Residential On-site Sewage Systems Rule
410 IAC 6-8.3, Revised
LSA Doc. #025-

Request for Moratorium Exception
February 13, 2025

Summary of Statutory Authority:

Under IC 16-19-3-4, the Executive Board of the Indiana Department of Health (IDOH) has the authority to adopt rules in order to protect or improve public health in the state, including rules concerning the disposition of excremental and sewage matter through the design, installation, construction, maintenance, and operation of residential on-site sewage systems. Under IC 16-19-3-1 IDOH possesses all powers necessary to fulfill the duties prescribed in statute and for the enforcement of any of the provisions of health laws and rules. In 2019, the Indiana Legislature created the Technical Review Panel which is required to assist the Executive Board with adopting rules. The Technical Review Panel make-up is set through IC 16-19-3-27.5, including governor appointments and represents the various members of the on-site sewage system industry.

History of the Residential On-site Sewage Systems Rule:

The Indiana Board of Health passed the first administrative rule regulating the disposition of sewage and excremental matter at private residences beyond the reach of sanitary sewer in 1977 with HSE 25, codified in 1978 as Rule 410 IAC 6-8. This rule gave local health departments powers of enforcement in public health matters related to onsite sewage disposal, provided minimum requirements for the conventional subsurface trench gravity flow septic system, and prohibited the discharge of treated or partially treated sewage. The Indiana State Department of Health replaced this rule in 1990 with Rule 410 IAC 6-8.1. The new rule provided minimum requirements for five types of "conventional" septic systems and made technical updates and requirements for soil evaluations and soil loading rates, subsurface drainage, technologies new to Indiana, and permit issuance by the local health department. In January of 2011, Rule 410 IAC 6-8.1 was updated and revised to Rule 410 IAC 6-8.2 which included construction and operating permits, requirements for outlet filters, and requirements for abandonment of systems. Rule 410 IAC 6-8.2 was replaced with Rule 410 IAC 6-8.3 in 2012, with slight revisions in 2013 and 2014. In 2024 Rule 410 IAC 6-8.3 was again updated in order to comply with I.C. 16-19-3-27.7

The Indiana State Department of Health is preparing revisions to *410 IAC 6-8.3, Residential On-Site Sewage Systems* in order to comply with statutory requirements.

Purpose for Revision:

The proposed rule revision will serve many purposes:

1) To update the rule in accordance with statutory changes since the last rule update.
2) To include new definitions and update existing definitions, as approved by the IDOH Technical Review Panel, for clarity and consistency.

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3) To update all matters incorporated by reference in the rule including standards and specifications and industry standard practices reflected in the rule in accordance with IC 16-19-3-27.7.
4) To provide minimum requirements for inspection of residential on-site sewage systems for use of best judgment and for connection or reconnection to an existing on-site sewage system.
5) Removing repetitive sections from the rule and replace them with defined terminology.
6) To allow local health departments to require registration and/or certification of installers.
7) To have specific requirements for sewage holding tanks for further clarification of IC 16-41-25-9.
8) To address high strength waste which contributes to the failure of a residential on-site sewage system.
9) To allow alternate on-site sewage system sizing options for tiny houses.

Fiscal Impact to the Indiana State Department of Health:

This rule update will not add any expenses to the IDOH. This rule does not make any changes to the state administration of the onsite sewage system program within IDOH, so there are no costs to IDOH.

Fiscal Impact to the State:

This rule update will not add any expenses to the State of Indiana. This rule does not affect any other part of state government, so it does not add any expenses.

Fiscal Impact to Local Government:

This rule revision will add no expenses to local government.

Family Impact Statement pursuant to Executive Order 13-05

1. This rule update will have no impact on
   - the stability of the family or the marital commitment;
   - nonmarital childbearing;
   - the rights of parents to raise their children and make the best choices about their children's education, health, and well-being; or
   - private family earnings or the incentive for parents to provide materially for their children.
2. This rule will not send any messages to
   - the public concerning the status of the family; or
   - to children about the relationship between their present choices and future well-being.

Fiscal Impact to the Regulated Community

The revised residential on-site sewage systems rule will have financial impact on homeowners whose homes are beyond the reach of sanitary sewer, soil scientists, and system installers. It is likely that the increased costs to soil scientists and system installers will be passed on to homeowners, and estimates provided in this analysis assume the end consumer, the homeowner, will bear all increased costs.

IDOH estimates that approximately 9,300 residential on-site system permits are issues each year. In 2022, IDOH conducted a survey of local health departments in 2022 with 48 departments responding. The responding local health departments report that in 2020 there were a total of 4835 septic permits issued, or an average of 100.7 per local health department, and in 2021 there were a total of 4858 septic permits

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issued, representing an average of 101.2 permits per county. These were the years that the impact of COVID was most significant, and the number of permits issued may not be representative of past or future years. If this average of 101 permits were extended to all 92 counties in Indiana, that would give an approximate number of 9300 residential on-site sewage system permits issued each year. These numbers would not include Fishers and Gary city health departments, which do issue on-site sewage system permits, but would likely issue significantly fewer permits each year than a county health department.

Based upon the discussion and estimated costs outlined below, the typical homeowner installing an on-site sewage system for new construction could expect an increase in costs of approximately $300-400, with a low of $0 to a high of $575. These cost estimates do not take into account a required connection to sewer or installation of a secondary treatment unit for high strength waste as these would be costs incurred only for very specific reasons and would not be combined with the cost of a new system. The estimates also only factor in the cost of one inspection, although inspections could be required for multiple things, one complete inspection should suffice for all requirements. To reach the approximated high cost, the system would need to entail many of the requirements of the rule that are proposed to be added, and this is very unlikely in many cases due to system type and design. Details of each item, including costs and benefits are in detail below this table.

Item	Low Cost	High Cost	Average Cost	Est. % of Systems Affected	Comments
Required connection to sewer if OSS fails[1]	$0	$10,000	$8,500	2	If sanitary sewer is available within 300' of the property line and is within 150% of the cost of installing a replacement OSS, the LHD *may* require connection.
Inspection for approval to connect or reconnect to an existing OSS.	$0	$300	$150	3	If there is an existing system that will be connected to or reconnected to, there is a requirement to have the system inspected and ensure that the system is not in failure.
Minimum requirements for construction plan.	$0	$50	$25	100	Designers should already be doing this. This is the intent of the current rule.
Including deviations from rule based upon best judgment on the OSS construction permit.	$0	$0	$0	20	This is just an additional note on a permit already being issued.
Required addition of an aerobic treatment unit to a system with high strength waste	$0	$10,000	$5,000	2	Only required on systems where high strength waste contributes to system failure. If the homeowner agrees to a plan to reduce waste strength, this may

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contributing to a failure[1].					be waived by the local health department.
Operating permits can be required for any system.	$0	$300	$200	10	Statute requires operating permits for sewage holding tanks. This would allow operating permits for all system types. This is a 2+ year permit.
Requirements for inspection for best judgment and operating permits	$0	$50	$25	5	Inspections for use of best judgment are already required. This just clarifies what is required to be documented.
Minimum of 3 soil profile evaluations	$0	$100	$50	5	Most soil scientists already do at least 3 evaluations now.
Location of soil evaluations from a fixed reference point	$0	$50	$25	25	Most soil scientists already do this.
Required separation to subsurface cistern used for drinking water	$0	$0	$0	½	This is very rare, but if present could cause a significant health hazard.
Minimum capacity for sewage holding tanks	$0	$250	$0	5	This requirement for residential systems would be consistent with what the commercial rule already requires.
Distribution Box Riser	$0	$100	$50	40	Many installers do this now.
Distribution Box stabilization	$0	$50	$25	20	Many installers do this now. This is only required on those systems with distribution boxes.
Protecting the area of the SAF	$0	$50	$25	25	This is already required for elevated systems, and the intent of the rule is for subsurface systems as well. Many installers already do this.
LHD may require a site visit and may require the system components to be marked at the site prior to permit issuance.[1]	$0	$100	$50	25	Some installers already do this. The system must be laid out at the site in order for the installer to know where the system is to be installed.

[1]This requirement may be waived by the local health department.

1) Required connection to sanitary sewer

Discussion: This rule allows a local health department to require a residence to connect to an available sanitary sewer if there is a failure of the existing on-site sewage system and if the sewer is

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within three hundred (300) feet of the property line and within 150% of the cost of installing a new on-site sewage system.
Cost: The average cost for installers surveyed for connection to a gravity sewer line with 4" SDR piping, or to a pressure sewer with 2" SDR 11 piping, at a distance of 300 feet is approximately $7800. The estimated cost for connection to a pressure sewer does not include the cost of a grinder pit and pump, if necessary. Some municipalities, districts, and not-for-profit utilities currently require this or something very similar. In those cases, where another entity requires connection, there would be no increase in cost to the homeowner from the rule requirements alone. This estimate does factor in a connection fee which varies greatly between utility companies.

The initial installation costs of an on-site sewage system would likely be considerably more than the initial average cost of connection to sewer; however, with a sewer connection, there would be a monthly bill. All on-site systems do require operation and maintenance, and that typically does not come on a monthly basis, but each time operation and maintenance costs are incurred, they would be significantly higher than a monthly sewer bill.
Benefit: Generally, for public health purposes, sewers are preferred to on-site sewage systems because the wastewater is thoroughly treated before being discharged and has less risk of failures. Further, homeowners connected to a sewer system would not have to worry about ever installing a replacement system, having a public health hazard in their yard, or preserving a portion of their yard for future system installation. Use of indoor plumbing would never be dependent upon weather conditions where many on-site systems must see limited use during large rain events and snow melts.

2) **Inspection for connection or reconnection to an existing system**
Discussion: The rule currently requires a construction permit to be issued when a home is connected to or reconnected to an existing on-site sewage system. The local health department should not be permitting connection or reconnection to a system that is in failure or to a system that does not have both a septic tank and a soil absorption field. An inspection of the system is needed to make this determination. If the system was previously permitted through the local health department, the inspection would only be to check to ensure the system is not failing.
Cost: Depending upon whether a permit is available for the existing system, the inspection may cost nothing if the installer doing the connection/reconnection also does the inspection. If there is no permit on file in the local health department, the inspection will likely be on the high end due to more investigation and probing that would be necessary.
Benefit: This ensures that the owner/occupant will be able to use a fully functional, non-failing system after occupancy. This also ensures that the local health department has done due diligence prior to issuing a construction permit for connection/reconnection.

3) **Construction plan requirements**
Discussion: The rule currently requires plans of sufficient clarity that compliance with the rule can be verified. The Technical Review Panel has requested additional clarity be added to the rule so that every local health department interprets this requirement the same way and so that there is consistency among local health departments for plan review.

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Cost: There really should be no additional cost associated with construction plans including this detail as that is the intent of the current rule. A small increase of an average of $25 is given to this in case this level of detail in the plans was not previously required by the local health department.
Benefit: The approved construction plan will be verified to be compliant with the rule. This safeguards the homeowner knowing that their system is rule compliant. This could add value to the property if a detailed plan is available for future use. The plan should be viewed as a reference document for the property similar to other property records.

4) **Deviations from rule based on best judgment recorded on the construction permit**
Discussion: This is beneficial for the applicant and anyone else that may view the permit in the future.
Cost: The local health department must already issue a permit for the installation, repair, or replacement of the system, so adding this statement should not cost anything additional and should take very little time to complete.
Benefit: This will ensure that the viewer is aware that the best judgment of the local health department was used and, in some way, the system does not meet the provisions of the rule for new construction. It should leave nothing in doubt as to why the permit was issued in this manner.

5) **Aerobic treatment unit for reduction of high strength waste**
Discussion: This rule allows a local health department to require that an aerobic treatment unit be installed in a replacement system when high strength waste is a contributory factor in a system failure. Alternatively, the local health department may allow a homeowner to prepare a plan of action to reduce waste strength in lieu of installing an aerobic treatment unit.
Cost: This could potentially cost a homeowner anywhere from $1,500-$10,000 depending upon the type of unit chosen to be installed, but could also potentially have no cost to the homeowner, if the homeowner agrees to a plan of action to reduce the waste strength produced in the home.
Benefit: When high strength wastewater is generated in the home, it often leads to excessive biomat buildup and plugging of outlet filters and soil pores, leading to premature system failure. The use of an aerobic treatment unit will prevent premature clogging of the septic tank outlet filter and soil absorption field, leading to greater longevity of the system and reduced costs of installing a replacement system. The installation of a secondary treatment unit could potentially be less than installing an entirely new system if the system fails due to high strength waste.

6) **Operating permits**
Discussion: The issuance of operating permits will allow the local health department to ensure that regular maintenance is being performed on all systems that are under an operating permit. Regular maintenance is required for all systems, regardless of the system type; the operating permit will simply ensure that the needed maintenance is performed.
Cost: Local health departments would set their own fees for operating permits in compliance with IC 36-11-2-2 which states that the periodic permit fee cannot exceed the actual cost incurred. An average fee of $100 is given to a 2-5 year permit.
Benefit: Owners would be assured of proper system function with periodic inspections of the system. Systems would have increased longevity if properly maintained throughout the life of the system.

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Owners would also be notified when the system needs further maintenance or if system abuse is causing issues with the system prior to the system failing.

7) **Required information to be included in an inspection report to the LHD for best judgment or operating permit renewal**

Discussion: There has previously been no indication of what needs to be included on a system inspection report or what actually needs to be observed during the inspection. This would clarify those requirements so that inspections are done consistently and the homeowner is getting the same results from any inspector.

Cost: The detail required in the inspection report required by this rule would add very little cost to the actual inspection itself. An average of $25 is given to ensure all required information is provided.

Benefit: This requirement would ensure that all system components are inspected and documented so that nothing is overlooked. The homeowner can have confidence that they know the exact condition of each component of the system. The local health department can also expect consistent information provided in the reports to ensure that any problem with the system is addressed and corrected as soon as possible so as to prevent failure.

8) **Minimum of 3 soil evaluation sites**

Discussion: IDOH has a long history of recommending at least three evaluation per residential soil absorption field site. This has been provided to local health departments and soil scientists in memo format on multiple occasions as well as commonly being a training point for local health department staff. Currently, there is only one known soil scientist who does not do at least three evaluations per system site.

Cost: There may be an additional cost per on-site evaluation for very few, if any soil evaluations because most soil scientists do this already. There may be an increase up to $100 in very few cases.

Benefit: Given the size of most soil absorption fields, it is critical to know the most limiting soil features in the entire area of the soil absorption field. One or two soil borings/pits are insufficient to determine the characteristics of the entire site. Onsite sewage systems are very expensive and homeowners will get systems better suited to their site when soils are well described which will help to avoid malfunctions and failures.

9) **Locating soil evaluation spots from a fixed reference point**

Discussion: In order for a soil evaluation to be useful and to ensure that the soil absorption field is placed in the area evaluated, the soil evaluation locations must be identified and replicable. Some use flags to mark boring locations, but for a number of reasons, flags may not remain in place until the system is installed. Locating the sites from a fixed reference point that will be in place until the system is installed is critical to getting the system installed in soil that has been evaluated.

Cost: This should cost very little as soil scientists typically measure where the borings are to begin with. An average of $25 per site has been assumed for the location of a fixed reference point on the property.

Benefit: Using a fixed reference point from which to locate borings will ensure that they system is designed and installed in the correct location. The system type and sizing is based upon the soils at the site and installing where the soils have not been evaluated makes the cost of the evaluation, the information needed to make the system type and size correct for the site, and the ease with which to design the system wasted.

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10) Separation to a subsurface cistern

Discussion: Some Indiana populations rely on obtaining drinking water from subsurface cisterns as community water or private wells are not an option. The Amish also rely on cisterns a great deal because of their religious beliefs.

Cost: Observing a 50' separation distance to a subsurface cistern to system components should not be an additional cost to the system.

Benefit: The benefit of requiring a minimum separation distance to a subsurface cistern is knowing that the drinking water source is protected from being contaminated by wastewater.

11) Minimum capacity for sewage holding tanks

Discussion: In 2023, IC 16-41-25-9 was added to allow the use of sewage holding tanks on a permanent basis in any situation. This statute provides the maximum allowed holding tank size, but is silent on the minimum holding tank size. A minimum specified size is needed to allow local health departments to regulate the tanks that are installed.

Cost: The significant cost to installing a holding tank is the actual installation cost and the cost of having the tank pumped when needed, both of which are due to a choice made by the homeowner. Additional capacity in a holding tank is a relatively minor cost which we have assigned an average cost of $150.

Benefit: When deciding what size holding tank to install, one must consider a balance between initial installation costs and long-term costs of pumping the contents regularly. Most pump trucks have a capacity of 1,000-4,000 gallons, so one must weigh the costs considering that a 500 gallon tank will need to be pumped twice as frequently as a 1000 gallon tank, nearly doubling the pumping costs over time. Mileage and the dumping costs don't vary much with amount of wastewater pumped, be it 500 gallons or 1000 gallons. The benefit to owners would be a conscious effort to reduce the costs of long-term pumping of the tank.

12) Risers on all distribution boxes

Discussion: The current rule allows risers on distribution boxes, but does not require them. There are a number of installers that already install risers on distribution boxes as a best management practice. The TRP members believe that putting this requirement in our statewide rule is advantageous to the property owner. The revised rule would require risers to the surface on all distribution boxes.

Cost: For those systems which require distribution boxes, riser sections will cost an average of $50 depending upon the material they are made of and the height of the riser.

Benefits: Having readily available access to the distribution box can allow simple measures to be taken to access the box, to assess problems, and to fix unequal distribution. For all systems utilizing a distribution box, the distribution box provides the best, most unintrusive access to a soil absorption field to assess system function and to troubleshoot failures. Slight movement of the distribution box can cause the box to become out of level causing unequal distribution of effluent to the soil absorption field. This would also alleviate homeowners of the cost and inconvenience of having to locate and dig up a distribution box when an inspection is needed or a problem arises.

13) Distribution box stabilization

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Discussion: The intent of the current rule is to have the distribution box installed so that it does not move or become unlevel during backfilling of the system and operation of the system.
Cost: There really should be no additional costs to this requirement because the intent of the rule requires this now. However, we have given an approximate $25 average cost for those who do not take these measures now.
Benefit: It is crucial to proper system function to have equal distribution of effluent to the entire soil absorption field. An unlevel distribution box will not provide equal distribution which would likely lead to system failure which causes increased costs for the homeowner and bad public health outcomes with sewage possibly entering the surrounding environment.

14) Protecting the soil absorption field area

Discussion: In order to collect information and elevations for the construction plan, the installer/designer has to be at the site prior to permit issuance. While at the site, he/she has to determine where the system will be placed to meet all separation distances and other requirements. If the site is not marked at that time, the installer must remeasure everything in order to find exactly where the system must go at the time of installation. This could actually save time and money by having it marked from the beginning.
Cost: We have included an average cost of $25 in cases where this is not already being done.
Benefit: Protection of the soil absorption field area can save significant headache, time and money for the owner. If the area is disturbed after the soil evaluation, it is required to have it re-evaluated by the soil scientist and the potential for the need for remediation or potentially making the site unsuitable is great. Marking the site also provide visible proof of meeting all required separation distances.

15) LHD site visit and marking soil absorption systems at the site

Discussion: A system designer must visit the site of a proposed on-site sewage system in order to gather site specific information necessary to design a system unique to each site. In the design phase, it is critical to ensure that the system, as designed, will physically fit on the site, will be designed on contour, and will meet the provisions of the rule. At the time of the site visit, the area of the system components should be protected from disturbance. Marking system components at the site should be part of the design process and could also be part of the protection for the site. Spray paint, flags, lathe, or other acceptable methods can be easily used to mark the system components.
Cost: The requirement for marking system components at the site will require very little additional cost, as the designer will already be on-site and needs to verify that the system can be designed in accordance with the rule. Costs would include spray paint, flags, lathe, or other acceptable materials for marking. Some of these, such as flags or lathe could be retrieved at the time of installation for reuse. We have indicated an average cost of $50 for marking of the on-site sewage system site.
Benefit: The benefits to marking of the system at the site includes protection of the site from others who may be doing work at the site, ensuring that the entire system will fit on contour at the site, and will allow the local health department a visual representation of the system which they can utilize to assist with plan review and verify compliance.

16) Rule Revisions that could lessen the cost of an on-site sewage system

a. Requiring an aerobic treatment unit or allowing the homeowner to plan a course of action to reduce waste strength in the home will potentially have a huge savings impact on the homeowner.

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If high strength waste is allowed to continue to be discharged to an on-site sewage system that is not designed to treat high strength waste, failure is probable and will likely require another replacement system if not dealt with.

b. Having required inspections for use of best judgment, connection/reconnect to an existing soil absorption field, and for operating permits can lessen the cost of future repairs or replacements by catching issues early and by proactively maintaining the system. Sometimes in the case of a failure, a thorough inspection may reveal an issue that can be corrected and thereby eliminate the need for a replacement system.
c. Requiring distribution box risers can eliminate the need for locating and digging up a distribution box for inspection and/or troubleshooting. Many issues with soil absorption fields are due to an unlevel distribution box. A quick and convenient way to observe this most critical component could save a lot of money for the owner.
d. Having the local regulator visit a site prior to issuing a construction permit may eliminate unnecessary costs and delays for a homeowner. In many cases, a two dimensional plan does not depict all of the limitations to installing an on-site sewage system at a site. Working together with the designer/installer prior to permitting the system to ensure that everything will go smoothly at installation and that the system will be in compliance with the rule is invaluable.
e. Protecting the area of the soil absorption field after the soil evaluation will potentially save the homeowner time and possibly even denial of the site due to factors that they may be unaware of. Concrete trucks, utility installations, home construction, deliveries and even homeowner activities can all destroy a site for an on-site sewage system. If this happens, the homeowner is required to either take steps to remediate the site or find another site that is suitable for installation. In some cases, there may not be a way to remediate and there may not be another suitable site.
f. For tiny homes, as proposed to be defined in the rule, the rule would allow reduced sizing for the soil absorption field based upon the number of people that could occupy the home as determined by the sleeping spots. Sizing would be based upon a design daily flow equal to 75 gallons per day per sleeping spot as opposed to 150 gallons per day per bedroom. This would potentially reduce the cost of an on-site system for tiny homes.

Benefit Analysis:

Many of the updated requirements proposed in this rule will have the initial cost offset by future savings with reduced maintenance intervals; built-in safety factors aimed at providing a safe, secure system for both the homeowner and the service provider; and on-site systems that will be better designed, sited, installed, and managed with a goal of increased longevity and less system failures. The soil scientist and evaluation of the site are the first step to designing, permitting, and installing a system best suited for the unique characteristics of each site. Thorough and accurate evaluation and description of the soils at the site is a critical aspect of system function and longevity. On-site sewage systems will last many years with proper operation and maintenance. Easy access to distribution boxes can provide a simple way to assess system performance, assist in locating problems, and allow for easier maintenance activities.

Many of the items proposed to be required in this rule stem from years of observation, collaboration, and advancements in technologies in the field of on-site sewage systems combining the years of experience in soil scientists, system designers and installers, academia, and local and state regulators. Several of the requirements of the proposed rule have been developed over many years and are collectively referred to

as “best management practices”. Many installers have previously embraced and have reaped the benefits of proactively incorporating these best practices into all systems they install. Requiring these best practices for all systems and installers will put these proactive installers on a level playing field with those installers who do not provide these best management services to their clients and continually undercut the progressive installers with lower bids. The end consumer will be assured that they are getting the best system possible.

It is hard to put an exact value on the benefits of these proposed revisions to this rule in part because many of them are already routine for installers and in part because it is hard to put a figure on the safety and security these systems will provide homeowners over the years. These changes will also provide a certain level of peace of mind knowing that the system installed for their home is best suited to the unique characteristics and limitations of that specific site, thought has gone into ease of system maintenance, and assurance that whatever installer they hire to install the system will be held to a consistent level of professional work and approved materials.

Summary:

The Environmental Public Health Division feels that the proposed revisions to Rule 410 IAC 6-8.3 are in the best interest of homeowners utilizing on-site sewage systems as well as for the protection of public health for all Hoosiers. Proactively taking steps to increase system longevity, to make system maintenance easier for service providers, and moving best management practices into requirements will be beneficial for all systems and homeowners alike. We respectfully submit these requested revisions so that our Indiana local health departments can be better equipped to administer this rule to accommodate the unique needs of their county, their residents, and their management capabilities.

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