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OPERATING PROCEDURES/GUIDELINES ON-SITE WASTEWATER TREATMENT & DISPOSAL

The first goal is to ensure that all required housing be equipped with an approved septic system (tank, lines & secondary treatment), and that efforts be made to inform citizens of the county on health hazards relating to septic systems, aware of their existing systems, and the county regulation.

These procedures/guidelines may require additions as new questions or circumstances arise. They will be reviewed yearly in January or February prior to the construction season beginning. They will provide guidance to the Sanitarian to ensure that everyone asking a similar question gets the same answer. Not all sites are alike though, and may require limited variations.

- New construction requires an application be filled out and a permit issued prior to a contractor starting work on the septic system.
- Existing septic systems that requiring digging, the Sanitarian will be notified. Replacement of short sections of pipe, 1 stick or less, will not require a permit but if the tank has to be replaced, a permit will be needed and the entire system upgraded. If the existing secondary treatment system fails or if the entire discharge line from a tank has to be replaced creating a new direct discharge, then the entire system shall be upgraded.
- The application for permit shall be filled out completely and turned into the Decatur County Environmental Health Office at 207 NE Idaho St., Leon Iowa.
- Uncovering a septic tank to have it pumped is considered maintenance, no notification or permit is needed.
- Rebuilding of a home or moving a manufactured home onto a site with an existing system will be considered the same as new construction. This may require upgrading or replacement of the existing system if it does not meet current State and County regulations.
- In upgrading a system, if the tank is found to be in acceptable condition but too small or containing only one compartment, another tank could be added with it to meet requirements.
- As the Sanitarian is not always available, notification for final inspection is needed 24 hours or more in advance. Special arrangements may be needed.
- If request is made for a time of sale inspection, both parties must agree to the inspection. If an inspection is performed and the system is found to be inadequate, the system would require upgrading.
- Anyone wanting to install an alternative type system will need approval of the Board of Health. The board could then allow the Sanitarian to approve future systems of the same type, or require their approval on each system. These variances could also require written agreements between owner and Board of Health addressing testing, failure or poor results of the system. The owner shall see that this agreement is recorded with the County Recorder, in the abstract of title for the property containing the alternative system.
- Contractors doing septic work will “register” with the Sanitarian. To be on a list provided to individuals contractors must have attended an approved septic course within the calendar year. This also means they understand the county regulations and agree to follow them. There will be a \$50 registration fee for new contractors and \$25 every 5 years to re-register.
- When a system requiring a service agreement is installed, it will be the responsibility of the owner to see that the service agreement (original copy) is recorded with the County Recorder, in the abstract of title for the property containing the system, within thirty days after inspection. A service agreement shall be maintained at all times and on file with the administrative authority.
- The contractor or company that is providing the maintenance agreement is responsible for testing the effluent at the required times with a copy of the results being submitted to the Sanitarian.
- When planning your septic system, consideration should be given to its location, future plans and required distance requirements. Anyone planning to do their own work shall discuss their site with the County Sanitarian

prior to starting the work to make sure they understand all of the requirements. The Sanitarian can do a site preview with the contractor and/or homeowner prior to the work being done.

- If a system is installed which has a surface discharge, that discharge shall be on your own property within distance requirements from property lines, easement areas, etc. Systems should discharge away from road ditches. If a road ditch is the only option, a permit shall be obtained from the road authority to perform work in the road right-of-way.
- Any dwelling where plumbing does not exist shall be served by an impervious vault toilet meeting the requirements of IAC 567-69.13(455B). Any dwelling with plumbing (drains from a sink, tub, etc.) that discharges water out of the dwelling shall be served by an on-site septic system consisting of a primary and secondary treatment system as required per IAC 567-69.1(455B). If the dwelling does not contain a toilet connected to the plumbing system, the dwelling shall also be served by an impervious vault toilet meeting the requirements of IAC 567-69.13(455B).
- There is a low interest loan program available for those who qualify. This program is intended for those sites that currently have improper septic systems and have to or want to upgrade their system. It is only available for unincorporated portions of the county. Ask for information on the Onsite Wastewater Assistance Program (OSWAP).
- There may also be grant money or low interest funds available from USDA Rural Development. These are generally based on your income and age. Ask for information on these programs.
- Set back requirements (from Chapter 69)

Minimum Distance in Feet From	Closed Portion of Treatment System	Open Portion of Treatment System
Private water supply well	50	100
Groundwater heat pump borehole	50	100
Lake or Reservoir (over 1 acre)	50	100
Stream or pond (under 1 acre)	25	25
Edge of drainage ditch	10	10
Dwelling or other structure	10	10
Property Lines	10	10
Water lines continually under pressure	10	10
Suction water lines	50	100
Foundation drains/subsurface tiles	10	10

LIST OF LOCAL CERTIFIED WELL PLUGGING CONTRACTORS 6-1-2020

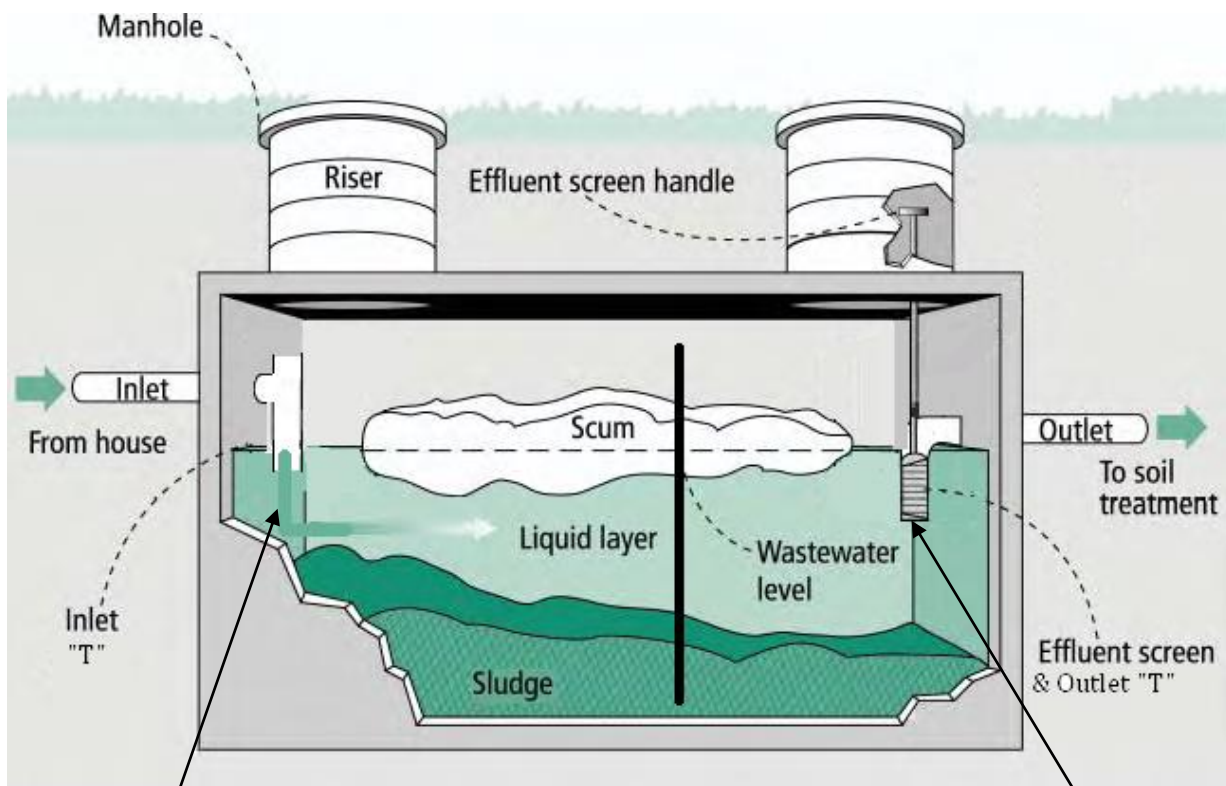
Kenny Holmes-8088	Corydon	641-870-0402
Gene Cameron-6944	Osceola	641-342-3413
Glen Bedwell-7263	St. Charles	641-396-2462
Gerald Snyder-8479	Murray	515-975-2594
Kevin Buckingham- 10529	Leon	641-414-7702
Tim Newberry- 10533	Lamoni	641-414-1731

This is not a complete list. This list is just a few that we know of that do work in the county.

Options for Secondary Treatment Systems

Type of System	Consider When:	Maintenance (depends on use)	Drawbacks
Gravel Drainfield	• Soil percolation rate: 5-60 min./in. • Bottom of trenches and beds at least 3 ft. above highest expected groundwater level. • Slope of site is less than 15%	• Pump septic tank every 2-3 years* • Prevent deep-rooted vegetation over drainfield. • Prevent soil compaction over drainfield.	• Excessive water use may overload system. • Garbage disposal use increases pumping frequency.
Pressure Dosing	• Drainfield is more than 500 linear ft. dosing is recommended, mount, sand filter.	• Pump septic tank every 2-3 years* • Flushing and cleaning of small diameter distribution pipe.	• Cost of pump and energy to run pump.
Mound System	• Soils with slow or fast percolation rates. • Shallow soil cover over fractured or porous bedrock. • A high groundwater table.	• Pump septic tank every 2-3 years* • Pumps and siphons must be maintained. • Flushing and cleaning of small diameter distribution pipe.	• Costs are higher than conventional systems due to design costs and materials.
Gravelless Drainfield System	• Site is remote or difficult to reach. • Typical drainfield materials (gravel) not available or expensive.	• Pump septic tank every 2-3 years*	• Potential problems in sandy soils.
Recirculating Filter	• No space for any other system	• Pump septic tank every 2-3 years*	• Small treatment system easily abused.
Sand Filter	• Repairing existing malfunctioning system. • Site is an environmentally sensitive area. • Soils with slow percolation.	• Pump septic tank every 2-3 years* • Maintenance varies by design. • Dosing chamber pumps, Controls and timer sequence must be checked.	• Cost is high where media is expensive or must be transported long distances. • Pumps require electricity. • Surface discharge water required NPDES permit.
Packaged Treatment Media Filter	• Similar to sand filter	• Pump septic tank every 2-3 years* • Rake filter surface every year or maintain the media type. • Requires perpetual maintenance with a manufacture certified technician.	• Media may require replacement on a frequent basis and replacement costs may be expensive.
Aerobic Treatment Unit	• Soil characteristics are not appropriate for a traditional septic tank/drainfield system. • Groundwater table is high or shallow bedrock exists. • A very small lot. • A traditional septic system has failed. • Desirable to extend the life of a drainfield.	• Inspect and pump secondary settling chamber as needed (as frequent as 3-6 months) *. • Mechanical parts require periodic check, maintenance and repair.	• Costs more to install than other systems. • Problems with sudden heavy loads or neglect. • Electrical costs and associated maintenance. • Requires final treatment in drainfield, sand filter, or other system. • Surface discharge water may require NPDES permit. • May require disinfection.
Holding Tank	• There is no suitable effluent treatment area. • Temporary or seasonal use only.	• More frequent pumping is required. • Alarm or visible float need to indicate when tank is 90% full.	• Restricted water use. • Pumping and disposal costs.

Table found on Page 13 of "Residential On-site Wastewater Treatment: An Overview". Available on Iowa DNR website.



Shall be 4" sch. 40 pipe & shall extend at least 6" above & 8" below liquid level. (No more than 20% of liquid depth.)

Shall be 4" sch. 40 pipe & shall extend at least 6" above & at least 10" below liquid level. (No more than 25% of liquid

Every septic tank shall be divided into 2 compartments. This may be obtained by using more than 1 tank. Influent compartment shall not be less than $\frac{1}{2}$ nor more than $\frac{2}{3}$ of total capacity. Effluent compartment shall not be less than $\frac{1}{3}$ nor more than $\frac{1}{2}$ of total capacity. Any tank placed in fill soil shall be placed on a level, stable base that will not settle. Access must be provided to all parts of tank necessary for adequate inspection, operation & maintenance. If only 2 opening in tank located over inlet & outlet. They must be at least 18". A 24" diameter opening may be provided at the center of tank with 2 smaller openings of at least 6" over the inlet & outlet. If top of tank is more than 12" below finished ground level, a riser at least 24" in diameter must be installed over each manhole of 18" or more in diameter to ring the top of the manhole lid to within 6" of the finished ground level.

- Tank shall not be used for disposal of chemical wastes or grease in quantities, which might be detrimental to the bacterial action in the tank.
- Interior length of tank should not be less than 5' & shall be at least $1\frac{1}{2}$ times the width. No tank or compartment shall have an inside width of less than 2'. The minimum inside diameter of a vertical cylindrical septic tank shall be 5'.
- Minimum liquid depth shall be 40". Maximum liquid depth for calculating capacity shall not exceed $6\frac{1}{2}'$.
- Tanks shall be constructed of poured concrete or plastic resistant to corrosion or decay & designed so they will not collapse or rupture. Metal tanks are prohibited. Fiberglass or plastic tanks shall be bedded according to manufacturer's specifications.
- Inlet and outlet connections at the tanks shall be made by self-sealing gaskets cast into the concrete or formed into the plastic or fiberglass

Tank capacity	
3 bedroom or less	1,250 gals
4 bedrooms	1,500 gals
5 bedrooms	1,750 gals
6 bedrooms	2,000 gals

Soil Borings, Soil Analysis

ABACI Consulting, INC- Mark McMurphy	515-986-5048		10540 Hickman Rd, Clive, IA
Campbell Engineering & Surveying- Brian Campbell, PE	515-963-4385	brian@cesiowa.com	Ankeny, IA
Camron Collier, PE	515-238-6330	Camron@herbergerconstruction.com	Grand River, IA
CMT-Doug Clement	515-263-0794		1717 NE 58 th Ave, DSM, IA
Doug Olemann	515-419-2926	Soilman12@msn.com	Altoona, IA
Jim Carroll, PE	515-250-2103		1549 NW 92 nd St, Clive, IA
Lee Engineers & Surveyors- Mark Lee	515-669-4188		8003 Douglas Ave, Urbandale, IA
Sam Bedwell	515-681-7585		St. Charles, IA
Stiens Soil Evaluations-Chris Steins	660-562-0726	soiltest@hotmail.com	315 W. 7 th St. Maryville, MO

TRAINED SERVICE/MAINTENANCE PROVIDERS

System Type Legend: P- Peat/Coco; A- Advantex; W/C- Whitewater/Clearstream

Deery Construction Inc	Brad Derry	New Market, IA	712-370-1547	P
Friday Excavation	Curt Friday	Lorimor, IA	641-340-5607	P
J&H Construction	Josh Jackson	Osceola, IA	641-414-3171	P, A, W/C
Keeney Custom Fencing	Aaron Keeney	Davis City, IA	641-344-5498	P
Mike's Construction, LLC	Mike Yutzy	Leon, IA	641-344-7220	P, A
Molitor Construction, LLC	Paul Molitor	Boone, IA	641-298-1268	A
OWWT, LLC	James Carney	Des Moines, IA	515-244-4646	P, W/C
Rogers Septic LLC	Rick Rogers	Des Moines, IA	515-282-0777	W/C, P
Snyder Plumbing LLC	Gerald Snyder	Truro, IA	641-342-8579	P
Southern Iowa Plumbing, LLC	John Buttz	Corydon, IA	641-870-1640	P, A
Swartzentruber Construction	Enos	Lamoni, IA	515-681-0433	P

This is not a complete list. This list is just a few that we know of that do work in the county or supply materials needed in septic construction.

Licensed Septic Pumpers

Cannon's Porta John Rentals ST-384 Greg Cannon-202 N. Grant St. Mt Ayr	<u>641-464-2906/641-344-7343</u> Truck holds up to 375 Gallons
Rauch's Septic Service ST-198 Eddie Rauch- 13326 205 th St. Lamoni	<u>641-414-4727</u> Truck holds up to 2500 Gallons
Dave's Pumping Service, ST-86 1685 Upland Trail Prole	<u>515-462-1903</u>
Don's Jons LLC, ST-483 Craig Shippley - PO Box 88, Lineville	<u>800-944-2317/660-953-1611</u> Truck holds up to 900 gallons
Page Construction LLC ST-452 Mike Page, 2613 Hwy 169, Shannon City	<u>641-340-1888</u> Truck holds up to 2000 Gallons
RM Plumbing & Construction, ST-496- Robert McCaulley, Lucas	<u>515-321-6623</u> Truck holds up to 2,000 gallons
Southern Iowa Plumbing, LLC, ST-485 411 N Dotur Dr, Corydon	<u>641-870-1640</u> Up to 2,000 gallons
Vern Killen Construction, ST-335 1679 140th Ave Carlisle	<u>515-480-6082</u> Truck holds up to 2200 Gallons
Wiegert Septic ST-237 PO Box 344 Martensdale	<u>641-764-2389</u> Up to 5,000 gallons
Willets & Woosley Sewer & Septic ST-23 411 New York Ave Creston	<u>641-782-4220</u> Truck holds up to 1,700 gallons

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SEPTIC TANKS

<u>INDIANOLA PRECAST</u> - 515-961-5158/515-865-8815	12995 80 th Ave--- Indianola, Iowa
<u>LIEBUS CONCRETE PRODUCTS</u> —1-800-491-6869	115 8 TH Ave EAST – Oskaloosa, Iowa
<u>LISTER INDUSTRIES</u> ---- Phone – 515-244-3149	300 NW 48 TH PL. – Des Moines, Iowa
<u>PRE-CAST CONCRETE COMPANY</u> —-641-782-4515	622 ½, New York Ave. –Creston, Iowa
<u>YODER'S PRECAST LLC</u> - 641-898-2803	2874 210 th St--- Seymour, IA

This is not a complete list. This list is just a few that we know of that have sold tanks to people within Decatur County.