

**TITLE 410 IAC 6-8.3 Indiana Department of Health
LSA Document #25-XXX**

I. Description of Rule

a. History and Background of the Rule

The Indiana Board of Health adopted 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.

This revision to the rule is prompted by statutory changes which have voided local on-site sewage system ordinances that vary from this rule (IC 16-19-3-27.8 and IC 16-41-25-7) as of July 1, 2023. IC 16-19-3-27.7 requires that all matters incorporated by reference and all industry standard practices reflected in the rules be updated by IDOH with approval from the Technical Review Panel. Currently, there are 23 local health departments that have local onsite sewage system ordinances approved by the Technical Review Panel, and many of those ordinances include several things proposed to be included in this rule revision.

b. Scope of the Rule

This rule is proposing to be revised for many reasons.

- 1) To update the rule in accordance with statutory changes since the last rule update.
- 2) To eliminate the need for local health departments to have lengthy on-site sewage system ordinances which include those things that should be implemented throughout the state. This will provide more consistency statewide.
- 3) To include new definitions and update existing definitions, as approved by the IDOH Technical Review Panel, for clarity and consistency.
- 4) 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.
- 5) To provide minimum requirements for inspection of residential on-site sewage systems for use of best judgment and for connection or reconnection to existing on-site sewage systems as requested by the Indiana Legislature and the Technical Review Panel.

- 6) To remove repetitive sections from the rule and replace them with defined terminology for clarity.
- 7) To allow local health departments to require registration and/or certification of installers.
- 8) To have specific requirements for sewage holding tanks to further clarify IC 16-41-25-9.
- 9) To address high strength waste which contributes to the failure of a residential on-site sewage system.
- 10) To allow alternate on-site sewage system sizing options for tiny homes and recreational vehicles.

c. Statement of Need

This updated and revised rule is needed to comply with statutory changes made since the last rule update and to address the intentions of the Technical Review Panel. IC 16-19-3-27.8 introduced a way for local health departments to have local onsite sewage system ordinances readopted locally and approved by the Technical Review Panel. After many months of reviewing local ordinance submissions, the Technical Review Panel has determined that there are many requirements being put into local ordinances that should be implemented statewide and should be incorporated into the rule. Currently, the Technical Review Panel has approved twenty-three local on-site sewage system ordinances. Each local ordinance is slightly different, but many have similar requirements as to what is being proposed in this rule revision. This rule revision will bring consistency throughout the state in the way residential on-site sewage systems are regulated and be reflective of the industry's current best practices.

d. Statutory Authority for the Proposed Rule

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 for onsite sewage systems. 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.

e. Fees, Fines, and Civil Penalties

This rule does not add or increase any fees, fines, or civil penalties.

II. Fiscal Impact Analysis

a. Anticipated Effective Date of the Rule

The anticipated effected date of the rule is January 1, 2026.

b. Estimated Fiscal Impact on State and Local Government

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. This rule does not affect any other part of state government, so it does not add any expenses.

This rule revision will add no expenses to local government.

c. Sources of Expenditures or Revenues Affected by the Rule

Not applicable to this rule.

III. Impacted Parties

Impacted Parties include:

- Homeowners who utilize on-site sewage systems – approx. 7244/year
- On-site sewage system installers – approx. 750
- On-site sewage system designers – approx. 50
- Soil scientists – approx. 44

IV. Changes in Proposed Rule

See attached Excel spreadsheet for a list of the changes proposed for the rule.

V. Benefit Analysis

Many of the updated requirements proposed in this rule will have the initial cost offset by future homeowner 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's site and soil evaluation are the first steps 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 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 of 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.

It is hard to put an exact value on many of 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 best design standards, professional work and approved materials.

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.

a. Estimate of Primary and Direct Benefits of the Rule

1. 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. 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.
2. 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.
3. 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.
4. 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.
5. 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.

b. Estimate of Secondary or Indirect Benefits of the Rule

1. Adequately evaluated sites, proper system design, confirmation of compliance with the rule, and utilization of best practices when installing onsite sewage systems will result in less system failures, less health hazards being created, and preservation of environment.

Ultimately, this will cause homeowners less need to replace systems in the future. This creates a healthier environment for all.

2. This rule revision will lead to much consistency throughout the state for regulation of onsite sewage systems. There will be less confusion about rule requirements for all involved.
3. The details of the rule revision will ensure that all installers are competing fairly for each site. Homeowners will be getting comparable services from any installer and will be protected in their investments.
4. This rule revision provides multiple options for homeowners so that they have more input in their systems and the system can be designed to specifically meet their needs and their site.

c. Estimate of Any Cost Savings to Regulated Industries

There will be no cost savings to regulated industries

VI. Cost Analysis

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.

A survey of local health departments was completed to determine the number of on-site sewage system construction permits that were issued in 2023 and 2024. 94 local health departments were surveyed (92 counties and 2 cities) and 77 responded (76 counties and 1 city). The one city health department response has been removed from the calculations of total permits issued. This city only issued one construction permit in these two years, and it was skewing the averages down. Averages were determined for just 92 local county health departments, and one construction permit was added to the statewide totals for each year to represent the city health departments.

Estimated total number of OSS construction permits issued in 2023: **7189**

Estimated total number of OSS construction permits issued in 2024: **7297**

Estimated average total number of OSS permits per year in 2023/24: **7244**

Estimated total number of OSS construction permits issued in 2023/24: **14,488**

Connection to sewer would be a cost that is separate from the increased costs of installation of an on-site sewage system; therefore, costs for connection to sewer and increased costs for on-site sewage systems are separated here.

1. It is estimated that connection to sewer would be required in 0.1% of cases.

1 year cost = $0.001 \times 7244 \text{ permits} \times \$8,500 = \$61,574^*$

2 year cost = $0.001 \times 14,488 \text{ permits} \times \$8,500 = \$123,148^*$

*As a reminder, this is only one option that a local health department may require in case of a failing residential on-site sewage system

- Estimated costs for installation of an on-site sewage system. Those already in compliance are not included in calculations.

Negative Fiscal Impacts:

Negative fiscal impacts are indicated as Costs in Columns N and O in the Excel spreadsheet.

Positive Fiscal Impacts:

Positive fiscal impacts are indicated as Savings in Columns Q and R in the Excel spreadsheet.

Overall Fiscal Impact **\$322,668/1 year** **\$645,336/2 years**

a. Estimate of Compliance Costs for Regulated Entities

There will be no compliance costs for regulated entities.

b. Estimate of Administrative Expenses Imposed by the Rules

There are no anticipated administrative Expenses that will be imposed by this rule.

c. The fees, fines, and civil penalties analysis required by IC 4-22-2-19.6

This rule will not add or increase any fees, fines, or civil penalties.

d. If the implementation costs of the proposed rule are expected to exceed the threshold set in IC 4-22-2-22.7(c)(6)

The revisions to this rule are estimated to be below the \$1,000,000 threshold for two years.

Actual estimated cost for 2 years is \$634,470.

Discussion on items listed above.

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 within three hundred (300) feet of the property line and within 150% of the cost of installing a new on-site sewage system. This is similar to verbiage in IC 8-1-2-125 for not-for-profit utilities, IC 13-26-5-2 for districts, and IC 36-9-23-30 for municipalities. These statutes allow not-for-profit, district, and municipal utilities to require connection to sewer with the stipulation that the sewer connection not be more than 150% of the cost of installing a new system or the property is within 300 feet of an available sewer. By using “and” instead of “or”, this rule would make it more difficult for a local health department to require connection than it would be for a utility.

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 \$8,500. The estimated cost for connection to a pressure sewer does not include the cost of a grinder pit and pump, if necessary. In cases where a utility requires connection, there would be no increase in cost to the homeowner from the requirements of this rule 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 there are less risks of health hazards from sewers. 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, avoiding use of the area of the system for other purposes, or preserving a portion of their yard for future replacement system installation. With connection to sewer, use of indoor plumbing would never be dependent upon weather conditions, whereas many on-site systems must see limited use during large rain events and snow melts. While there is a monthly bill for sewer connection, the maintenance costs of an onsite sewage system can be exorbitant if the system does not function properly or is not properly maintained.

2. Onsite Sewage System Installer Registration

Discussion: This would require onsite sewage system installers to register in each local jurisdiction in compliance with IC 16-41-25-12.

Cost: Local health departments do not always charge for installer registration, but in some cases do charge an administrative fee. Typically, registrations are renewed every year, but in some cases may be good for two or three years. \$100 is the average cost of registration. This is not included as a permit fee as a single installer could install 1 or 2 systems per year or 20 or 30 systems per year.

Benefit: Local health department registration of onsite sewage system installers gives both homeowners and regulators some confidence in the installer's ability to know the rules and install a system in compliance with the rule. This also allows the local health department a way to offer a list of installers to homeowners and maintains a contact list of installers for use if contact needs to be made.

3. Construction plan requirements

Discussion: The rule currently requires minimum information on an application form and plans of sufficient clarity that compliance with the rule can be verified; there are no specifics indicated beyond that. 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.

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 \$15 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 and could be resource if an inspection of the system is ever required.

4. Aerobic treatment unit for reduction of high strength waste

Discussion: This rule revision would allow a local health department to require an aerobic treatment unit to be installed in a replacement system when high strength waste is a contributory factor in the

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 \$2,500-\$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, which is a health hazard. The use of an aerobic treatment unit will prevent premature clogging of the septic tank outlet filter and the 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 failed due to high strength waste. The waste coming out of the aerobic treatment unit would be “cleaner” (less biochemical oxygen demand, lower total suspended solids, and sometimes lower bacterial count), so if a failure were to reoccur, the health hazard created would be “less” of a hazard.

5. Operating permits

Discussion: The issuance of operating permits will allow the local health department to ensure that regular maintenance is being carried out 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 completed.

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 \$200 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. 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.

6. Onsite Sewage System Inspection

Discussion: The rule currently requires inspection of an existing system for use of best judgment to evaluate the system components and determine a potential cause of failure, but no instruction is provided indicating the extent, the directions, or the documentation required of the inspection. With this revision, an inspection would also be required when there is an application requesting that a home be connected to or reconnected to an existing on-site sewage system. Further, this section would encourage the use of these protocols for any other inspection of an onsite sewage system, such as if a buyer would want an inspection completed before a real estate transaction was completed.

Cost: Depending upon whether a permit is available for the existing system, the inspection may cost nothing if the installer doing the connection/reconnection or system replacement also does the inspection. If there is no permit on file in the local health department, the inspection will likely be at the high end due to more investigation and probing that would be necessary. In approximately 3% of the sites that require onsite sewage system inspections, the average cost would be \$250.

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.

7. Minimum of 3 soil evaluation sites

Discussion: IDOH has a long history of recommending at least three soil evaluations 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 approximately 96% compliance with this requirement. One soil scientist is known to do less than 3 evaluations/site, and one local health department right now only wants 1 evaluation per site. In the local health department survey, 96% current compliance was indicated.

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 \$50 in up to 4% of cases. Soil scientists who work in the one county likely would not charge additional as they do at least 3 in other counties they work in.

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 lessen malfunctions and failures.

8. 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 identifiable 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. All soil scientists must locate each boring or pit on a map of the site, but there is no requirement as to what they measure from. In some cases, these are measured from an arbitrary point which may or may not be fixed or available for use when the system is designed and installed.

Cost: It is estimated that in approximately 20% of soil evaluations, a fixed reference point would need to be located and used for measurement. Since soil scientists must locate the borings anyway, this should not be a significant cost increase; however, for these 20% of sites, an average of \$10 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 and pits will ensure that the system is designed and installed in the correct location. The system type and sizing are 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.

9. 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 of using 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 (a larger tank vs a smaller tank) is a relatively minor cost, which we have estimated at \$150. In our survey, it was found that 144 holding tanks were installed in 2024. Nineteen of twenty-three local health departments with local ordinances which have been approved by the Technical Review Panel have this requirement in place now.

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 do not 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. If owners are concerned about long-term costs, a larger tank will be beneficial, and the less the pumping costs, the more likely owners are to properly maintain the tank.

10. 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 that are installed with the top below final grade.

Cost: Approximately 50% of onsite sewage systems require distribution boxes and approximately 21% of those are already having risers to final grade installed. That leaves approximately 39.5% of all systems that would need to comply, with an average cost of \$30 each 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. This would also alleviate homeowners of the cost and inconvenience of having to locate and dig up an underground distribution box when an inspection is needed, or a problem arises. Location of distribution boxes can be very difficult.

11. Distribution box stabilization

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.

Approximately 50% of systems require a distribution box and an average of 80% of distribution boxes are set correctly. An estimated 10% of systems with distribution boxes do not have it stabilized well enough to prevent movement.

Cost: There really should be no additional costs to this requirement because the intent of the rule requires this now. However, for the 10% of systems that need better stabilization, an approximate \$25 average cost could be incurred.

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 and would lead to increased costs for the homeowner and bad public health outcomes with sewage possibly entering the surrounding environment.

12. Protecting and marking the soil absorption field area

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. An average cost of \$25 for marking of the on-site sewage system site has been included for those sites that are currently not being marked and protected.

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. The potential savings from having the soil absorption field destroyed by vehicular traffic, landscapers, builders, etc. could equal the cost of a soil evaluation plus the cost of relocating the system, if that is even possible.

13. Permit for abandonment of an onsite sewage system

Discussion: The current rule requires abandonment of an onsite sewage system if there is no continued use of the system. There is no specific requirement for a permit for abandonment, but approximately 50% of local health departments currently do issue abandonment permits.

Cost: The cost of the permit for abandonment will vary between departments but will average \$75. It is estimated that 50% of the time local health departments are already issuing permits for abandonment of system, and an estimated <1% of all permits issued would be for abandonment.

Benefit: Obtaining a permit for abandonment of the system will provide a permanent record of proper abandonment of the system for the owner and ensure that the local health department will oversee the abandonment is done compliant with the rule. Proper abandonment will ensure that the tank(s) being abandoned will not become a health hazard by collapsing or overflowing.

14. Addition of definition of tiny home and recreational vehicles and providing an alternative sizing requirement for these options

Discussion: Currently there is only one way to size a soil absorption field for a residence. The number of bedrooms and bedroom equivalents is multiplied by 150 gallons per day to determine the design daily flow. The larger the design daily flow, the larger the system will be. With the increase in the number of tiny homes and recreational vehicles being used as homes, there was no provision in the rule for allowing sizing based on a lower design daily flow for these homes which typically do not have conventional, defined bedrooms and typically have less water use than a traditional home. By providing the definition of a tiny home and recreational vehicle, the local health department will be able to allow alternative sizing flows for these residences.

Cost savings: Cost savings for onsite sewage systems for tiny homes could be substantial depending upon the number of sleeping spots in the home. An estimated 0.5% of permits could be issued for tiny homes with an estimated savings of \$2000 per system.

Benefit: Allows the owner flexibility in the sizing of the onsite sewage system if they choose to construct a tiny home or a recreational vehicle and install a system designed to meet their needs.

15. Protection of the soil absorption field site

Discussion: A negative fiscal impact was previously discussed for this rule change; however, while there is a small upfront cost, this action could save the homeowner a lot of money in the long run. In the time between the soil evaluation and the system installation, there are many times when there could be disturbance to the soil absorption field area, especially with new construction. If there is

disturbance during that time, the soil must be re-evaluated and the system design altered (if possible) to overcome the extent of the disturbance. Extensive disturbance may cause the site to be unsuitable for use, in which case, another area would have to be evaluated, and the system redesigned in the new area. If an alternative area cannot be identified, the local health department would have to deny the site for a construction permit.

Cost savings: This is estimated to potentially provide security to 2% of system sites that could be affected. An estimated \$250 per site is considered to be the least in the cost savings, as that is the low end cost of an onsite soil evaluation. Having to find a different site and redesigning the system, or potentially having an unsuitable site, could be exponentially more costly and this requirement could prevent the necessity of the higher cost.

Benefit: This would serve to protect the system site from disturbance and to prevent the owner from having to spend additional money after a site has already been approved. It provides a visual cue that the site should be off limits to anyone other than the installer.

16. Abandonment allowance of removed materials to be used as fill

Discussion: Currently the rule requires that materials removed from an abandoned soil absorption field to be taken to a licensed landfill. Transport and dumping at a licensed landfill, if there is one locally that will accept the material, is very expensive. If this material is allowed to fully dry out prior to removal and transport, there should be no health hazard for using the dried material (stone, sand, and/or soil) as fill material. As it would be covered up, any pathogens remaining would be covered and eventually die off.

Cost savings: It takes multiple triaxle loads to haul this material from the site, and the cost of transport could be as high as \$250 a load. At an estimated 5 loads, that could be as much as \$1,250 in transportation fees and the cost of dumping at the landfill could be another \$500.

Benefit: The benefit to this is simply the reduction in cost of abandoning a soil absorption field that needs to be removed from the ground. It could also benefit the owner if there is an area that needs filled in on the site.

17. Rule Revisions that could lessen the cost of an on-site sewage system for homeowners but cannot necessarily be quantified monetarily.

- a. Consistency among local health departments throughout the state will benefit all installers. They will know what is required of them regardless of the county they work in.
- b. Having required inspections for use of best judgment and connection/reconnect to an existing soil absorption field can lessen the cost of future repairs or replacements by catching issues early and by proactively maintaining the system. It will also prevent system failures and associated health hazards. Sometimes in the case of an inspection for a system failure where best judgment is needed, a thorough inspection may reveal an issue that can be corrected and thereby eliminate the need for a replacement system resulting in greatly reduced costs.
- c. Having the option for operating permits for any system type is likened to preventive maintenance. Small problems that could become large and/or lead to system failure will likely be identified before they become a big issue requiring expensive repairs or replacements of systems. In many instances without operating permits being required, homeowners forget about their system or put off needed maintenance until the system is beyond repair and the system is likely creating a health hazard.

- 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.

VII. Sources of Information

a. Independent Verifications or Studies

	1 Year	2 Years
Connection to Sewer	\$61,574	\$123,148
Onsite Sewage System		
Totals Costs	\$479,138	\$958,276
Total Savings	\$156,470	\$312,940
Overall Fiscal Impact	\$322,668	\$645,336

A survey of 94 local health departments was conducted as outlined above. This survey included total number of onsite sewage system construction permits in each jurisdiction in 2023 and 2024. It also included, for both years, the number of new and repair/replacement permits issued, the number of permits for different types of soil absorption field technologies, the number of systems requiring distribution boxes, the number of systems requiring subsurface drainage, the number of permits issued for sewage holding tanks, and the number of soil evaluation reports received with a minimum of 3 soil profile descriptions. The results of this survey were used in the fiscal impact analysis for the rule revision.

Personal conversations were had between IDOH staff and soil scientists, installers, and others in the industry to put together a composite view of the remainder of the fiscal analysis. Costs associated with these changes vary drastically by installer, area of the state, and available suppliers, so typically an estimate on the higher end was chosen for use in this analysis.

b. Sources Relied Upon in Determining and Calculating Costs and Benefits

There were no other sources relied upon in determining and calculating costs and benefits.

VIII. Regulatory Analysis

Connection to sewer or installation of an onsite sewage system are options allowed by this rule. Considering that only one or the other cost will be incurred, estimates of costs have been determined for both options, but a homeowner will only need to incur one or other of the costs, not both. The estimated costs for connection to sewer and an onsite sewage system cannot be combined to evaluate overall fiscal impact. The estimates for both options are below.

There are many variables in both estimates, and in some cases the expenses on any one site could vary significantly. With the estimates for an onsite sewage system, the accumulated overall costs includes all requirements, and in most instances, all costs would not apply to any one system. It is unlikely that all costs would be incurred on any one site very infrequently. Therefore, it is extremely hard to predict overall costs, but if anything, these estimates err on the high side.

While costs are a substantive concern, the most valuable benefit of this rule revision will be realized in better onsite sewage systems, increased longevity, better system maintenance, protection of investments, and less public health hazards created from failing onsite sewage systems. IDOH feels that the benefits associated with these revisions will greatly outweigh the monetary costs of implementation.

The second biggest benefit from these rule revisions will be realized in the consistency of regulation throughout the state. Inconsistency of regulations has been a concern for installers and legislators for many years. The Technical Review Panel and Indiana legislators have strongly encouraged IDOH to pursue this revision with a vision to protect homeowners, clarify consistent requirements, and offer options to homeowners, and IDOH feels that these rule revisions will fulfill that goal.

The proposed revisions will also fulfill the recent requirements of state statutes that mandate revision of the rule to keep current with standards and best practices of the industry as well as to incorporate more options for system owners and for difficult sites.

IX. Contact Information of Staff to Answer Substantive Questions

Michael Mettler, REHS, Director
Environmental Public Health Division
Indiana Department of Health
2 North Meridian Street, 7D
Indianapolis, Indiana 46204
(317) 233-7183
mmettler@health.in.gov

and

Alice Quinn, Manager
Residential On-site Sewage Systems Program
Indiana Department of Health
2 North Meridian Street, 7D
Indianapolis, IN 46204
(317) 518-4388
alquinn@health.in.gov

Additional Information for OMB and SBA Review

X. Redline Draft of Proposed Rules

Please provide a link or attachment to the proposed rule that includes a redline of the changes made by the proposed rule from existing regulations, or an alternative form of identifying changes approved in advance by OMB. This draft can include annotations with other sources of requirements as discussed in Section IV above.

XI. Resubmission Information (if applicable)

Not applicable at this time.