the submission.

PUBLIC COMMENT PERIOD – Murken opened the public hearing at 7:40 p.m.

Brian Campbell, Campbell Engineering, Ankeny, Polk County: remarked on inconsistencies regarding setbacks, utility locations, and soil evaluation testing. Kent Spillers, Ames: asked technical questions. Timothy Gartin, Ames: asked about home rule authority, legislative feedback, and time of transfers. Ted Rasmusson, Richland Township: commented on five-year pumping versus seven-year, and voiced frustration regarding lack of local control over concentrated animal feeding operations (CAFOs) in contrast to septic systems.

Hearing no further comments, Murken closed the public hearing at 8:05 p.m.

Heddens asked about number of bedrooms. Jaynes reported. Murken reported on variables and the need for a strategic plan. Additional discussion took place. Murken reported on next steps.

ORDINANCE NO. 287 – Olson moved, Murken seconded the approval of Ordinance No. 287 on First Consideration and Set Second Consideration for Tuesday, 11/24/20 at 10:00 a.m. Olson aye, Murken aye, Heddens nay. Motion passes.

Murken thanked staff.

Olson moved, Heddens seconded to adjourn at 8:30 p.m. Roll call vote. (MCU)

Story County Board of Supervisors Special Meeting

11/18/20 Tentative Agenda

Proposed Ordinance No. 287 Private Sewage Disposal Systems

at 6:30 P.M.

1. NOTICE TO THE PUBLIC: The Public May Submit Comments On The Proposed Ordinance At: See Below
   HTTPS://WWW.STORYCOUNTYIOWA.GOV/SEPTIC

   Department Submitting Auditor

2. Originating From Administration Building, Story County Public Access Provided Via "Zoom" Meeting (Septic)
   SPECIAL NOTE TO THE PUBLIC: Due to recommendations to social distance in order to help slow the spread of the COVID-19 virus, the capacity of our meeting room is significantly limited. Therefore, public access to the meeting will be provided via Zoom.
   Members of the public can participate by using the information below:

   Join from a PC, Mac, iPad, iPhone or Android device:

   Please click this URL to join. HTTPS://US02WEB.ZOOM.US/J/86483712502?PWD=M2JIZXCZQ1DUZG9COWXTLZJ1VM5VQT09

   Passcode: 569564

   Or join by phone:

   Dial(for higher quality, dial a number based on your current location):

   US: +1 929 205 6099 or +1 301 715 8592 or +1 312 626 6799 or +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799

   Webinar ID: 864 8371 2502

   Passcode: 569564

   International numbers available: HTTPS://US02WEB.ZOOM.US/U/KZ2ZA42VQ

3. CALL TO ORDER: 6:30 P.M.

4. STATEMENT EXPLAINING WHY A MEETING IN PERSON IS IMPOSSIBLE OR IMPRACTICAL, PER CODE SECTION 21.8.1

5. ADOPTION OF AGENDA:

6. PUBLIC HEARING ITEMS:

   I. Proposed Septic Ordinance - Margaret Jaynes

      Department Submitting Environmental Health

      Documents:

      PRESENTATION.PDF
      SEPTIC ORDINANCE.PDF

   II. Written Comments Received By Story County - Linda Murken

      Department Submitting Auditor

   III. Public Comment Period (Please Raise Hand Or Use *9 On Your Phone To Unmute. When Called On, State Your Name And Address. Limit Comments To Two Minutes

      Department Submitting Auditor

   IV. Discussion And Consideration Of The Proposed Ordinance No. 287

      Department Submitting Auditor

7. ADJOURNMENT:

Story County strives to ensure that its programs and activities do not discriminate on the basis of race, color, national origin, sex, age or disability. Persons requiring assistance, auxiliary aids or services, or accommodation because of a disability may contact the county's ADA coordinator at (515) 382-7204.

Story County
Board of Supervisors
Special Agenda
11/18/20

NAME	ADDRESS

DO NOT WRITE IN THE SPACE ABOVE, RESERVED FOR RECORDER
Prepared by Margaret Cemashko Jaynes, Story County Environmental Health Director, 900 6th St., Nevada, Iowa 50201
Return to Story County Environmental Health Department

ORDINANCE NO. 287

AN ORDINANCE REPLACING STORY COUNTY CHAPTER 65, PRIVATE SEWAGE DISPOSAL SYSTEMS, ADOPTED MAY 29, 2018, SO AS TO ADD DEFINITIONS, SET MORE STRINGENT SETBACKS, LIMIT SHARED SEPTIC SYSTEMS, IDENTIFY WHEN A PERMIT OR ALTERATION PERMIT IS REQUIRED, CONTINUE TO HAVE THE SANITARIAN CONDUCT SITE EVALUATIONS, ALLOW SANITARIAN TO SEEK ASSISTANCE WITH SOIL CORING AT OWNER'S EXPENSE, SPECIFY INFORMATION REQUIRED IN THE EVALUATION REPORT, SET SPECIAL CONSIDERATIONS FOR SEPTIC SYSTEMS FOR PROPOSED SUBDIVISIONS, ALLOW SANITARIAN TO REQUEST ENGINEER'S PLAN, CONTINUE TO REQUIRE INSTALLERS TO BE CERTIFIED, REQUIRE SOIL PROTECTION, SET MORE STRINGENT HOLDING TANK REQUIREMENTS, ISSUE CERTIFICATES OF COMPLETION, REQUIRE SEPTIC TANK PUMPING EVERY FIVE YEARS FOR EXISTING AND NEW SEPTIC SYSTEMS, SET REQUIREMENTS FOR DISCHARGING SYSTEMS AND MAINTENANCE AGREEMENTS, AND SET AN ADOPTION DATE.

BE IT ENACTED by the Board of Supervisors of Story County, Iowa:

WHEREAS; the Story County Board of Health, at their meeting on August 4, 2020, moved and approved a recommendation to the Board of Supervisors to consider the above described ordinance change for adoption,

WHEREAS: all other ordinances and parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict; and

WHEREAS: if any section, provision, or part of this ordinance shall 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; and

WHEREAS: this ordinance shall be effective after its final passage, approval and publication of the ordinance or a summary thereof, as provided by law.

THEREFORE, HEREBY BE IT ORDAINED, that the Story County Board of Supervisors approves Ordinance No. 287.

Action upon FIRST Consideration: _____
DATE: November 18, 2020

Moved by: _____
Seconded by: _____
Voting Aye: _____
Voting Nay: _____
Not Voting: _____
Absent: _____

Action upon SECOND Consideration: _____
DATE: November 24, 2020

Moved by: _____
Seconded by: _____
Voting Aye: _____
Voting Nay: _____
Not Voting: _____
Absent: _____

Action upon THIRD Consideration: _____
DATE: December 1, 2020

Moved by: _____
Seconded by: _____
Voting Aye: _____
Voting Nay: _____
Not Voting: _____
Absent: _____

ADOPTED THIS _____ day of _____, _____

First Consideration

Second Consideration

Third + Final Consideration

_____
Story County Board of Supervisors

_____
ATTEST: County Auditor

CHAPTER 65

65.01 PURPOSE.

The purpose of this chapter is to safeguard public health by minimizing the impact of onsite sewage treatment and disposal 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 567 IAC 68.

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, the following Iowa Administrative Code chapter: 567 IAC 69 – *Private Sewage Disposal Systems*.

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 this chapter.

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 chapter regulating private sewage disposal systems.

65.06 SOIL PERCOLATION TESTS.
The property owner is responsible for overseeing any required percolation test, and shall follow the percolation test procedure outlined in
567 IAC 69.

65.07 APPLICATION FOR PERMIT.
Any person, firm, or corporation wishing to construct or reconstruct a private sewage disposal system in Story County shall submit an application for a construction permit to EH.

Application shall be made on forms provided by EH.

Information provided shall contain, at a minimum, name of property owner, name of applicant, legal description of the site location, type of facility and/or anticipated loading rate, name of septic contractor, and additional requests by EH.

65.08 WHEN CONSTRUCTION PERMIT APPLICATION NEEDED.
1. New construction with wastewater generation.

2. Existing system with increased wastewater loading.

3. Replacement or enlargement of the secondary system.

65.09 WHEN REPAIR PERMIT APPLICATION NEEDED.
1. Septic tank or pump chamber replacement.

2. Distribution box replacement.

65.10 FEES.
Application for permit must be accompanied by a filing fee, as set by the Board of Health. Fees shall be made payable to the Story County Treasurer, and directed to EH.

65.11 SITE EVALUATION.
Site evaluations are required prior to issuance of a construction permit, and may be conducted by EH, a certified civil engineer, or a soils professional. A person performing a professional soil analysis for a site evaluation shall demonstrate training and experience in soil morphology, such as testing absorption qualities of soil by the physical examination of the soil's color, mottling, texture, structure, topography, and landscape position. EH may require an engineer's design for system proposals for commercial, institutional, or public service facilities with special wastewater treatment needs or large wastewater volumes.

65.12 SOIL PROTECTION.
As per the findings of the site evaluation, the proposed wastewater soil absorption area shall be cordoned off to prevent soil compaction from construction traffic.

65.13 SITE EVALUATIONS FOR PROPOSED SUBDIVISIONS.
All subdivisions of land proposing more than two buildable lots shall have a site evaluation conducted by a certified engineer or soils professional for each lot. The evaluation report shall include soil core locations, soil descriptions to at least 60", depth to limiting layer, soil loading rates, system type, and options for system location. Wells, subsurface tiles, easements, buried utilities, known locations of buried rubble, and waterways shall be identified in the report. Site evaluation timing shall coordinate with the developer's and builder's schedules, using the evaluation to establish property lines, building placement and a reserved area for the septic system.

65.14 CONSTRUCTION PERMIT.

Upon completion of the site evaluation 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 Board of Health, the Federal Environmental Protection Agency, the Iowa Department of Natural Resources, 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.

65.15 DENIAL OF PERMIT.

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

65.16 VOIDING OF PERMIT.

The wastewater treatment system's construction plan, stipulated in the Story County Board of Health Permit, shall be followed. Any variation from that which is defined in the permit voids the construction permit.

65.17 PERMIT EXPIRATION.

A permit for construction shall expire one calendar year from the date of issuance.

65.18 POSTING PERMIT.

A copy of the permit shall be posted at the site location during the construction period. The permit applicant shall post a copy at the entrance of the construction site so it can be clearly seen by the public.

65.19 EMERGENCY REPAIR.

In the event of an emergency situation, work may be initiated to repair a system without first obtaining a permit, provided this repair work is reported to EH by 12:00 noon of the next Story County Administration's business day. All repair work shall conform to the specifications provided in 567 IAC 69. All completed work shall be left uncovered until inspected by EH.

Emergency repair work does not include replacing the secondary system. The necessity for a new or replacement wastewater treatment system requires a site evaluation and permit.

65.20 REQUESTS FOR FINAL INSPECTION.

The contractor or property owner shall notify EH at least eight working hours, between 8:00 a.m. and 5:00 p.m. before the completed system is to be available for final inspection.

65.21 INSPECTION OF NEWLY CONSTRUCTED OR RECONSTRUCTED PRIVATE SEWAGE DISPOSAL SYSTEMS.

The secondary system shall remain uncovered until inspected by EH.

The contractor shall be available to discuss details of the installation. EH will notify the contractor of any concerns with the system installation, and how to remedy them. The purpose of this 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. It is the responsibility of the licensed contractor to ensure that all on-site wastewater treatment system installations are performed in accordance with the provisions of 567 IAC 69.

65.22 LICENSURE OF PRIVATE SEWAGE DISPOSAL CONTRACTORS.

~~—Any person, firm or corporation desiring to construct, alter, repair or provide maintenance of any private sewage disposal system in Story County, Iowa, shall file for licensure with EH.~~

~~—To qualify for licensure in Story County, the applicant must be a Certified Installer of Onsite Wastewater Treatment Systems (CIOWTS), as accredited by the Iowa Onsite Waste Water Association (IOWWA) or the National Environmental Health Association (NEHA). Certification must be obtained by April 1, 2015.~~

~~—1. Licensure is valid for two years. Renewal requires proof of CIOWTS.~~

~~—2. Continuing education credits for CIOWTS shall be as defined by IOWWA certification requirements.~~

~~—3. A licensed Story County private sewage disposal contractor shall be on site during the final inspection of private sewage disposal systems.~~

~~65.23 REVOCATION AND DENIAL OF LICENSURE.~~

~~—A private sewage disposal contractor's license may be revoked by the BOH for violation of terms of this chapter.~~

~~—1. Revocation Period. Application for renewal of license, when the license has been revoked, will not be allowed for a period of one year from the date of revocation.~~

~~—2. Appeal Hearing. An appeal hearing on license denial or revocation may be requested in writing to the Story County Board of Health Chairperson.~~

~~—3. The contractor may only be reinstated at the discretion of the Story County Board of Health.~~

CHAPTER 65
PRIVATE SEWAGE DISPOSAL SYSTEMS

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 then 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.

Proposed Septic Ordinance
First Consideration, November 18, 2020

Environmental Health Department

Margaret Jaynes, Director

Story County
IOWA · 1853

WHY CHANGE NEW SEPTIC REQUIREMENTS?

Story County is taking a proactive approach to protecting and improving water quality. The design, installation, and maintenance of septic systems have a direct impact on water quality. These proposals are part of the county's clean water initiative.

Timeline

9/24/19	Stakeholders meeting.
2/04/20	BOH recommended the BOS consider adopting changes to Chapter 65, *Private Sewage Disposal Systems.*
03/2020	Public hearing for ordinance #287 postponed due to Covid.
8/04/20	BOH recommended the BOS consider adopting changes to Chapter 65, *Private Sewage Disposal Systems.*
10/27/20	BOS passed Resolution #21-31, setting a date & time for a public hearing for Ordinance #287.
11/12/20	Public notice printed in newspapers.
11/18/20	First consideration.

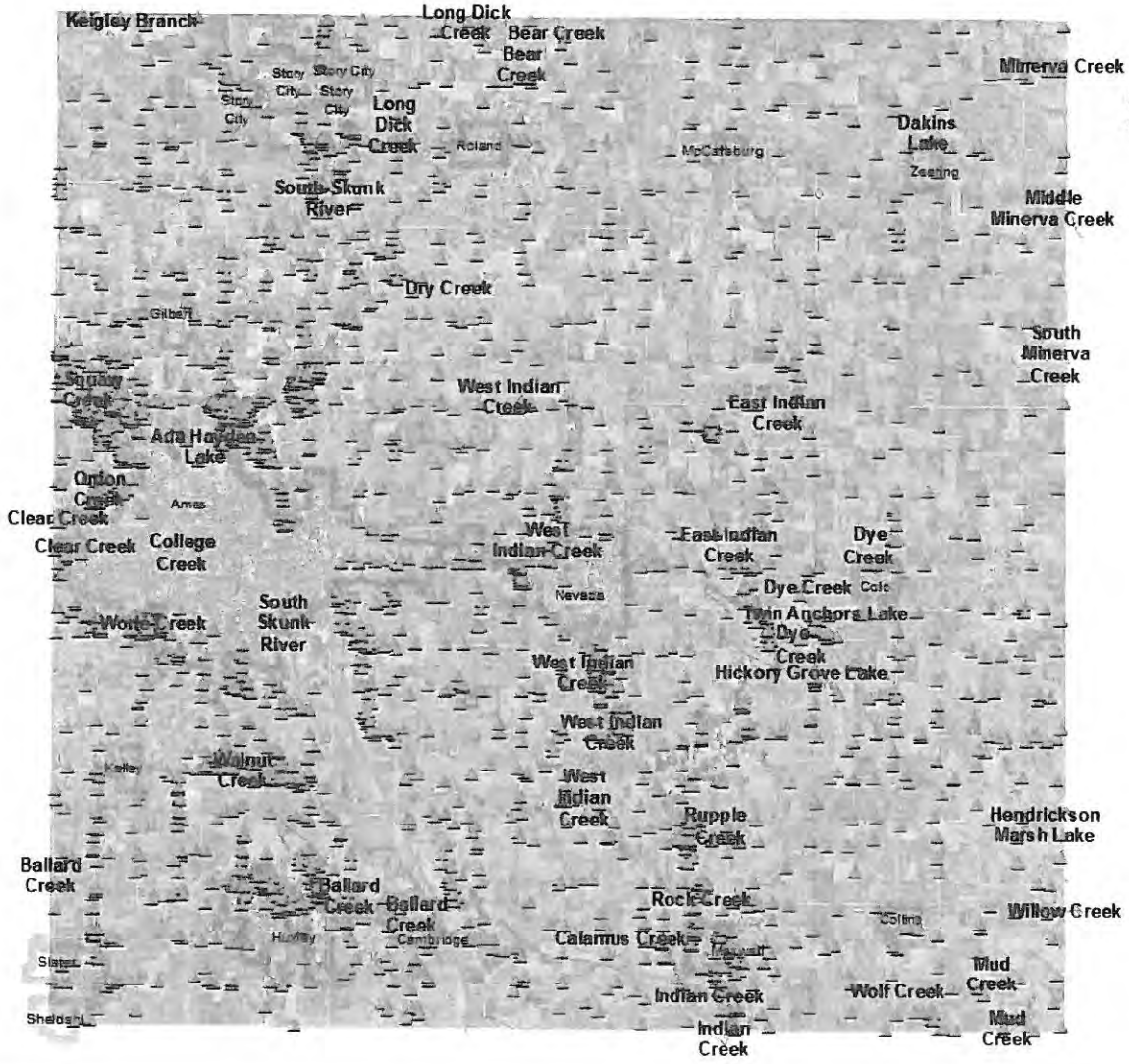
Second and third consideration dates will be set by the BOS.

The proposed regulations, if passed by the BOS, will replace the existing regulations, Story County Code of Ordinances, Chapter 65, *Private Sewage Disposal Systems".*

The effective date will be January 1, 2021. This was inadvertently shown as January 1, 2020 in the version originally posted to the county website, but has since been corrected.

Regulations

- State IAC Chapter 69 sets minimum standards for septic systems in Iowa for the county to enforce.
- Counties have home rule, and can enforce more stringent laws for septic systems with the exception of time-of-transfer inspection requirements.
- Story County began permitting septic systems in 1972.
- The bulk of the county septic regulations were adopted in 1990.
- Main change since then, in 2015, was the requirement for septic contractors to be certified.



Septic systems in Story County

- 3,120 active permitted septic systems.
- Estimated 900 properties, or 22% of rural properties do not have a septic permit.
- The time of transfer inspection program has found that most older houses that did not a septic permit did not have a secondary system. A small study (10 houses) conducted near Hickory Grove Lake found that 100% of the houses that did not have a septic permit did not have secondary treatment.

This suggests that there are about 900 houses with no secondary treatment and the septic tank discharges to a field tile, ditch, or creek.

PROPOSED CHANGES FROM CURRENT RULES:

- Adds definitions.
- Sets more stringent setbacks.
- Limits shared septic systems.
- Identifies when a construction permit or alteration permit is needed.
- Continues sanitarian conducting site evaluations except for subdivisions.
- Allows sanitarian to request assistance coring (backhoe, etc.) at owner's expense.
- Specifies information required in the site evaluation report.
- Sets special considerations for septic systems for proposed subdivisions.
- Allows sanitarian to request engineer's plan.
- Continues to require installers to be certified.
- Requires soil protection.
- Sets more stringent holding tank requirements.
- Issues certificates of completion.
- Requires septic tank pumping every five years for existing & new septic systems.
- Changes due dates for maintenance agreements.
- Sets requirements for discharging systems.
- Sets an adoption date of January 1, 2021.

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.

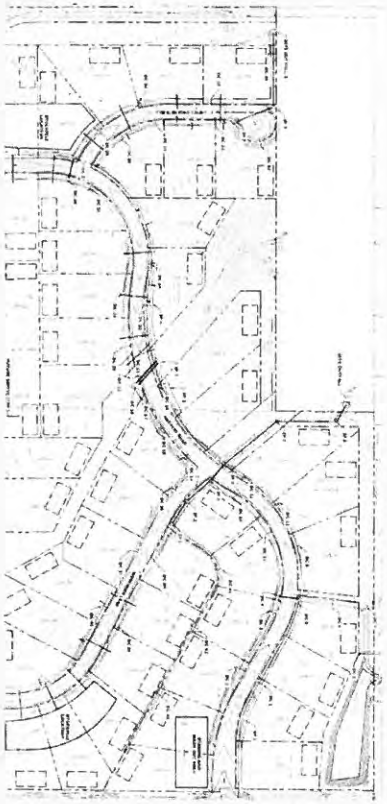
** Includes subsurface absorption systems (secondary and tertiary treatment), mound systems, intermittent sand filters, constructed wetlands, open bottom media filters.

*** 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.

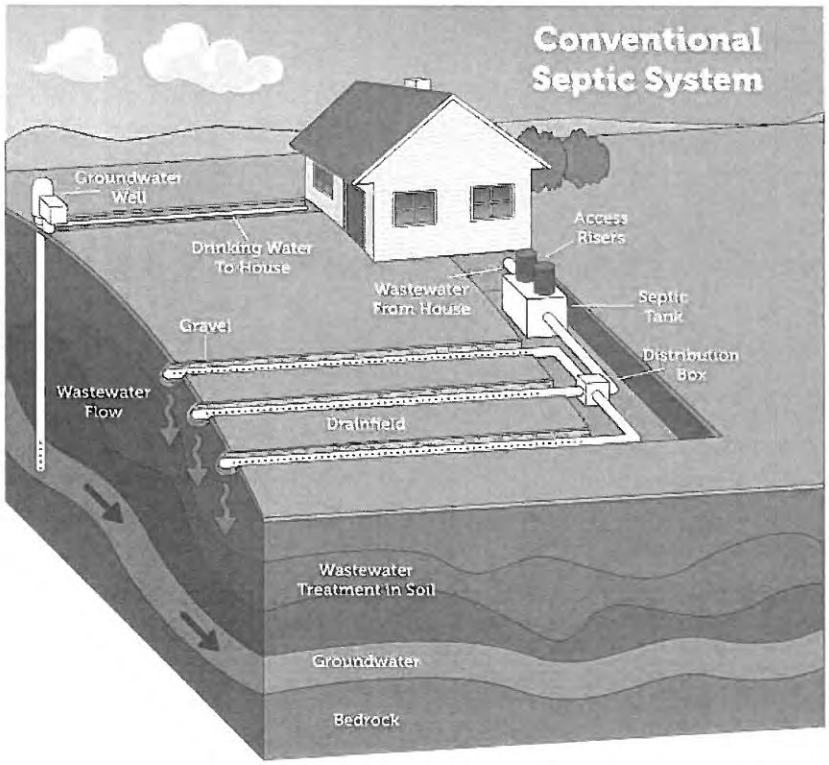
**** Deep well means a well located and constructed in such a manner that there is a continuous layer of low-permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

Subdivisions:

- Lot size and configuration shall take into account features that impact septic system placement.
- Final plats shall show the location of the proposed septic system for each lot. Soil coring is not required at this step.
- For any subdivision of three lots or more, a professional evaluator, other than the county sanitarian, shall conduct site evaluations for each lot.
- The sanitarian will conduct a site visit and confirm all evaluations. This will ensure program continuity, and provide a second review for environmental factors.



How do septic systems work?



Please note: Septic systems vary. Diagram is not to scale.

https://www.epa.gov/septic/types-septic-systems

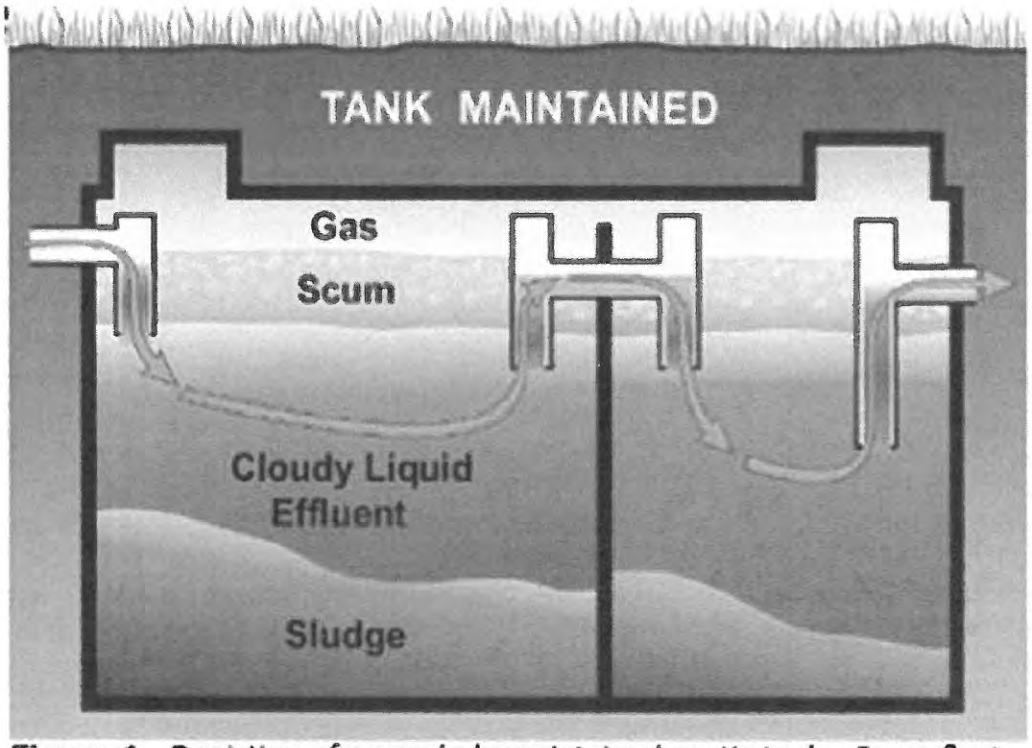


Figure 1. Depiction of a regularly maintained septic tank. Scum floats to the top, while sludge settles to the bottom, leaving the liquid to flow into the drainfield and be absorbed into the soil.

MANDATORY TANK PUMPING EVERY 5 YEARS

- Septic tanks provide primary treatment, where solids settle out. Bacteria breaks down solids, but not all solids.
- Tanks should be pumped when the sludge depth is 1/3 or more of the liquid depth.
- Pumping the septic tank saves the homeowner money in the long run because it protects the laterals from clogging and/or the house from backups.
- This proposal will not require systems in poor condition to be repaired. However, in some instances, it may lead to the owner realizing that their system is not working, and opt to replace the system.

Septic Systems

How to Care for Your Septic System

Septic system maintenance is not complicated, and it does not need to be expensive. Upkeep comes down to four key elements:

- Inspect and Pump Frequently
- Use Water Efficiently
- Properly Dispose of Waste
- Maintain Your Drainfield

Inspect and Pump Frequently

The average household septic system should be inspected at least every three years by a septic service professional. Household septic tanks are typically pumped every three to five years. Alternative systems with electrical float switches, pumps, or mechanical components should be inspected more often, generally once a year. A service contract is important since alternative systems have mechanized parts.

Four major factors influence the frequency of septic pumping:

- Household size
- Total wastewater generated
- Volume of solids in wastewater
- Septic tank size

- Air Quality
- Land Quality
- Water Quality
  - Drinking Water Compliance
  - Certification
  - Iowa Water Plan
  - Private Well Program
  - Lake Restoration
  - River Restoration
  - Water Supply Engineering
  - Source Water Protection
  - Water Security
  - Watershed Improvement
  - Watershed Management Authorities
  - Water Quality Standards
  - Wasteload Allocations
  - Water Monitoring
  - Water Summary Update
  - NPDES/Wastewater Permitting
  - Nutrient Reduction Strategy
  - Private Septic Systems

Cleaning (Pumping) Septic Tanks

Onsite wastewater treatment (septic) systems normally include two parts: a septic tank, the first component of the system, followed by a secondary wastewater treatment component, such as a soil absorption leach field. The septic tank acts as a settling chamber that allows wastewater to separate naturally into three distinct layers before liquid flows out of the tank. First, solid particles settle to the bottom of the tank to form a layer of sludge, where some of it is digested by anaerobic bacteria. Second, greases and fats float to the top of the wastewater in the tank and form a second layer, or scum layer. Third, a clearer layer of liquid wastewater develops in the middle--between the sludge layer at the bottom and the scum layer at the top of the wastewater in the tank. The liquid layer of wastewater eventually flows out of the tank to the secondary treatment component (usually the final treatment component) of the system.

A normally functioning septic tank provides primary treatment of wastewater, which includes the separation of wastewater into three layers and the partial digestion of sludge by anaerobic bacteria. With normal contributions of wastewater to the system, sludge continues to build up at the bottom of the septic tank over time, despite the anaerobic digestion of some solids. At the same time, the layer of scum on top of the wastewater continues to grow thicker. The continual growth of the two layers--the sludge at the bottom and the scum at the top--effectively reduces the storage capacity of the tank and shrinks the middle liquid layer of wastewater. As this happens, wastewater flows more rapidly through the tank, which means there is less time for the wastewater to settle out solids and separate scum from the liquid. Unless there is adequate space in the septic tank for wastewater to separate into layers, solids and scum will float out of the tank and into the secondary treatment component of the system. Eventually, the secondary treatment component will clog and the entire system will fail.

The Need for Regular Tank Pumping

To help ensure the proper maintenance and long term functioning of the entire onsite septic system, the septic tank should be pumped out every three to five years, given normal household water usage. Pumping the tank helps prevent sludge and scum from flowing out of the septic tank and into the secondary treatment system.

Proper tank cleaning refers only to removing all the solids and scum from the tank by pumping, not by any other means. Adding septic tank "additives" to the system is not a proper substitute for tank pumping and may actually harm the system if it causes solids to become suspended and flow into the secondary treatment component of the system. It is also not necessary to add bacterial additives to the septic tank after tank pumping, since there is sufficient bacteria present in normal household wastewater for proper functioning of the system.

Licensure of Tank Cleaners

Iowa Administrative Code (IAC) 567 Chapter 68 PDF, "Commercial Septic Tank Cleaners", requires septic tanks to be pumped out only by a licensed "commercial septic tank cleaner", a person or firm licensed by the Iowa DNR to clean septic tanks. A list of licensed septic tank cleaners is provided below. Persons or firms interested in applying for a commercial license to pump septic tanks may complete the application form provided below.

Licensed Tank Pumper List PDF
[542-2010] Licensed Tank Pumper Application PDF

Standards for Disposal of Septage

Disposal of wastes (septage) from private waste facilities (septic tanks) shall be carried out in accordance with the requirements of 567 IAC Chapter 68 (see above).

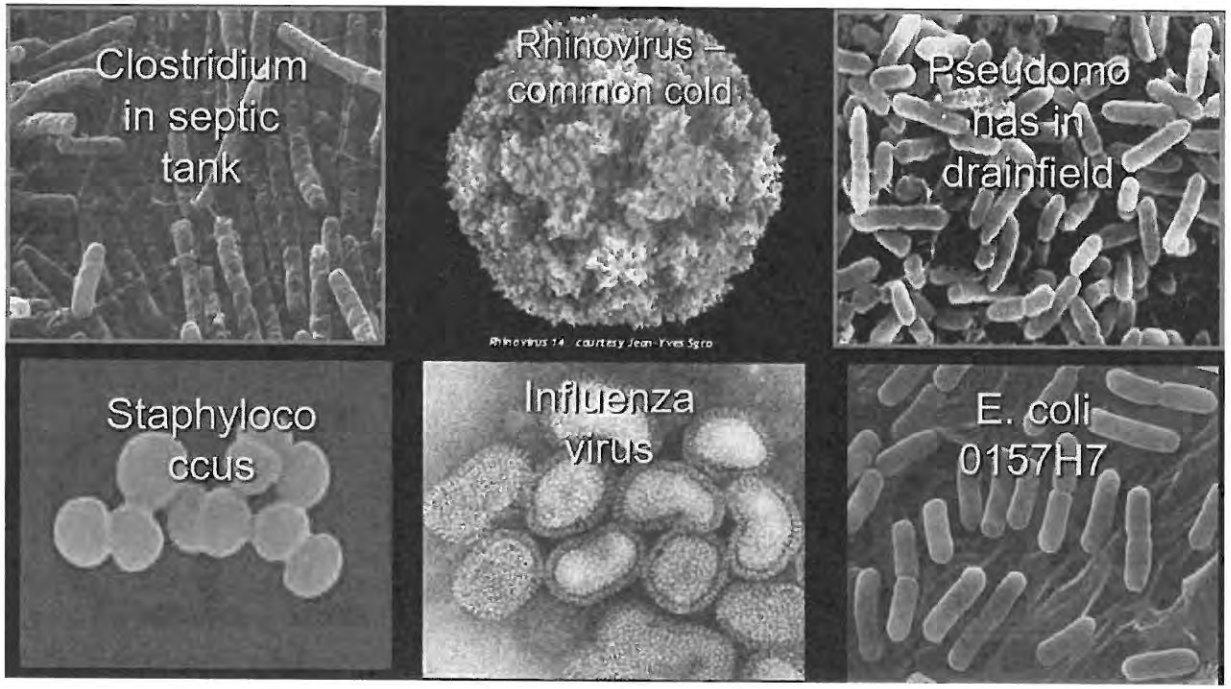
Enforcement

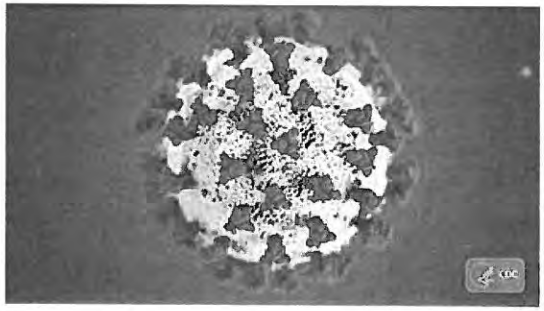
The county boards of health are responsible for enforcing the standards and licensing requirements contained in Chapter 68 and other referenced rules relating to the cleaning of private waste facilities and disposal of waste from such facilities.

When septic systems malfunction, water quality can be impacted:

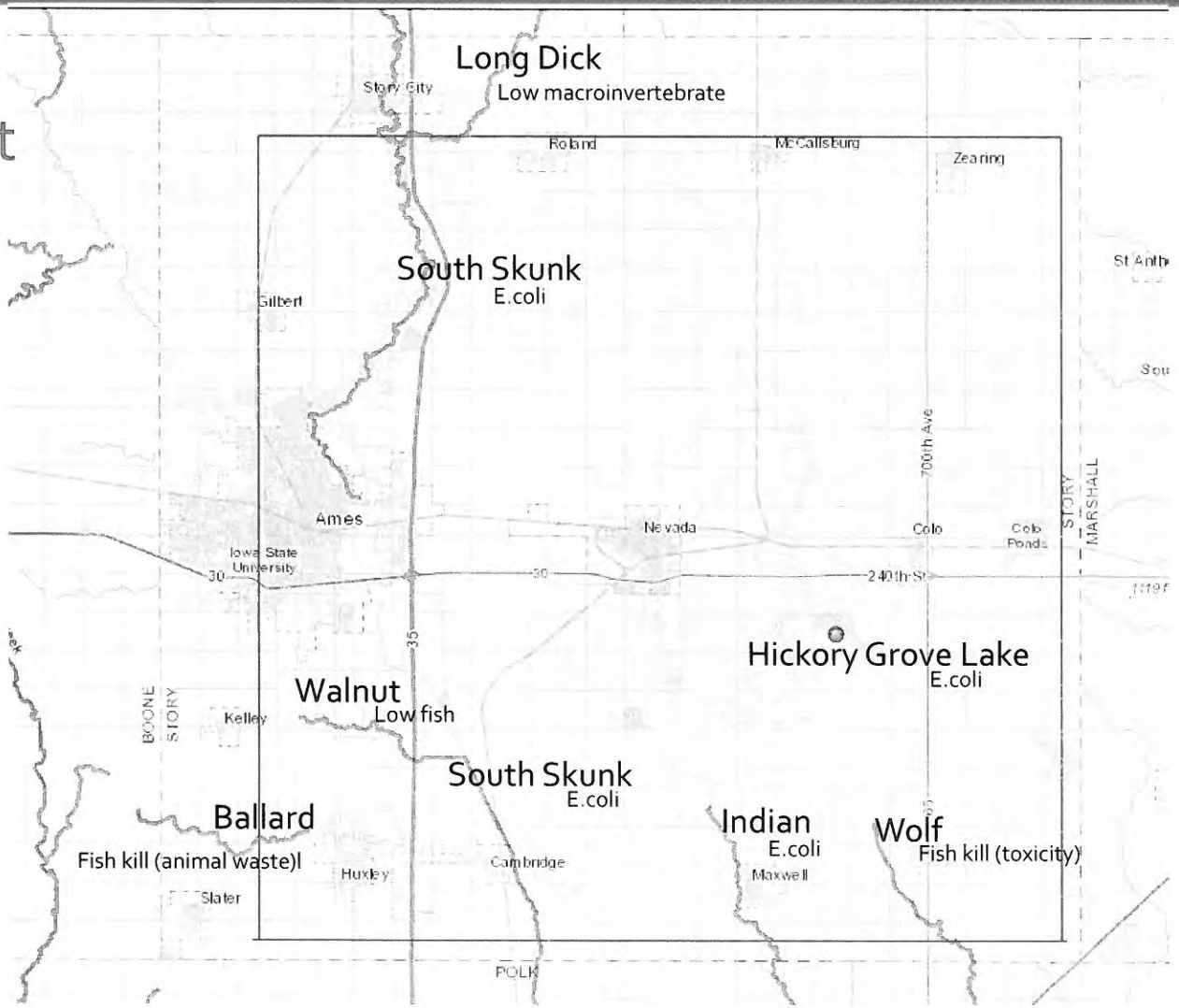
- Bacteria
- Nitrate
- Phosphorous
- Pharmaceuticals
- Human pathogens

When septic systems malfunction, human health can be impacted by exposure to human pathogens:





DNR's 2018 list of impaired waters



Pumping costs range from $260 to $400






Photo credit:
https://www.google.com/search?q=images+of+pumping+septic+tank&rlz=1C1GCEU_enUS880US880&tbm=isch&source=iu&ictx=1&fir=xmRy4Jxly_fiFM%253A%252CBHUgbW9jHzNVSM%252C_&vet=1&usg=AI4_-kSyNULtMOfyI6TNRTBM6N7lbceq8A&sa=X&ved=2ahUKEwjVsv621JDoAhWDW80KHRJhBqsQ9QEwCHoECAoQHg#imgrc=KRQKkp7d40NfGM

Land application of septage

Restrictions on:

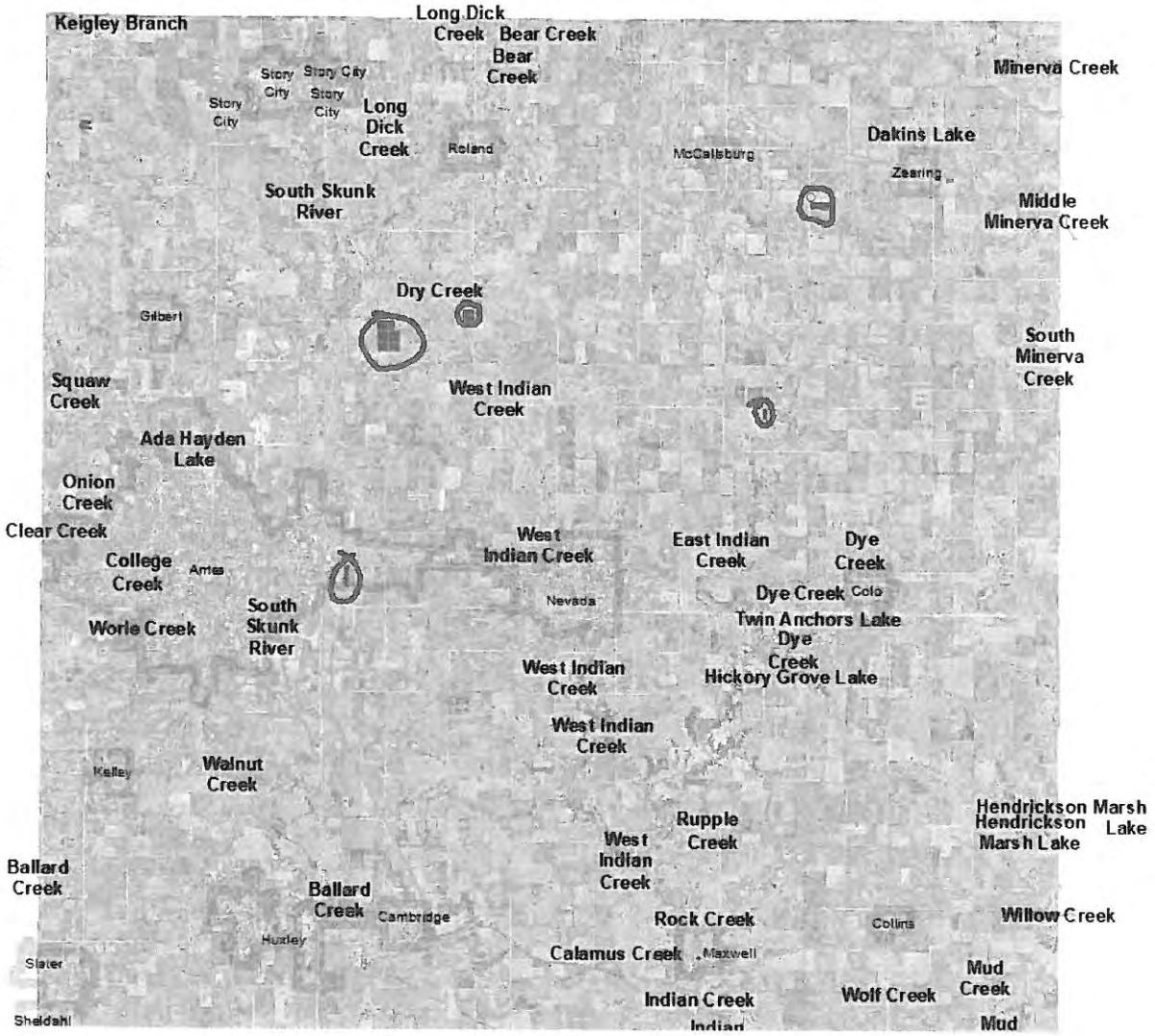
- slope,
- application rate,
- high water table,
- distance to streams,
- food crops,
- residences,
- wells

Vector control:

- septic injection,
- incorporated,
- Increase pH to 12

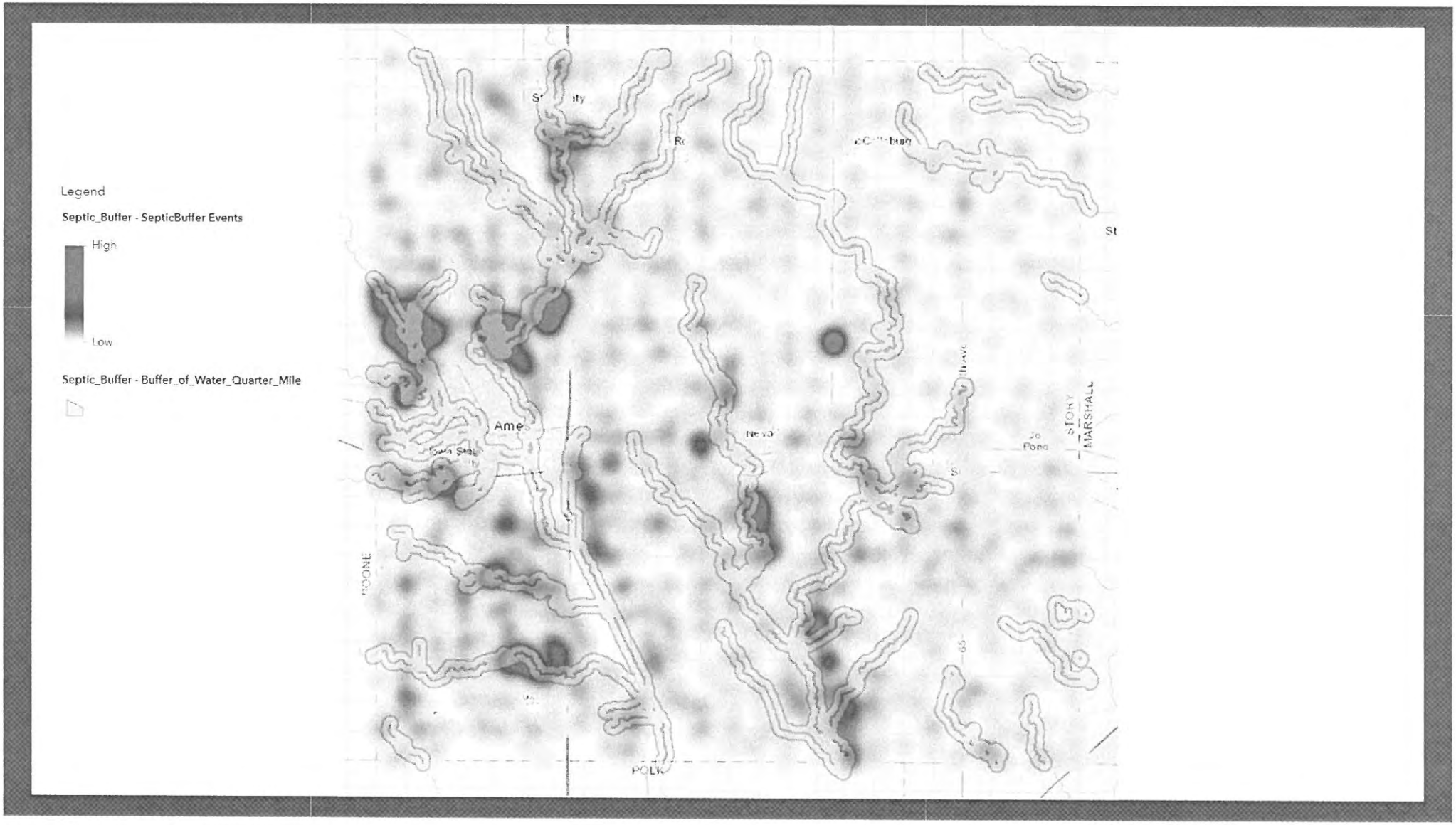
Photo credits:
https://www.google.com/search?q=images+land+application+septage&tbm=isch&chips=q:images+land+application+septage,online_chips:pumper&rlz=1C1GCEU_enUS880US880&hl=en&ved=2ahUKEwj16JiglpPoAhWXA50JHSLkBgEQ4lYoC3oECAEQIA&biw=1663&bih=939#imgrc=iY7MnfRHTtv-jM

Septage land application sites by certified pumpers



Implementing a pumping program:

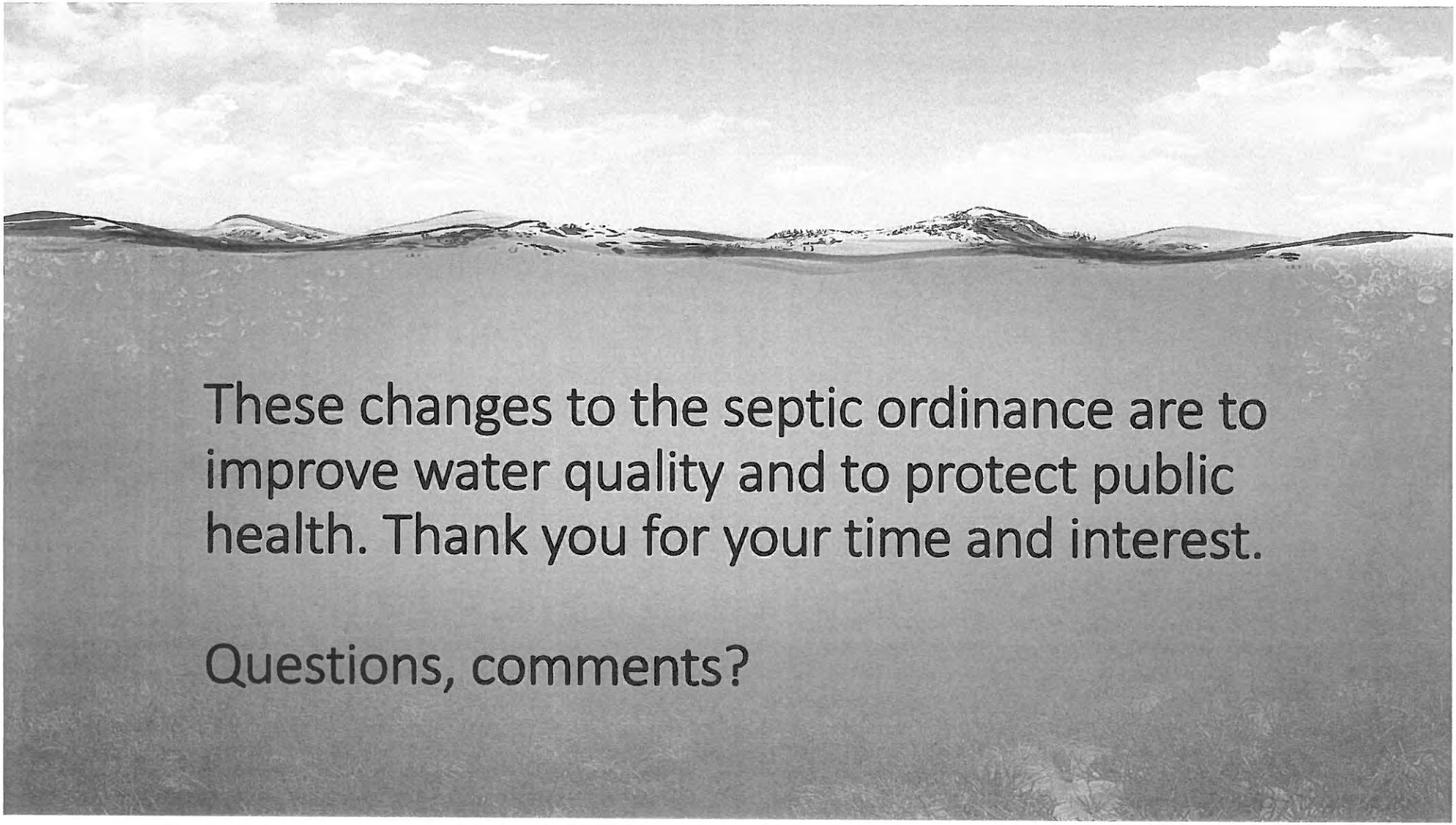
- Currently, the septic pumpers are required to keep records for five years showing the address of the tank, gallons of septage, and how the septage was disposed. We will need to add general condition of the system.
- We have a software program close to completion for tracking the information collected by the pumper. Eventually, they will be able to record this into the Health Department database via cell phones or computers.
- Story County Environmental Health tentatively plans to monitor those areas directly by streams and areas of high density. There will be random checks of systems that do not have septic permits.
- This is a new program, so we will continue to try different approaches until we find a successful approach to enforcement.


Legend
Septic_Buffer - SepticBuffer Events
High
Low
Septic_Buffer - Buffer_of_Water_Quarter_Mile
Ames
STORY
MARSHALL
POLK

DISCHARGING SYSTEMS:

- There are two classifications of permitted discharging systems:
  - NPDES general #4 systems, that discharge to water bodies and must meet effluent parameters set by the permit.
  - Systems that do not require the NPDES permit. These systems shall be tested upon request of the sanitarian. Only qualified samplers can collect samples. Effluent samples must be analyzed at an Iowa certified lab.

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


These changes to the septic ordinance are to improve water quality and to protect public health. Thank you for your time and interest.
Questions, comments?

Matthew D. Cory

From: grantridge@aol.com
Sent: Wednesday, November 18, 2020 4:50 PM
To: Environmental Health Department
Subject: Septic ordinance

[External Sender - Please Use Caution]

Hi Margaret --

I thought I'd be able to attend the Zoom hearing tonight to express strong support for the septic ordinance, but it turns out I can't. And I see the deadline for written comments has passed. I at least wanted to thank you and your staff for working so hard on the ordinance. If you happen to see this message before the hearing, I hope it will go really well. And if you see it after the hearing, I hope it went well!

Thank you again, and best wishes --

Cindy

Cindy Hildebrand
grantridge@aol.com
57439 250th St.
Ames, IA 50010

"I hear the heart-stirring whistle of an upland plover; time was when his forebears followed the buffalo as they trudged shoulder-deep through an illimitable garden of forgotten blooms." (Aldo Leopold)

Matthew D. Cory

From: Margaret C. Jaynes
Sent: Wednesday, November 18, 2020 4:01 PM
To: Linda S. Murken; Michelle L. Bellile
Cc: Board Members; Matthew D. Cory
Subject: RE: your link to submit a comment for tonight is broken

OK, thanks Linda. Anything new in the two comments?

From: Linda S. Murken
Sent: Wednesday, November 18, 2020 4:00 PM
To: Michelle L. Bellile <MBellile@storycountyiowa.gov>
Cc: Board Members <BoardofSupervisors@storycountyiowa.gov>; Margaret C. Jaynes <MJaynes@storycountyiowa.gov>; Matthew D. Cory <MCory@storycountyiowa.gov>
Subject: RE: your link to submit a comment for tonight is broken

I just checked my recollection, which was that the deadline was yesterday (the 17th) at 5 p.m. That was so Matt would have time to get them to the Supervisors and we would have time to review them before the meeting. The EH page says " Submit written comments to Story County Environmental Health, 900 6th Street, Nevada IA 50201 or submit comments using this form. All written comments shall be received no later than November 17, 2020 @ 5:00 pm."
But I do have your email and two others that were sent directly to me and have reviewed them.
Linda

From: Michelle L. Bellile
Sent: Wednesday, November 18, 2020 3:38 PM
To: Margaret C. Jaynes <MJaynes@storycountyiowa.gov>; Matthew D. Cory <MCory@storycountyiowa.gov>
Cc: Board Members <BoardofSupervisors@storycountyiowa.gov>
Subject: RE: your link to submit a comment for tonight is broken

It says 5 on the website and reopen please

From: Margaret C. Jaynes <MJaynes@storycountyiowa.gov>
Sent: Wednesday, November 18, 2020 3:37 PM
To: Michelle L. Bellile <MBellile@storycountyiowa.gov>; Matthew D. Cory <MCory@storycountyiowa.gov>
Subject: RE: your link to submit a comment for tonight is broken

Comment period closed. Is that what you mean?

From: Michelle L. Bellile
Sent: Wednesday, November 18, 2020 3:28 PM
To: Matthew D. Cory <MCory@storycountyiowa.gov>; Margaret C. Jaynes <MJaynes@storycountyiowa.gov>
Subject: your link to submit a comment for tonight is broken

☹

Michelle Bellile

not limited to, civil engineers, environmental engineers, wastewater engineers, soil scientists, and environmental scientists. A person wanting to work in Story County as a Professional Soils Analyst shall submit an application and supporting documentation to the EH. Application forms shall be provided by EH. Minimum qualifications include a Bachelor's Degree in Environmental Studies, Soils, Engineering or a related degree, and have at least two years of experience conducting site evaluations. An appeal for denials may be requested in writing to the BOH within thirty days of EH's decision.

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
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
10. **NPDES** National Pollutant Discharge Elimination System
11. **PSDS** Private Sewage Disposal System
12. **TSS** Total Suspended Solids

65.08 SETBACKS.

Setbacks more stringent then the IDNR requirements have been established to enhance water quality protection. Septic systems installed prior to the adoption of this ordinance are not subject to the new setbacks, nor are repairs of septic systems installed prior to adoption of this ordinance are subject to the new setbacks.

Minimum Distance in Feet From	Closed Portion of Treatment System (1)	Open Portion of Treatment System (2)
Private water supply well	50	100
Shallow public water supply well (3)	200	400
Deep public water supply well (4)	100	200
Groundwater heat pump borehole	50	100
Lake or reservoir	50	100
Stream (other than Class A1 A2 or A3 waters)	25	25
Pond	25	25

River ? not defined in ch 69 or here

is distance horizontal or vertical or a combination of both to make distance?

Class 'A1' water (primary contact recreational use water)	50 (new)	100 (new)
Class 'A2' water (secondary contact recreational use water)	25 (new)	50 (new)
Class 'A3' water (children's recreational use water)	50 (new)	100 (new)
Edge of road ditch	10	10
Edge of drainage district ditch	25 (new)	50 (new)
Dwelling or other structure	10	20 (was 10)
Property lines (unless a mutual easement recorded)	10	10
Other type of subsurface treatment system	10 (was 5)	25 (was 10)
Water lines continually under pressure	10	10
Suction water lines	50	100
Foundation drains or subsurface tiles	10	10

Geo thermal wells # Loops — Less than 20' / More than 20'

(1) Includes septic tanks, aerobic treatment units, fully contained media filters and impervious vault toilets.

(2) Includes subsurface absorption systems, mound systems, intermittent sand filters, constructed wetlands, open bottom media filters and waste stabilization ponds.

(3) "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 the department) 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.

(4) "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 INDIVIDUAL SEPTIC SYSTEMS REQUIRED. The sharing of a septic system by two or more parcels not owned by the same person or entity is prohibited. Sharing of a septic system from multiple wastewater sources on one parcel is acceptable.

65.10 ALTERATION REQUIRES COMPLIANCE. No person shall begin construction, reconstruction, alteration, or repair of any on-site septic system until the owner has complied with all of the applicable regulations of the Board of Health and the Iowa State Department of Natural Resources (IDNR).

65.11 WHEN SEPTIC CONSTRUCTION PERMIT NEEDED:

1. New construction with wastewater generation
2. Existing system with increased wastewater loading and/or wastewater strength
    a. A Planning & Development application for a Zoning Permit for increasing the number of bedrooms for an existing dwelling
    b. A Planning & Development application for a Conditional Use Permit
    c. A Planning & Development application for a Home Business Permit

65.17 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.

65.18 SITE EVALUATION. Site evaluations are required prior to issuance of a construction permit, and shall be conducted by a professional soils analyst.

65.19 SITE EVALUATION REPORT CONTENT. The professional soils analyst report shall include, at a minimum:

1. Descriptions of the soil cores to at least 60" – or to 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 applicant's property
8. Diagram showing the location and setbacks of existing/proposed water wells, geothermal wells, geothermal loops, buildings, waterways, subsurface tiles, buried utilities, known locations of buried rubble, existing easements that may impact the construction of the septic system.
9. Detailed diagram of septic system design. Any changes to the design shall be in writing as an amendment to the professional soils analyst's report and diagram.
10. Pump, piping, hole spacing, dosing, and alarm system recommendations if pressurized system

Why go to 60" if limiting layer is at say 36"

? – do you allow percolation tests? if not why mention this?

65.20 REVIEW OF SITE EVALUATION. Site evaluations shall be performed in the presence of EH. The professional soil analyst shall contact EH at least 48 hours prior to conducting the evaluation. If EH is not available for the evaluation, the professional soil analyst shall conduct the evaluation, and submit the site evaluation report to EH. Upon receipt of the site evaluation report, EH shall confirm the findings of the site evaluation by visiting the site and reviewing the soils, topography, setbacks and any other matters prior to issuing the permit. EH may request a follow-up meeting with the professional soil analyst to answer questions regarding the site evaluation.

of Iowa Licensed Professional

65.21 ENGINEER'S DESIGN. EH may require a state certified 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, license renewal date, and engineer's seal.

Seal not required by State

Septic- cause & effect?

(1) Ask Margaret to bring map of septic systems in Grant 5 with permitted & noticed & all the forms.

(2) Does this give the County access to properties

(3) Does really do anything for water quality

(4) Time of Transfer should take care of issue??

(5) How measure it's successful?
How measure H2O quality?

(6) How disposing of Septage?
at least 500-1000 per house
limited vendors

(7) If not working - prove it's not working

(8) If septic/drainage system not working-
home owner would know it- it'd back up into house.

(9) County putting money into it? Impacting a sub-group

(10)
pg 2- bedroom size

- Septic systems go on bodies

(11) Already regulated who's allowed to install a system.
(Ask Nick on warranty??)
Usual warranty 1 yr

(12) Is DNR pushing to adopt this?

(13) What about educating farmers on it

(14) ordinance is not addressing new homes but current that are grandfathered in under old system- new homes will fall under new rules (Are rules equal?)

(15) How tracking HZD quality?

(16) If pump out bacteria - d inadvertently put clearing materials down - often removed bacteria & then system doesn't work?

(17) What about checking wells? If bacteria then mitigate but no bacteria then is there an HZD problem??
(although people probably won't be happy & you don't test from well - also other issues w/ well checks too.

(18) Make sure representing the unincorporated part of the County.

(19) Farmers want clean water too.

Name: Carol Collings
Address: 58853 250th st Nevada
Email:
Form submitted on: 11/12/2020 6:38:09 PM
Comment: The very end of your new septic ordinance says 2020 not 2021.

Name: Tami Hicks
Address: PO Box 2491 - 3719 University Blvd, Ames, IA 50010
Email: tamihickshomes@gmail.com
Form submitted on: 11/16/2020 4:18:37 PM
Comment: As a real estate broker in the state of iowa and in the Story County area and a lifetime resident of Ames, and a acreage owner for 10+ years, I would like to comment on this ordinance to state I don't think more stringent rules is the right answer. I am against this ordinance. I want to strenuously object to including a requirement to pump a tank every 5 years. It is unnecessary to make that a requirement and it adds expense to some people that might not be able to have added expenses at this time. What is the point of it? We went 7 years without a pumping and the guy said we could've gone longer. Granted there are only 2 of us in a 5 bedroom, but that still doesn't make sense to me. I again am against this ordinance.

Name: Timothy Morgan
Address:
Email:
Form submitted on: 11/17/2020 2:05:39 PM
Comment: I am writing to express my deep concerns with the recently proposed changes to the Story County Septic Ordinance, in particular, Section 65.33 – Minimum Level of Septic Maintenance Required. While the goal of improving water quality in Story County is a laudable one, the requirement to pump septic tanks every five years is a mandate that many residents will not be able to afford, is not scientifically justified, and will not be effective at achieving the water quality improvement goals.
Estimates published in the Ames Tribune (Nov. 15, 2020) put the cost of pumping at septic tank at up to $400. While for many Story County residents this is not a significant barrier, there are residents in the county who simply cannot afford this additional expense. This is particularly true for farmers, many of whom currently have slim or non-existent profit margins after years of low commodity prices and who are disproportionately served by septic systems.
The second and most important question is whether a requirement to pump septic tanks every five years is scientifically justified. In short, it is not. According to Ohio State University Extension Publication AEX-740, the necessary pumping frequency of a septic tank is based on numerous variables, including (but not limited to) tank size, number of users, water conservation practices, and the use of a garbage disposal. As such, the necessary pumping frequency can vary widely from under 1 year to over 30 years. Pumping on a predetermined schedule without considering the variables involved will necessarily result in some tanks being pumped far too often, and some being pumped far too infrequently.
Additionally, the question of whether infrequently pumped septic tanks are a substantial source of pollution needs to be addressed. A 2015 study published in Environmental Science & Policy found that septic tank systems "constitute a relatively small (often <10%) portion of annual

catchment nutrient loads" and a 2005 meta-analysis of septic tank pollution potential published in the Australian Journal of Soil Research found that "where there have been reports of SAS-related [septic tank-soil absorption system] waterborne disease outbreaks, these have usually been localised and associated with a single, poorly performing system." The available evidence indicates that the pollution risks associated with septic systems are not a chronic problem of poorly maintained systems, but rather specific design and installation problems with a small number of systems, which regular pumping will not rectify.
In light of these issues, and the mutual desire of all Story County citizens to improve our water quality, I would like to propose an alternative to the proposed minimum maintenance requirements that would address the above concerns and be more likely to identify and repair the few poorly performing septic systems that cause the most problems. Instead of mandating minimum maintenance, I propose that Story County establish a program of random, voluntary performance testing for all septic tanks in the county. To respect both the law of the State of Iowa and scientific ethics, such a program would need to be voluntary. Therefore, to encourage participation of septic tank owners, I propose that Story County make grants available to those who participate in the program to defray the costs of any repairs or upgrades that are found to be necessary as a result of the program. Additionally, I think it is probable that Story County could establish a partnership with the Department of Natural Resource Ecology and Management at Iowa State University as part of the program so that Story County may benefit from the latest knowledge in the field, and Iowa State researchers can use the testing results to provide new and valuable information on septic performance to the scientific community. Such a partnership would also be beneficial in the pursuit of both private, state, and federal grants to cover the costs.
In closing, I ask that the Story County Board of Supervisors allow the residents of Story County to do what we have been doing successfully for over a century, maintain our septic systems as the tank conditions warrant, not by an arbitrary schedule. As I have proposed, other programs will achieve the laudable goal of improving water quality with respect to septic systems through means are more fiscally prudent, more scientifically sound, and that will be more effective at reducing pollution.

Name: Nick Hermanson
Address: 12621 Hillcrest Dr. Story City, is 50248
Email: Nhermanson@gmail.com
Form submitted on: 11/17/2020 2:13:01 PM
Comment: I am writing in opposition of the septic ordinance as it stands. I do agree with the increased set backs, while allowing variances where needed.
As to the issue of required maintenance, I don't think it is a one size fits all approach. A single person living alone that spends most of his time at work, doesn't need the same level of maintenance as a family of 10.
I believe the county should have recommendations for service that the residents can adapt to there own situations as opposed to being required to follow procedures that are overkill at the home owners expense.
I also believe the county may have a skewed idea of the necessity to mandate a required pumping interval. They only hear of the incidences, of failed systems, not the rest of the systems that are working perfectly.

Name: Daniel Fuchs
Address: 3411 University Blvd Ames, 50011
Email: danjfuchs@gmail.com
Form submitted on: 11/17/2020 3:48:31 PM
Comment: I own a single family dwelling with an AdvanTech septic system, which is a filtration system with surface discharge. Our system requires an annual service contract at a cost of over $300. We just had our system pumped for the first time this past summer, 9 years after the construction date. Our maintenance contractor inspects the system annually and lets us know when it needs pumping. It seems to me that the ordinance could allow for exceptions for systems that require annual service contracts. Please consider adding such a provision to the proposed ordinance. Thank you for taking the time to read this.

Name: Amy schade
Address: 25498 Sand Hill Trail
Email: r.a.schade@gmail.com
Form submitted on: 11/17/2020 4:18:37 PM
Comment: Let's not add any more expenses to others income for awhile. There is enough stresses these days.

Name: Marty Chitty
Address: 60831 210th St Nevada Iowa
Email: DELTAMLR93@AOL.COM
Form submitted on: 11/17/2020 4:59:18 PM
Comment: I would just say to codifying this septic desire as expressed by BOH and others, this is how you run a real risk of losing a Home Rule capability within Story County.
You remember how the Legislature scooped up the Minimum Wage and Chapter 20 and removed them from local control? Do you really think this will go unremarked upon?
With now point source determination of ground water offense, this is little more than taxation without validation.
This will unlikely end in a Story County code adoption.
Respectfully,
Marty Chitty

Matthew D. Cory

From: Linda S. Murken
Sent: Wednesday, November 18, 2020 5:20 PM
To: Margaret C. Jaynes; Matthew D. Cory
Subject: FW: septic tanks

FYI. Now you have everything I do.

From: CURTIS BURGER <curtiseburger@gmail.com>
Sent: Wednesday, November 18, 2020 12:12 PM
To: Linda S. Murken <LMurken@storycountyiowa.gov>
Cc: Matthew D. Cory <MCory@storycountyiowa.gov>
Subject: Re: septic tanks

[External Sender - Please Use Caution]

No, didn't know. Just saw story in the Sunday Tribune that we get on Monday. Curt

On Wed, Nov 18, 2020 at 9:30 AM Linda S. Murken <LMurken@storycountyiowa.gov> wrote:

Curt,

Thanks for your comment. Did you by chance submit it via the form on our website prior to yesterday's 5 p.m. deadline?

Linda

From: CURTIS BURGER <curtiseburger@gmail.com>
Sent: Wednesday, November 18, 2020 9:05 AM
To: Lauris A. Olson <LOlson@storycountyiowa.gov>; Linda S. Murken <LMurken@storycountyiowa.gov>; lhedden@storycountyiowa.gov
Subject: septic tanks

[External Sender - Please Use Caution]

State rules require septic system inspection when a property is transferred. This will eventually include all unregistered systems. If there are loopholes in the rules, then fix the loopholes. Most of the unregistered systems probably belong to long-time, elderly home-owners. Any spot inspection requiring immediate remedy can be an expensive hardship.

Pumping a septic tank is necessary maintenance, but a one-size-fits-all 5 year rule seems heavy-handed. Many elderly and others are conservation-minded and easily get by on less than 1000/gal a month--just look at the water bill! A better approach would be an ongoing public information campaign explaining the need to pump your tank given

your situation-- tank size, water usage, etc. The main problem when a tank needs pumped is that your toilet won't flush and needs urgent relief!

Curt Burger

Huxley

Matthew D. Cory

From: Linda S. Murken
Sent: Wednesday, November 18, 2020 5:19 PM
To: Margaret C. Jaynes; Matthew D. Cory
Subject: FW: proposed ordinance comment

FYI

From: Lisa M. Markley
Sent: Wednesday, November 18, 2020 3:36 PM
To: Board Members <BoardofSupervisors@storycountyiowa.gov>
Subject: proposed ordinance comment

Hello,

My intent was to submit my comment regarding the Septic ordinance via the comment section of the website, but unfortunately that link isn't working. As a rural resident in Story County I find this ordinance to be a government overreach. Telling me how often I have to maintain my personal property isn't the job of government as far as I am concerned.

Thanks
Lisa Markley

Stephanie L. Jones

From: noreply@civicplus.com
Sent: Thursday, November 12, 2020 6:38 PM
To: Environmental Health Department
Subject: Online Form Submittal: Proposed Septic Ordinance

[External Sender - Please Use Caution]

If you are having problems viewing this HTML email, click to view a Text version.

Proposed Septic Ordinance

Name*	Carol Collings
Address	58853 250th st Nevada
Email	
Comment	The very end of your new septic ordinance says 2020 not 2021.

* indicates required fields.

View any uploaded files by signing in and then proceeding to the link below:
http://www.storycountyiowa.gov/Admin/FormHistory.aspx?SID=1896

The following form was submitted via your website: Proposed Septic Ordinance

Name: Carol Collings

Address: 58853 250th st Nevada

Email:

Comment: The very end of your new septic ordinance says 2020 not 2021.

Additional Information: