Notice to all Property Owners who are replacing their onsite sewage system

When private onsite sewage systems must be replaced, a number of routine questions are generally asked. If you have been ordered to replace your system by the Department, some of the timing and coordination of issues can be even more important. We hope this document will address some of those concerns.

How long does it take to obtain a construction permit and install an onsite sewage system?
There are a number of steps in the process, involving several different parties/entities. Most of the steps in the process are the responsibility of the property owner to complete. These steps include:

- contacting and hiring a soil scientist to complete the soil test;
- submitting all required paperwork to the Department of Health, including:
  - legal description;
  - floor plans of the house;
  - copy of the soil report;
  - application for the onsite sewage system construction permit (to install the system);
  - application for the onsite sewage system operating permit (for maintenance and inspection of the system after installation);
  - payment for the appropriate fees;
  - signed notice regarding 2001 recessional moraine soil testing protocol.
- contacting and hiring an onsite designer; and
- contacting and hiring a certified installer

It is highly recommended that you engage in these above steps as early in the process as possible. Delaying steps in the process, no matter what your reason for replacement, could result in missing out on the narrow window for system construction that occurs during the drier summer months. If you have been issued an order to replace your system, waiting to begin the process usually results in problems in meeting deadlines and may require further legal action, including an order to vacate your home.

When the system design has been submitted, it will be reviewed and information will be provided back to the submitter. The Department of Health (DOH) attempts to review plans within a 10-day timeframe upon receipt if at all possible. The more complete the information is when it is submitted, the easier and quicker it will be for review, response and approval.

Further, the soil scientist, engineer and onsite system installer must all find time to fit the project into their schedule for all the required site visits. The busiest time of the year for this industry is during the dry summer months. Waiting until the middle of summer to begin contacting these individuals may result in being further out on their schedules, which will delay your installation process and possibly cause you to miss your installation deadlines.

Once the onsite sewage system construction permit has been issued by the DOH, it is valid for one year. Installers tend to prioritize based on which home has the permit that will expire the soonest, but also which sites are dry enough to begin construction. The dense clay soils of Allen County typically are not suitable for construction until mid-June. The fall rain showers of mid-October usually bring an end to the construction season. Therefore, the construction window is small and completely weather-dependent.

As you can see, there are many steps in the construction permit phase, and the window for installation is short. PLEASE CONSIDER STARTING THE ENTIRE PROCESS NOW! If you are under an order, delaying any step in the process may lead to further orders, including orders to vacate the property per state law. While we will make every effort to guide you through the process, ultimately it is your responsibility to ensure this task is completed. For obvious public health reasons, all homes with failed systems that have failed to comply within the time limit will be required to uncover the outlet of the septic tank, seal it, and begin pump and haul of waste until the new system can be completed. Acting early can avoid this process.

Water Conservation Tips

Until you can get your new system installed, you may be required to pump and haul your septic tank at some point. Below are some tips to reduce your amount of water usage, which will reduce the frequency with which you must have your septic tank pumped:

1. Use a laundromat to wash clothes. Washing machines generate a lot of wastewater and can fill a holding tank up quickly, especially in a growing family. You may notice some incidental time saving in this process by completing 4-5 loads at once – a chore that would take all day at home.
2. Disconnect any downspouts, floor drains, foundation drains, sump pumps or other sources of "clear" water from the septic tank. Please be aware that "grey" water (washing machines, sinks, showers, slop sinks) is considered wastewater and, along with "black" water (toilets), must drain to the septic tank for proper treatment and disposal.
3. Ensure that your septic tank has a water-tight lid, and is not allowing surface water to drain into the top of the tank.
4. Fix all leaking plumbing fixtures. A faucet with a slow drip may waste 36 gallons per day. A faucet with a heavy drip may waste 180 gallons per day. If the backflush valve of the water softener is stuck open or leaks, several hundred gallons per day may be wasted. A leaky toilet may waste over 100 gallons per day. Leak tests can be performed on toilets and water treatment devices to determine if there is a problem.
5. Retrofit your plumbing with water conservation devices. Examples include: low flow toilets, low flow shower heads and aerators on sinks.
6. Ultra-conscientious people may shut off the water during a shower, only turn it on to get wet, and then rinse off. Shutting off the sink while brushing your teeth helps also.
7. Some property owners are beginning to install water meters to monitor their own water usage.

Protecting Your Investment

The general understanding is that the atmosphere within a septic tank is potentially very hazardous to human health. It can also be very corrosive to the concrete structure of a septic tank and distribution box. The gases and bacteria work together to create a condition referred to as Microbial Induced Corrosion ('MIC'), which, over time, can lead to softening, thinning and ultimately failure of the concrete walls in septic tanks and distribution boxes. This occurs at some sites in a relatively short time span. We have been studying the issue, but do not have enough information to be able to predict which sites are more susceptible to this corrosion; therefore, we recommend all sites be protected.

The standard practice for concrete septic tank manufacturers to combat this issue has been to apply a coating on the surface of the concrete above the water line in the tank (sidewalls and ceiling), which helps reduce this condition but may not eliminate it. Some property owners and installers have requested their onsite designer to specify plastic septic tanks in the design as an alternative to concrete tanks.

Another option is for the concrete tank manufacturer (at the request of the property owner/installer/designer) to insert an admixture into the concrete when the tank is being mixed and poured. This admixture prevents corrosion from occurring, thereby maintaining the structural integrity and thus increasing the lifespan of the septic tank and distribution box. This admixture has been available for 20 years and has been used by sewer utilities for new concrete structures. There is some additional cost to add this product into the tank mix. It is not currently required by state code; however, the admixture is recommended as a best management practice because the relatively small upfront cost to include the admixture will outweigh the future cost to completely replace a corroded tank. ***If you have further questions regarding adding this mixture into your new tank, contact your local septic tank manufacturer, installer, or onsite designer. If you decide to install a tank with this admixture, please be sure to notify this Department so that we can note this in our inspection records regarding your new tanks and d-box.***

Environmental Services Division • Pollution Control Program
200 E. Berry Street, Suite 360 • Fort Wayne, IN 46802
Phone: (260) 449-7530 • Fax: (260) 449-3010 • www.allencountyhealth.com

On-Site Sewage System Permit Packet (new, replacement, alteration or repair)

The forms below make up the On-Site Sewage System Permit Packet. You will find each referenced form herein, and individual forms can also be found at: https://allencountyhealth.com/licensing/applications-forms. These documents also are available at the address above.

1. ____ *Residential (or Commercial, if applicable) Septic Construction Permit Application*
2. ____ *How to Obtain a Permit (Instructions)*
3. ____ *Allen County Onsite Wastewater Management District Operating Permit Application*
4. ____ *List of Onsite Sewage System Designers*
5. ____ *List of Certified Installers and Evaluators*
6. ____ *List of Soil Consultants*
7. ____ *Recessional Moraine Soil Notice*
8. ____ *IDOH Soil Moraine Protocol Letter*
9. ____ *Notice of Onsite Sewage System/Bedroom Affidavit*

ALLEN COUNTY DEPARTMENT OF HEALTH
APPLICATION FOR CONSTRUCTION PERMIT
FOR ON-SITE SEWAGE SYSTEM
(RESIDENTIAL)

Receipt: _____
Date: _____
Amount: _____
Initials: _____

OFFICE USE ONLY: (INSTALLER): _____

****

APPLICANT NAME: _____ PHONE: _____ EMAIL: _____

MAILING ADDRESS: _____ CITY: _____ STATE: ____ ZIP CODE: _____

PROPERTY OWNER NAME: _____ PHONE: _____ EMAIL: _____

PRESENT ADDRESS: _____ CITY: _____ STATE: ____ ZIP CODE: _____

I hereby request a permit to construct an On-Site Sewage System at the following location:

NUMBERED ADDRESS OF SITE: _____ CITY: _____

STATE: ____ ZIP CODE: _____ LOT NUMBER: _____ SUBDIVISION NAME: _____

SECTION NUMBER: _____ TOWNSHIP NAME: _____

****

PLEASE PLACE YOUR INITIALS ON EACH LINE BELOW AFTER READING THE SENTENCE (*REQUIRED*).

____ I hereby certify that facilities at the above location will be installed in compliance with 410 IAC 6-8.3 and Allen County Code Title 10–4.5, and as outlined in this application.

____ I hereby certify that to the best of my knowledge all information contained in this application is correct (including information referenced below regarding number of bedrooms and house components and locations).

____ I understand it will be necessary for a representative of the Allen County Department of Health to visit my property during normal business hours (as authorized by State Code) to inspect the construction of my system and I consent to these inspections.

____ I understand it will be necessary for a representative of the Allen County Department of Health to conduct a walk-thru of any existing and new structures on my property to verify if plumbing is/is not present and to verify the number of bedrooms. I consent to these inspections and will allow them once provided with the Department's request to do so.

____ I further understand that this permit will expire in one year from the date of issue if the system has not been substantially completed by that time. I understand I must then reapply and pay for a new permit at that time.

PROPERTY OWNER SIGNATURE: _____

(REQUIRED, indicating full agreement with above statements as initialed)

When installation has been inspected/approved, an Operational Permit will be issued from the Allen County On-Site Wastewater Management District, if applicable.

****

CHECK ONE:

☐ NEW INSTALL ☐ REPLACEMENT ☐ ALTERATION ☐ REPAIR ☐ EXISTING COMPONENT
☐ MAJOR REVISION ☐ PRIVY

IF AN ALTERATION, REPAIR OR MAJOR REVISION, WHAT IS PROPOSED: _____

IF THE PROPOSED SYSTEM HAS A SOIL ABSORPTION FIELD, WILL THE SYSTEM HAVE PRETREATMENT: ☐ YES ☐ NO

IF YES, WHAT TYPE PRETREATMENT: _____

TYPE OF SYSTEM PROPOSED:

☐ AT GRADE ☐ DRIP IRRIGATION ☐ ELEVATED SAND MOUND ☐ ELJEN/GRAVITY
☐ ELJEN/PUMP ☐ ENVIROSEPTIC/PRESBY/GRAVITY ☐ ENVIROSEPTIC/PRESBY/PUMP ☐ FLOOD DOSE TRENCH
☐ GRAVITY TRENCH ☐ INFILTRATOR ATL/GRAVITY ☐ INFILTRATOR ATL/PUMP ☐ PERMITTED DISCHARGE*
☐ PRESSURED TRENCHES ☐ VAULT PRIVY ☐ PERMANENT HOLDING TANK ☐ OTHER: _____

* *All permitted discharge systems have pretreatment included.*

****

NUMBER OF BEDROOMS (*CURRENT/PROPOSED*): _____ LOT SIZE (*ACRES*): _____

BASEMENT: ☐ YES ☐ NO ARE THERE ANY BATHROOMS IN THE BASEMENT? ☐ YES ☐ NO SUMP PUMP: ☐ YES ☐ NO

WHERE DOES BASEMENT FLOOR DRAIN DISCHARGE? _____

IS THE SUMP PUMP TIED IN TO THE SEWER PLUMBING LINE? ☐ YES ☐ NO ☐ N/A

IF IN THE BASEMENT, WHERE DOES THE SINK AND LAUNDRY WASTE DRAINAGE DISCHARGE? _____

IS THE WATER SOFTENER BACKFLUSH TIED IN TO THE SEWER PLUMBING LINE? ☐ YES ☐ NO ☐ N/A

BASEMENT/LOWER LEVEL PLUMBING FIXTURES DRAIN TO SEPTIC TANK: ☐ VIA GRAVITY ☐ VIA SEWAGE EJECTOR PIT ☐ N/A

HOW MANY SEWER LINES ARE/WILL BE EXITING THE HOUSE? _____

DOES THE HOUSE HAVE JETTED TUBS (>125 GALLONS)? ☐ YES ☐ NO

WHERE DOES EFFLUENT FROM THE EXISTING SEPTIC TANK DISCHARGE? _____

WHERE DO DOWNSPOUTS DISCHARGE? _____

IS A CISTERN IN USE ON THE PROPERTY? ☐ YES ☐ NO IF YES, WHERE DOES THE CISTERN OVERFLOW DRAIN TO? _____

ARE THERE CURRENTLY ANY SANITARY VAULT PRIVIES OR OUTHOUSES ON THE PROPERTY? ☐ YES ☐ NO

IF YES, WILL IT/THEY: ☐ BE PROPERLY ABANDONED (PUMPED/FILLED IN) ☐ REMAIN IN USE

☐ CONVERTED TO A FLUSH TOILET & CONNECTED TO NEW SYSTEM ☐ OTHER: _____

ARE THERE ANY OTHER STRUCTURES ON THE PROPERTY WITH PLUMBING (*INCLUDING A SLOP SINK*)? ☐ YES ☐ NO

IF YES, WHICH STRUCTURES HAVE PLUMBING? _____

ARE THERE FUTURE PLANS TO BUILD ANY STRUCTURES ON THE PROPERTY WITH PLUMBING/BEDROOMS? ☐ YES ☐ NO

IF YES, WHAT WILL THE STRUCTURES BE? _____

ARE THERE ANY BUSINESSES ON THE PROPERTY THAT WOULD GENERATE WASTEWATER? ☐ YES ☐ NO

IF YES: ☐ CHILD CARE ☐ COOKING ☐ CLOTHES WASHING ☐ HAIR SALON ☐ PET GROOMING/KENNEL

****

SUBMIT LOT LAYOUT OF RESIDENCE. Show location of septic tank, dosing tank absorption field (or other secondary system), all pipes connecting the various parts of the system, well(s) drains, drainage ditches, driveways, roads, property lines, out-buildings and rough floor plan of house. All of the above-mentioned items should be sufficiently labeled and dimensioned. Layout must be drawn to scale and scale shown. **A LEGAL DESCRIPTION IS ALSO NECESSARY.**

Permit Fee Schedule

Payable to - Allen County Department of Health:
200 E. Berry St., Suite 360 Fort Wayne, IN 46802

Permit Type	Fee
Septic Construction Permit (**New or Replacement**) (Must obtain prior to the commencement of any excavation, construction, modification or addition to any existing or new private sewage disposal system.)	$300.00
Septic Construction Permit (**Alteration, Repair, Major Revision, Permanent Holding Tank, or Sanitary Privy**) (Must obtain prior to the commencement of any alteration, repair, modification, or addition to any existing private sewage disposal system that does not involve the replacement or modification of the soil absorption field, or permitted discharge system.)	$175.00
Septic Construction Permit (**Existing Component**) (Must obtain prior to the commencement of any excavation to any existing private sewage disposal system.)	$100.00

NOTE: ***Payments made by check that result in non-sufficient funds will result in the requirement for immediate payment to the Allen County Department of Health (plus an additional NSF check fee) via cash, money order or certified check within 5 business days. If payment is not received within 5 business days of notification, the application process will be on hold until fees are paid in full.***

COLLECTIONS NOTICE: ***Any and all charges for services and permits are your sole responsibility and are to be paid in full upon application. In the event any legal proceeding must be instituted to recover the amount due, the Allen County Department of Health shall be entitled to recover the cost of the collections, including reasonable attorney fees.***

ALLEN COUNTY DEPARTMENT OF HEALTH
APPLICATION FOR CONSTRUCTION PERMIT
FOR ON-SITE SEWAGE SYSTEM

Receipt: _____
Date: _____
Amount: _____
Initials: _____

OFFICE USE ONLY: (INSTALLER): _____

COMMERCIAL ESTABLISHMENTS & INSTITUTIONS
(This form is to be used for all installations except for a 1 and 2 family residence.)

APPLICANT NAME: _____ PHONE: _____ EMAIL: _____

MAILING ADDRESS: _____ CITY: _____ STATE: ____ ZIP CODE: _____

PROPERTY OWNER NAME: _____ PHONE: _____ EMAIL: _____

PRESENT ADDRESS: _____ CITY: _____ STATE: ____ ZIP CODE: _____

I hereby request a permit to construct an On-Site Sewage System at the following location:

NUMBERED ADDRESS OF SITE: _____ CITY: _____

STATE: ____ ZIP CODE: _____ LOT NUMBER: _____ SUBDIVISION NAME: _____

SECTION NUMBER: _____ TOWNSHIP NAME: _____

****

PLEASE PLACE YOUR INITIALS ON EACH LINE BELOW AFTER READING THE SENTENCE (*REQUIRED*).

_____ I hereby certify that facilities at the above location will be installed in compliance with 410 IAC 6-10.1 and Allen County Code Title 10-4.5, and as outlined in this application.

_____ I hereby certify that to the best of my knowledge all information contained in this application is correct (including information referenced below regarding the structures with plumbing).

_____ I understand it will be necessary for a representative of the Allen County Department of Health to visit my property during normal business hours (as authorized by State Code) to inspect the construction of my system and I consent to these inspections.

_____ I understand it will be necessary for a representative of the Allen County Department of Health to conduct a walk-thru of any existing and new structures on my property to verify if plumbing is/is not present. I consent to these inspections and will allow them once provided with the Department's request to do so.

_____ I further understand that this permit will expire in one year from the date of issue if the system has not been substantially completed by that time. I understand I must then reapply and pay for a new permit at that time.

PROPERTY OWNER SIGNATURE (*REQUIRED, indicating full agreement with above statements as initialed*): _____

When installation has been inspected and approved, an Operational Permit will be issued from the Allen County On-Site Wastewater Management District, if applicable.

****

CHECK ONE: ☐ NEW INSTALL ☐ REPLACEMENT ☐ ALTERATION ☐ REPAIR ☐ EXISTING COMPONENT
☐ MAJOR REVISION ☐ PRIVY

IF AN ALTERATION, REPAIR OR MAJOR REVISION, WHAT IS PROPOSED: _____

_____

WILL THE SYSTEM HAVE PRETREATMENT: ☐ YES ☐ NO IF YES, WHAT TYPE PRETREATMENT: _____

TYPE OF SYSTEM PROPOSED:

☐ AT GRADE ☐ DRIP IRRIGATION ☐ ELEVATED SAND MOUND ☐ ELJEN/GRAVITY
☐ ELJEN/PUMP ☐ ENVIROSEPTIC/PRESBY/GRAVITY ☐ ENVIROSEPTIC/PRESBY/PUMP ☐ FLOOD DOSE TRENCH
☐ GRAVITY TRENCH ☐ INFILTRATOR ATL/GRAVITY ☐ INFILTRATOR ATL/PUMP ☐ PRESSURED TRENCHES
☐ PERMANENT HOLDING TANK ☐ VAULT PRIVY ☐ OTHER: _____

****

TYPE OF ESTABLISHMENT: _____

LOT SIZE (*ACRES*): _____ DISTANCE TO NEAREST CITY SEWER: _____ NEAREST CITY WATER: _____

ESTIMATED MAX. NO. OF GALLONS OF WASTES TO PASS THRU SYSTEM PER DAY: _____ (*Provide documentation.*)

WATER SUPPLY (*CHECK ONE*): ☐ PRIVATE WELL ☐ PUBLIC WATER SUPPLY

ARE THERE ANY RESTROOMS IN THE BASEMENT? ☐ YES ☐ NO

WHERE DOES BASEMENT FLOOR DRAIN DISCHARGE? _____

IS THE EXISTING WATER SOFTENER BACKFLUSH TIED IN TO THE SEWER PLUMBING LINE? ☐ YES ☐ NO ☐ N/A

BASEMENT/LOWER LEVEL PLUMBING FIXTURES DRAIN TO SEPTIC TANK: ☐ VIA GRAVITY ☐ VIA SEWAGE EJECTOR PIT

ARE THERE CURRENTLY ANY SANITARY VAULT PRIVIES OR OUTHOUSES ON THE PROPERTY? ☐ YES ☐ NO

IF YES, WILL IT/THEY: ☐ BE PROPERLY ABANDONED (PUMPED/FILLED IN) ☐ REMAIN IN USE

☐ CONVERTED TO A FLUSH TOILET & CONNECTED TO NEW SYSTEM ☐ OTHER: _____

ARE THERE ANY OTHER STRUCTURES ON THE PROPERTY WITH PLUMBING (*INCLUDING A SLOP SINK*)? ☐ YES ☐ NO

IF YES, WHICH STRUCTURES HAVE PLUMBING? _____

ARE THERE FUTURE PLANS TO BUILD ANY STRUCTURES ON THE PROPERTY WITH PLUMBING? ☐ YES ☐ NO

IF YES, WHAT WILL THE STRUCTURES BE? _____

IS A CISTERN IN USE ON THE PROPERTY? ☐ YES ☐ NO IF YES, WHERE DOES THE CISTERN OVERFLOW DRAIN TO? _____

****

SUBMIT LOT LAYOUT OF PROPERTY. Show location of septic tank, dosing tank absorption field (or other secondary system), well, well pump, tile lines, sewers, drains, drainage ditches, plumbing, driveways, roads, property lines, and rough floor plan of establishment with sufficient label and dimensions to identify and locate all items. Layout must be drawn to scale and scale shown. **A LEGAL DESCRIPTION IS ALSO NECESSARY.**

Permit Fee Schedule

Payable to - Allen County Department of Health:
200 E. Berry St., Suite 360 Fort Wayne, IN 46802

Permit Type	Fee
Septic Construction Permit (**New or Replacement**) (Must obtain prior to the commencement of any excavation, construction, modification or addition to any existing or new private sewage disposal system.)	$300.00
Septic Construction Permit (**Alteration, Repair, Major Revision, Permanent Holding Tank, or Sanitary Privy**) (Must obtain prior to the commencement of any alteration, repair, modification, or addition to any existing private sewage disposal system that does not involve the replacement or modification of the soil absorption field, or permitted discharge system.)	$175.00
Septic Construction Permit (**Existing Component**) (Must obtain prior to the commencement of any excavation to any existing private sewage disposal system.)	$100.00

***NOTE:** Payments made by check that result in non-sufficient funds will result in the requirement for immediate payment to the Allen County Department of Health (plus an additional NSF check fee) via cash, money order or certified check within 5 business days. If payment is not received within 5 business days of notification, the application process will be on hold until fees are paid in full.*

***COLLECTIONS NOTICE:** Any and all charges for services and permits are your sole responsibility and are to be paid in full upon application. In the event any legal proceeding must be instituted to recover the amount due, the Allen County Department of Health shall be entitled to recover the cost of the collections, including reasonable attorney fees.*

Allen County Department of Health

How to Obtain a Permit to Install a Private Sewage Disposal System

1. Hire a soil scientist. (You may want to consult an On-Site Sewage System Designer or a Certified Installer before hiring a Soil Scientist.)
2. Hire an On-Site Sewage System Designer.
3. Hire an Allen County-Certified Installer.
4. Fill out an application for a Construction and Operation Permit for Private Sewage Disposal System. The following must be submitted to complete the application:
    a. Soils report from Registered Soil Scientist
    b. Floor plans of home. (Including basement & any closets)
    c. Legal Description and/or survey (including flood zone notation)
    d. Plot plan prepared by an Onsite Sewage System Designer, showing the proposed site; on-site sewage system with respect to property lines; existing and proposed structures; roads and water supply; and, perimeter drain outfall location. Plot plan also should show site topography with contours established at 1-foot intervals and show the location of a benchmark.
    e. If necessary, recorded easements
    f. ALL property owners must **sign** and return the enclosed notice stating they have been made aware of the Indiana Department of Health's recommended protocol for soil testing (August 2001)
    g. Fees (*made payable to the Allen County Department of Health*):
        i. $300 Permit application, plan review, and inspection fee;
        ii. $150 ACOWMD fee (if applicable, dependent on system type)

NOTE: THE FOLLOWING RULES MUST BE FOLLOWED

- Special caution shall be taken to prevent wheeled and tracked vehicles from compacting the area selected for placement of the absorption system before, during and after construction of the system, especially during wet weather. Precaution is especially important where clayey soils are involved. This includes those soils classified as sandy loam, silt loam, loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. Alteration of soil structure by movement of vehicles may be grounds for rejection of the site and/or the system.

- Subsurface soil absorption systems shall not be constructed in clayey soils during periods of wet weather when the soil is sufficiently wet at the depth of installation to exceed its plastic limit. This includes those soils classified as sandy loam, silt loam, loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. For the purpose of this rule, the plastic limit of a soil shall be considered to have been exceeded when the soil can be rolled between the palms of the hands to produce threads one eighth (1/8) inch in diameter without breaking apart and crumbling.

Allen County
Onsite Wastewater Management District

Operating Permit Application

- Please complete all information below -

Receipt #	
Date	
Amt Pd	
Ini	File #
OSS Permit #	

Name: _____ Phone: _____ Email: _____

Mailing Address: _____ City: _____ State: _____ ZIP: _____

Site Address: _____

*Date Tank Was Last Pumped: _____ *Name of Company That Pumped It: _____

(*This applies if your system exists at the time of application vs. new construction. We are not asking you to pump the tank at this time – we are only inquiring about latest pumping information if applicable. You will be notified after any inspection if the tank needs to be pumped.)

Other Information Regarding System Operation: _____

Permit Fee Schedule
Pre-Treatment - $100 (annually)
Permitted Discharge - $150 (annually)
Payable to: Allen County Wastewater Management District
200 E. Berry St., Suite 360
Fort Wayne, IN 46802

Application Fee Enclosed: _____ Check Number: _____

***NOTE:** Payments made by check that result in non-sufficient funds will result in the requirement for immediate payment to the Allen County Department of Health (plus an additional NSF check fee) via cash, money order or certified check within 24 business hours. If payment is not received within 24 business hours of notification, the application process will be on hold until fees are paid in full.*

***COLLECTIONS NOTICE:** Any and all charges for services and permits are your sole responsibility and are to be paid in full upon application. In the event any legal proceeding must be instituted to recover the amount due, the Allen County Department of Health shall be entitled to recover the cost of the collections, including reasonable attorney fees.*

To be read and signed by the Applicant:

By signing below, I am indicating that I have enclosed the above fee and am requesting the issuance of the Operating Permit for the onsite sewage treatment system for the above address (once construction is complete). I understand that when this operating permit expires (as they are issued for a period of 1 year and are required by law for all permitted discharge systems and systems with pre-treatment), I will need to renew my operating permit and pay the applicable permit fees at that time, and I understand there are penalties for non-compliance in this regard. All information provided on this form is accurate to the best of my knowledge. *I understand that a contract is required with a service provider for the life of the system and if there are changes to my service provider or contract, I will notify the Allen County Onsite Wastewater Management District at the time of the change (at 260-449-4181).*

Per Allen County Ordinance, I understand it is necessary for my system to be inspected to ensure the continued maintenance and functionality of the system every year.

Signature of Homeowner: _____ Date: _____

I would like to be present during the inspection (9a-3p): ☐ Yes ☐ No Please contact me at: _____ to set a time/date.
I have a fence with a locked gate around the area where the onsite system is located: ☐ Yes ☐ No

Environmental Services Division • Pollution Control Program
200 E. Berry Street, Suite 360 • Fort Wayne, IN 46802

Phone: (260) 449-7530 • Fax: (260) 449-3010 • www.allencountyhealth.com

Onsite Sewage System Designers

The following list of Onsite Sewage System Designers is provided as a convenience. This does not constitute an endorsement of any of the listed designers. The Allen County Department of Health requires that onsite sewage system plans be stamped by a professional engineer.

Civil Engineering Services
Richard Slayback, P.E.
8121 Union Chapel Rd.
Fort Wayne, IN 46845
p (260) 627-2791
c (260) 437-0870
raslayback@aol.com

DLZ Indiana
Mike Trevino
825 S. Barr St.
Fort Wayne, IN 46802
p (260) 420-3114
f (260) 420-0240

Embury Engineering
Duane Embury, P.E. & L.S.
7810 Morning Gate Ct.
Fort Wayne, IN 46804
p (260) 432-9045
c (260) 740-6531

Engineering Resource, Inc.
11020 Diebold Rd.
Fort Wayne, IN 46825-2347
p (260) 490-1025
f (260) 490-1026

Lougheed & Associates
Kevin McDermit, P.E.
1017 S. Hadley Rd.
Fort Wayne, IN 46804
p (260) 432-3665
f (260) 436-0224
krmcdermit@comcast.net

Maxwell Surveying & Engineering
Steve Maxwell, P.E. & P.L.S.
P.O. Box 5068
Huntington, IN 46750-5068
p (260) 224-6813
smaxwell@maxsurv.net

OneWater, Inc
201 N. Illinois St., Ste 1200
Indianapolis, IN 46204
p (866) 925-4239 or (317) 925-4239
f (317) 829-5902

Wightman
Darrin Good, P.E.
6415 Mutual Dr
Fort Wayne, IN 46825
p (260) 687-2542
c (260) 348-8146
dgood@gowightman.com

Allen County Department of Health
Certified Onsite Sewage System Professionals

Company Name	Cert #	Contact	City	Zip Code	Phone	Phone 2	Fax	System/Component Certifications									Categories		
								Gravity & Flood Dosed	Sand Mound, Pressure Trench	Permitted Discharge	Presby	Eljen	Infiltrator ATL	AeroTech	Norweco		Installer	Service Provider	Certified Evaluator
Amstutz Excavating	#0033	**Brian J Amstutz**	Grabill	46741	(260) 657-5971	(260) 466-9454	(260) 657-5971	X	X		X	X	X				X		
Ben Kauser Excavating, LLC	#0127	**Ben Kauser**	Antwerp, OH	45813	(419) 769-9969			X	X		X						X		
Bolinger Contracting, LLC	#0030	**Andrew Bolinger**	Bluffton	46714	(260) 615-8514		(260) 846-2324	X	X	X	X	X	X				X	X	X
LA Brown	#0077	**Andrew McAfee**	Bluffton	46714	(260) 824-5754		(260) 824-5754	X			X	X					X		
Classic Construction	#0113	**Heidi Hitchcock**	Hicksville	43526	(419) 551-2676	(419) 786-9134		X	X		X	X	X						
DeWald Excavating	#0004	**Kevin DeWald**	Fort Wayne	46818	(260) 489-3833	(260) 410-2068	(260) 497-7818	X	X		X	X	X				X		
Doctor Excavating	#0124	**Jason Doctor**	Columbia City	46725	(260) 366-7363			X	X		X						X		
Dozer Werks, LLC	#0027	**Adam Scheiderer**	Woodburn	46797	(260) 410-8809		(260) 748-6856	X	X		X	X	X				X	X	X
Earth Pros, Inc.	#0018	**Dave Gross**	LaOtto	46763	(260) 437-8111			X	X		X	X	X				X		
Extreme Services	#0128	**Tim Peters**	Fort Wayne	46818	(260) 625-5426			X	X	X	X		X				X		X
Fischer Plumbing & Heating, Inc.	#0123	**Jason Buettner**	Delphos, OH	45833	(419) 692-8901			X	X	X					X		X		
Global Construction Service	#0122	**Michael Simmons**	Columbia City	46725	(260) 667-3350	(260) 503-4205		X	X								X		
Graber Excavating, Inc.	#0007	**Mel Graber**	Grabill	46741	(260) 627-2991	(260) 410-5854	(260) 627-2241	X	X		X	X	X				X		
Hess Brothers Co, Inc	#0078	**Michael Hess**	Churubusco	46723	(260) 385-2264			X	X		X	X	X				X		
Integrity Services, LLC	#0111	**Mark Graber**	Spencerville	46788	(260) 438-6926			X	X	X	X		X				X	X	X
J & L Excavating, LLC	#0062	**Jim Grose**	Decatur	46733	(260) 724-4044			X	X		X						X		
J & S Liquid Waste Svc, Inc.	#0131	**Daniel Kleber**	Fort Wayne	46818	(260) 489-6021		(260) 490-0003	X	X	X	X	X	X				X	X	X
Junior's Land & Sewer Management, LLC		**Charles Fear**	Hartford City	47348	(765) 393-5498			X	X		X		X				X		
Krafft Water Solutions, LLC	#0100	**Benjamin Krafft**	St. Joe	46785	(260) 573-6593			X	X		X	X	X				X		
Lee Excavating, Inc.	#0008	**Lee E. Smith**	Butler	46721	(260) 341-8745			X	X		X	X	X				X		
Litco Mechanical	#0087	**Michael Little**	Fort Wayne	46825	(260) 438-0770			X	X		X	X	X				X		
M & S Excavating, Inc.	#0042	**Alex Pranger**	Huntertown	46748	(260) 637-1148	(260) 433-4639		X	X	X	X		X				X	X	
Nyu-Edge Concrete, LLC	#0084	**Shannon Kimmel**	Fort Wayne	46835	(260) 705-8493			X	X		X						X		
Perkins Septic & Drain	#0046	**Andy Perkins**	Ashley	46705	(260) 587-3739			X	X	X	X	X	X					X	X
Dan Plummer Trucking & Exc.	#0032	**Daniel G Plummer**	Fort Wayne	46818	(260) 637-6430		(260) 637-6425	X	X	X	X	X	X				X		
RAW Unlimited	#0052	**Robert Winters**	Fort Wayne	46825	(260) 579-0321			X	X			X					X		
Roto-Rooter	#0001	**Jonathon Lipp**	Fort Wayne	46816	(260) 745-9969	(260) 410-5157		X	X	X		X					X	X	X
S & J	#0003	**Jessie Jenkins**	Fort Wayne	46863	(260) 433-6276			X	X	X	X	X					X	X	X
Schmucker Custom Brush Hoggir	#0091	**Alvin Schmucker**	Woodburn	46797	(260) 705-4130		(260) 632-0428	X	X	X	X	X	X				X	X	
Seiler Excavating, Inc.	#0012	**Larry W Seiler**	Auburn	46706	(260) 925-0507	(260) 341-2603	(260) 927-0447	X	X		X	X	X				X		
Shankster Brothers	#0069	**Steve Shankster**	Silver Lake	46982	(260) 693-0202	(260) 750-2185	(260) 352-2902	X	X	X	X	X	X		X		X	X	X
Underground Contractors, Inc.	#0051	**David Schwartz**	New Haven	46774	(260) 493-3037	(260) 205-3029	(260) 493-3102	X	X			X	X				X	X	
UR 1st Service	#0022	**James Graber**	Fort Wayne	46816	(260) 602-1441			X	X		X		X				X		
Warner Excavating	#0042	**Joshua Warner**	Huntertown	46748	(260) 341-5725			X	X	X							X		
Wigent Excavating	#0083	**Jason Porter**	Columbia City	46725	(260) 244-3014	(260)740-1375	(260) 244-5381	X	X		X		X				X		
Wolf Excavating, Inc.	#0034	**Brad Wolf**	Huntington	46750	(260) 359-3477			X	X		X		X				X	X	
Zimmerman Septic Services, Inc.	#0036	**Phil Zimmerman**	Fort Wayne	46808	(260) 451-0565		(260) 451-0883	X	X	X	X	X	X				X	X	X

Environmental Services Division • Pollution Control Program
200 E. Berry Street, Suite 360 • Fort Wayne, IN 46802
Phone: (260) 449-7530 • Fax: (260) 449-3010 • www.allencountyhealth.com

SOIL SCIENCE CONSULTANTS

The following list of soil science consultants is provided as a convenience in obtaining an on-site survey. This does not constitute an endorsement of any listed consultant.

THE SOIL SCIENTIST MUST BE RECOGNIZED BY THE INDIANA STATE DEPARTMENT OF HEALTH. THE CONSULTANTS ON THIS LIST MEET THE STATE REQUIREMENTS AND WORK IN ALLEN COUNTY.

Baker Soil Services
Joe Baker
3152 N 100 W, Decatur IN, 46733
(260) 724-2144
bakersoil@gmail.com

Duane Burrow
52258 Eagle Chase Dr, Granger, IN 46530
(574) 273-3927
ssdp1979-soilscientist@yahoo.com

Jessique Haeft
West Quad, Room 114, Ball State University
Muncie, IN 47306
(805) 459-2603
jessighezzi@gmail.com

HM Environmental Soil Consultants
Larry Huber
4600 W US Hwy 6
PO Box 249
Union Mills, IN 46382
Phone (800) 477-0275; Fax (219) 767-2503
Lhuber51@yahoo.com

Soil Horizons, LLC
Mark McClain
10740 Cheryl Ct, Carmel, IN 46033
(765) 212-7645
Mmcclain1313@gmail.com

IDEM-LICENSED WASTEWATER HAULERS

Company	Name	Address	Telephone
Bennett Sanitation LLC	Joshua Richman	10440 E 640 S, Hudson, 46747	(260) 347-2086
Brewer's Septic Service Inc	Dwight Brewer	6829 N. Blackford Ave., Montpelier, 47359	(765) 728-5574
Bluhm & Reber LLC	Karl Reber	3663 N 600 W, Decatur, 46733	(260) 565-3469
G.I. Johns	Will McLoughlin	3015 New Haven Ave, Fort Wayne, 46803	1-877-GI-JOHNS
Graber Septic Services LLC	Dave Graber	1536 Buckskin Rd, Hicksville, OH, 43526	(260) 479-8201
J & S Liquid Waste Services Inc	Daniel Kleber	4030 Option Pass, Fort Wayne, 46818	(260) 489-6021
King's John Services Inc	Carey King	8721 Droege Rd, Decatur, 46733	(260) 748-0441
North Septic Inc	Morgan Snowball	5321 Kroemer Rd, Fort Wayne, 46818	(260) 438-6828
Oberley Septic Cleaning	David Oberley	21739 Lincoln Hwy East, Monroeville, 46773	(260) 623-2236
Perkins Septic & Drain Service	Jerry Perkins	1351 County Road 2 Ste 100, Ashley, 46705	(260) 587-3739
Pump 19 Services LLC	Norm Lengacher	4340 Bruick Rd, New Haven, 46774	(260) 740-7303
SamWel Hydro Excavation LLC	Tony Sessions	7407 Brush College Rd, Woodburn, 46797	(260) 632-5151
Septic Cleaning LLC	Seth Miller	7934 Garman Rd, Auburn, IN 46706	(260) 705-5679
Shankster Brothers	Steven Shankster	501 S Jefferson St., Silver Lake, 46982	(260) 982-7111
Stockert Septic LLC	Kristi Stockert	1587 County Road 56, Garrett, 46738	(260) 357-3053
Three Sons Sanitation	Steven Warnick	6432 W Jefferson Blvd #189, Fort Wayne, 46804	(260) 432-5132

This list is provided as a service and is not intended to endorse any provider listed nor exclude any provider not listed.

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RECESSIONAL MORAINE SOIL NOTICE

On June 19, 2001 (later updated on July 18, 2001, and again updated most recently on August 14, 2001), the Indiana Department of Health (IDOH) issued the attached suggested protocol for the siting of new and replacement on-site sewage systems (OSS) in Northeast Indiana, including Allen County. Because of the increase in premature failures, we are now seeing in systems installed in Allen County, we continue to make periodic updates in our pre-construction requirements *to protect homeowners as best we can* from this problematic situation on their properties. The Allen County Department of Health is now **REQUIRING THAT MECHANICAL ANALYSIS OF THE SOIL BE COMPLETED** when the types of soils mentioned in the attached protocol are found on a site being considered for a new/replacement system. If the soil has a forty percent (40%) or higher clay content, then, it is **STRONGLY RECOMMENDED** by both IDOH and by this Department that you do follow the rest of the protocol – to protect your investment. If the soil has a fifty percent (50%) or higher clay content, then it is **STRONGLY RECOMMENDED** by both IDOH and by this Department that you do not build a home on that property unless an area can be found for the system which is less than fifty percent (50%) clay. Following this guidance makes it less likely any system installed on poor soils will prematurely fail and require replacement. You, the property owner, are not required by law to follow these recommendations, but it is our best guidance, based on experience.

As the property owner, please understand the following important statements as they relate to on-site sewage systems in Allen County:

- This Department has documented failed OSSs which occurred within a matter of months after installation at sites where the property owners failed to follow this protocol. When this occurs, it can result in some extremely unfortunate situations for property owners (see 3rd bullet below).
- You as the Property Owner are responsible for notifying the soil consultant and system designer of your choice to let them know you have chosen to follow the current version of the moraine soil protocol.
- You as the Property Owner are responsible for maintaining a properly functioning OSS at all times following installation. If your new or replacement OSS fails, you will be provided with four options to remedy the issue:

1. Connection to a nearby public sewer, if one is available.
2. Repair or replace the OSS so it is no longer a risk to public health.
3. Cap the septic tank and "pump and haul" the sewage on a continuous basis. This can be very expensive, generally requires water conservation measures to be exercised in the home, and this option is not generally a permanent measure that can be allowed.
4. Abandon the premises as it is no longer habitable if none of these options can be employed. This generally means the home/property cannot be sold until remedied.

Although there can never be a guarantee that an OSS will not fail soon after installation, the purpose of the Indiana Department of Health's suggested protocol is to *reduce the likelihood of failure*, so the homeowner is not left with the unfortunate situation where their only options are "pump and haul", replacement with a new system, or abandonment of the home.

We are available to answer any of your questions in this regard. Once you have read this document and asked all applicable questions, please initial the applicable line(s) below indicating your decision on whether or not you plan to follow the protocol, sign, date and return one of the two copies to this Department. THIS SECTION MUST BE COMPLETED TO PROCEED.

____ I voluntarily agree to follow/comply with the current version of the Moraine Soil Protocol.

____ At this time, I decline to pursue additional testing, even though the clay was over 40% and understand the potential repercussions of that decision, as noted above.

____ At this time, I intend to move forward with plans to design and construct an onsite sewage system, even though the clay was over 50% and understand the potential repercussions of that decision, as noted above.

Property Address: _____

Property Owner # 1 Printed Name: _____

Property Owner # 1 Signature: _____ **Date:** _____

Property Owner # 2 Printed Name: _____

Property Owner # 2 Signature: _____ **Date:** _____

A COPY OF THIS COMPLETED FORM MUST BE EMAILED TO ACDOH.POLLUTION.CONTROL@ALLENCOUNTY.US, MAILED OR HAND-DELIVERED TO THE ADDRESS NOTED ABOVE OR FAXED TO (260) 449-3010.

Frank L. O'Bannon
Governor

Gregory A. Wilson, M.D.
State Health Commissioner

Indiana State Department of Health

An Equal Opportunity Employer

DATE: August 14, 2001

TO: Adams, Allen, Blackford, DeKalb, Delaware, Grant, Howard, Huntington, Jay, Miami, Noble, Randolph, Steuben, Wabash, Wells, and Whitley Counties

FROM: Howard W. Cundiff, P.E., Director HWC
Consumer Protection
AC (317) 233-7182

SUBJECT: Residential and Commercial On-site Sewage Systems and Recessional Moraines in Northeastern Indiana
Update to Memoranda of June 19, and July 18, 2001

The following are revisions to the procedures for the evaluation of recessional moraine soils in the designated counties, or designated portions of counties, in northeast Indiana:

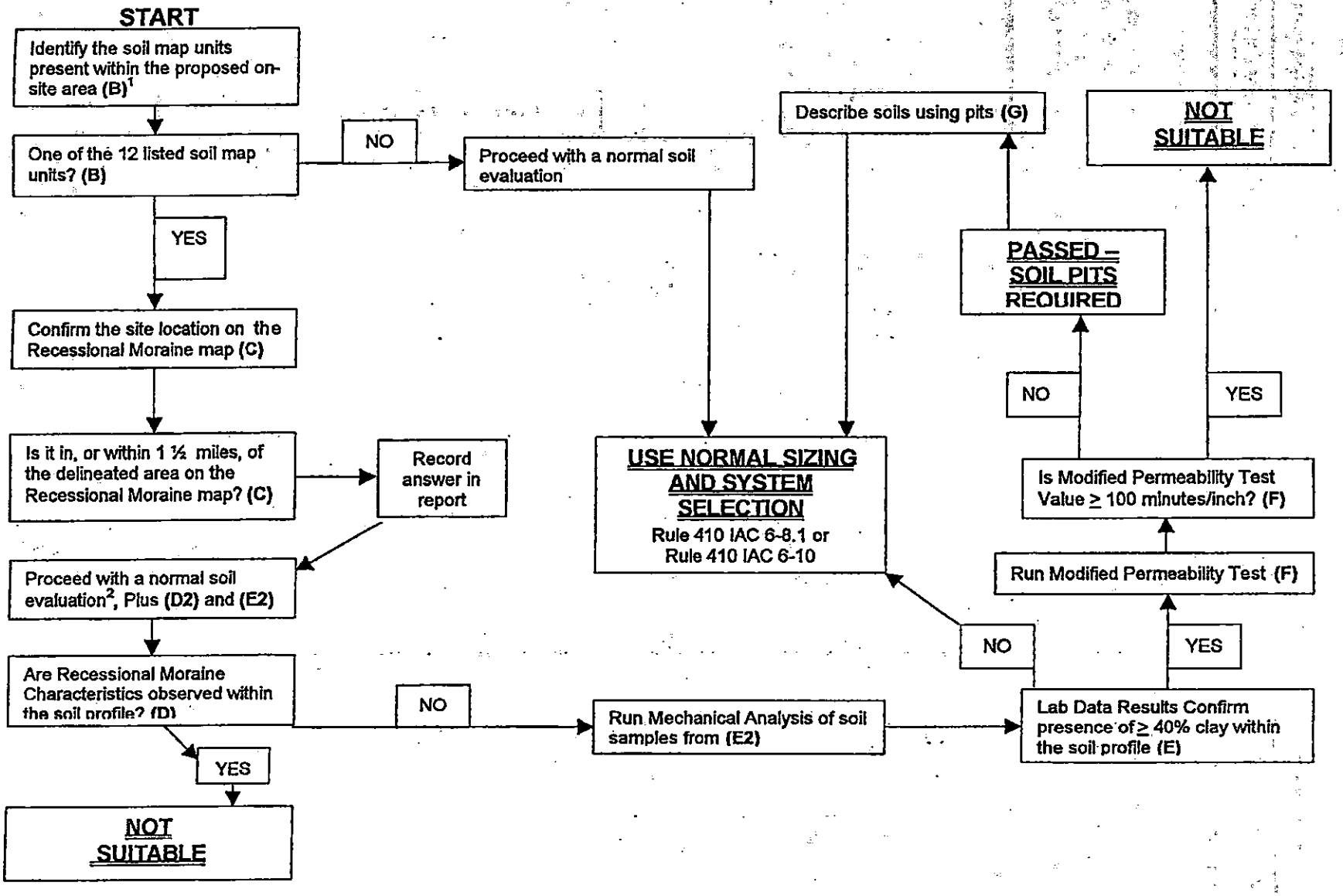
- The Del-Ray soil series must be added to the list of NRCS soil series which may contain recessional moraine soils characteristics. This list is now 1.) Blount, 2.) Bono, 3.) Del-Ray, 4.) Glynwood, 5.) Hoytville, 6.) Milford, 7.) Montgomery, 8.) Morley, 9.) Nappanee, 10.) Pewamo, 11.) St. Clair, and 12.) sites that contain areas of severely eroded soils that have clay loam, silty clay loam, silty clay, or clay surface textures.
- If the site being evaluated contains any of the eleven soil series named in my memorandum of July 18, 2001, the procedure in the flow chart must be followed. However, if the Soil Scientist conducting the evaluation determines that the soil is in a coarser textural family than the textural family of the soil series which has been mapped, the procedure does not need to be applied.
- If the site being evaluated does not contain any of the eleven soil series, the procedure does not need to be applied.
- If the site being evaluated does not contain one of the eleven soil series, but a soil scientist recognizes what may be moraine characteristics during an examination of the soils, the procedure must be applied.
- If the result of the mechanical analysis is forty (40) percent or greater, the modified permeability test must be conducted. This change in percentage from fifty to forty percent is due to modifications to the laboratory procedure. The modified procedure more accurately measures the clay content separately from the silt content.

With this procedure, the location of the site in relation to the location of the recessional moraine is not necessary in order to determine if the procedure must be applied. However, in order to continue our assessment of recessional moraine soils and their impacts to on-site sewage disposal, the location of each site in relation to the location of the recessional moraine must be identified.

If you have any questions, please contact my on-site sewage disposal staff at 317-233-7177.

cc: On-Site Sewage Staff
Soil Scientists

FLOW CHART FOR EVALUATION OF RECESSIONAL MORAINE SOILS FOR ON-SITE SEWAGE SYSTEMS



[1]Letter in parenthesis ( ) references corresponding letter in ISDH memorandum of 06/19/01 to local health departments
[2]Special care must be taken in observing and describing the soil horizons; especially the surface layers.

ISDH 06/19/01

UPDATE BY FW-AC Department of Health
08/16/01

Frank L. O'Bannon
Governor

Gregory A. Wilson, M.D.
State Health Commissioner

Indiana State Department of Health

An Equal Opportunity Employer

DATE: July 18, 2001

TO: Adams, Allen, Blackford, DeKalb, Delaware, Grant, Howard, Huntington, Jay, Miami, Noble, Randolph, Steuben, Wabash, Wells, and Whitley Counties

FROM: Howard W. Cundiff, P.E., Director HWC
Consumer Protection
AC (317) 233-7182

SUBJECT: Residential and Commercial On-site Sewage Systems and Recessional Moraines in Northeastern Indiana
Update to Memorandum of June 19, 2001

The Recessional Moraines in Northeastern Indiana include parts of: Adams, Allen, Blackford, DeKalb, Delaware, Grant, Howard, Huntington, Jay, Miami, Noble, Randolph, Steuben, Wabash, Wells, and Whitley Counties.

Questions and issues have come up which require this memorandum to update my memorandum of June 19, 2001, and to clarify the procedures pertinent to the evaluation of recessional moraine soils for on-site sewage systems. This memorandum provides:

- The implementation of a new procedural flow chart. This revision is due to a question of application of the procedure outside of the moraine soils and the 1 1/2 mile buffer zone. The procedure is to be applied to the soil map units when the site is outside of the recessional moraine and the 1 1/2 mile buffer zone. A new flow chart is attached to reflect that requirement. Please replace the previous flow chart with this one.
- The addition of two NRCS soil series to the list of nine in the memorandum of June 19, 2001. The complete list of eleven NRCS soil series is below.
- That the flow chart must be followed, including all of the steps. To conduct the evaluation of the site in any procedure other than what is prescribed will not provide the health department with all of the information necessary to process an application for a permit.
- Clarification as to the use of the Modified Permeability Test. This test is to be used, when required, as a part of the procedure for the evaluation of recessional moraine soils for on-site sewage systems. It has no other application. The procedure itself has not changed from my memorandum of June 19, 2001, but the introduction has been modified to provide a clearer explanation as to the limits of its use. The new document for the Modified Permeability Test is attached. Please replace the previous document with this one.
- Clarification on procedures when the soils description differs from the modal description of the soil series mapped at the site. If the soil is mapped as one of the eleven NRCS soil series, the procedure must be followed, even if the soil scientist's descriptions differ from the modal description of the soil series.

- Clarification of sampling for mechanical analysis. Sampling for mechanical analysis does not include a requirement for sampling of the parent material [BC, CB, or C horizon ("till" or densic material)].
- Clarification on the examination of soil characteristics using soil pits. When the soils are examined using a pit, the face of the pit wall must be fresh and moist with carefully limited "picking" at the time of examination. Therefore, the pit must be dug when the soil scientist is present and ready to do the evaluation.

The following procedure is included for use with the attached flow chart. Any changes in the following from my memorandum of June 19, 2001 are indicated by the above comments.

A. Use the "*FLOW CHART FOR EVALUATION OF RECESSIONAL MORAINE SOILS FOR ON-SITE SEWAGE SYSTEMS*" published by ISDH.

A flow chart has been developed to maintain a consistent procedure for the evaluation of sites located in or adjacent to the recessional moraine areas or that have any of the NRCS soil series listed below. The flow chart is attached.

B. Soil Series Associated With The Recessional Moraines

Certain landscape conditions and NRCS soil series are present in areas where these on-site system failures have been identified:

1. Blount
2. Bono
3. Glynwood
4. Hoytville
5. Milford
6. Montgomery
7. Morley
8. Nappanee
9. Pewamo
10. St. Clair
11. Sites that contain areas of severely eroded soils that have clay loam, silty clay loam, silty clay, or clay surface textures

C. Locating Potential Moraine Areas

A general map has been developed using the *Miscellaneous Map 49*, developed by Henry H. Gray, Quaternary Geologic Map of Indiana, 1989. It is used to generally locate those moraine areas in northeast Indiana that have a high potential for OSS failure.

D. Wabash Recessional Moraine Characteristics

1. These are the characteristics that have been identified in Wells County as being present when premature OSS failures have occurred. At the present time, not all of the characteristics have been identified in the other recessional moraine soils. Only an experienced professional soil scientist can look for these characteristics from an evaluation of the soil using a backhoe soil pit.

Therefore, all soils descriptions in these areas must be conducted by a soil scientist, soil specialist, soil classifier, or registered professional soil scientist certified by:

- the American Registry of Certified Professionals in Agronomy Crops, and Soils (ARCPACS),
- the Indiana Association of Professional Soil Scientists (IAPSS), or
- the Indiana Board of Registration for Soil Scientists.

2. A soil pit at least 24 inches wide must be used to closely examine the surface soil and the upper part of the subsoil for the Recessional Moraine characteristics. The soil must be described to a depth of 60 inches or to a layer which cannot be readily penetrated, whichever is shallower.

E. Mechanical Analysis (Particle Size Analysis)

1. When required, soil samples will be collected and mechanical analyses conducted on selected horizons in the individual soil profiles. These analyses will be completed using the Hydrometer Method of particle size analysis developed by Bouyoucos. A facility or laboratory accepted by the local health department having jurisdiction must conduct the analyses. Copies of the Hydrometer Method of particle size analysis will be forwarded to local health departments by separate memorandum.

2. Collect soil samples (100 grams each) for mechanical analysis to determine percent clay, sand, and silt for each sample. The following horizons must be sampled:

   a. Surface horizon.
   b. Any horizon or horizons that the soil scientist suspects might have problems with permeability or the horizon that has the highest percent clay in the subsoil.
   c. If present, the horizon below suspected horizons that appear to be acceptable for "normal" permeability for these textures.

   Sampling for mechanical analysis does not include a requirement for sampling of the parent material [BC, CB, or C horizon ("till" or densic material)].

F. Modified Permeability Test for Recessional Moraine Soils

When required, modified permeability tests will be used as a pass/fail test for water movement through the subsoil material. These tests will be required only when indicated by the results of the initial soil evaluation and mechanical analysis. An individual accepted by the local health department having jurisdiction will conduct the tests. A minimum of seven (7) test holes will be required for residential sites. Additional test holes may be required by ISDH for commercial on-site projects. The minimum 7 holes will be located as follows:

1. A minimum of five (5) test holes will be placed in the proposed soil absorption field site. One hole will be located near each inside corner of the site and the fifth hole located near the center of the site.
2. A minimum of two (2) additional test holes will be required in the downslope dispersal area for a residential site. These two (2) test holes will be dug so that they are located ten (10) feet below the proposed soil absorption field and located approximately 1/3 of

the distance from each of the outside corners of the proposed soil absorption field. A copy of the Modified Soil Permeability Test for Recessional Moraine Soils is attached.

G. Backhoe Soil Pits Will Be Used To Describe Soil Properties Used To Select System Type And Size OSS Soil Absorption Fields

The ISDH is adopting the procedure developed by the Wells County Health Department for their Wabash Recessional moraine soils to describe soils characteristics for selecting system type and size. During parts of the initial investigation, the soil scientist may have already completed some or all of the following requirements:

1. Minimum of two (2) soil pits.
   a. One soil pit dug ten (10) feet directly upslope of the upslope edge of the proposed soil absorption field.
   b. A second soil pit dug ten (10) feet below the downslope edge of the proposed soil absorption field.
   c. Each soil pit must be at least (six) 6 feet long and two (2) feet wide. The depth of each soil pit must be sufficient to adequately describe the subsoil, but may be no greater than five (5) feet.
2. A minimum of five (5) soil borings taken in the proposed soil absorption field site, with one hole located near each corner of the site and the fifth hole located near the center of the site.

Finally, the following requirements will be applied to sites where on-site sewage systems are installed in soil containing more than 50 percent clay, the site passed the modified permeability test, and the site meets all other minimum state and local code requirements for permit issuance:

1. Observation ports will be installed in the absorption trench laterals and, when installed, in the perimeter drainage system.
2. The local health departments and ISDH will have the right to visit and inspect the system to determine the status of the system.
3. The local health departments and ISDH will have the right to conduct dye tests and to collect effluent and perimeter drain water samples for testing.
4. The testing and visits will be at the discretion of the local health departments and ISDH, but will be conducted during normal working hours unless the owner has been notified.

If you have questions or desire assistance prior to the workshops, please contact my on-site sewage staff at (317) 233-7177.

cc: On-Site Sewage Staff
Soil Scientists
Attachments
Flow Chart for Evaluation of Recessional Moraine Soils for On-Site Sewage System
The Modified Soil Permeability Test for Recessional Moraine Soils

The Modified Soil Permeability Test for Recessional Moraine Soils

The Modified Soil Permeability Test will be used as a pass/fail test for water movement through the subsoil material in recessional moraine soils. It is similar to the percolation test except that:

- Only subsoil horizons are evaluated using the specific criteria. Surface horizons cannot be evaluated using this test.
- This test will be required only when indicated by the results of the initial soil evaluation and mechanical analysis.
- It is a "pass/fail" test. The sole purpose is to determine whether or not the soil will accept water. It is not used for system selection or sizing. System selection and size are determined from soil characteristics from soil pits and borings.
- This test is to be used on natural, undisturbed soils as a part of the procedures for recessional moraine soils evaluations. For a variety of reasons, this test is not suitable for use in other applications. Therefore, its use must be limited to this application.
- The failure test value shall be equal to or greater than 100 minutes/inch.

Procedure for the Modified Soil Permeability Test:

1. A minimum of seven (7) test holes will be required for residential sites. Additional test holes may be required by ISDH for commercial on-site projects. The intent of the procedure is to uniformly position the holes within the proposed OSS site. The minimum 7 holes will be located as follows:
   a. A minimum of five (5) test holes will be placed in the proposed soil absorption field site. One hole will be located near each inside corner of the site and the fifth hole located near the center of the site.
   b. A minimum of two (2) additional test holes will be required in the downslope dispersal area for a residential site. These two (2) test holes will be dug so that they are located ten (10) feet below the proposed soil absorption field and located approximately 1/3 of the distance from each of the outside corners of the proposed soil absorption field.
2. Notify the local health department of the date and time of the start of the modified soil permeability test at least one working day prior to the start of the test.
3. Dig or bore each hole with horizontal diameter dimension of eight (8) to twelve (12) inches.
4. Each test hole must have a minimum hole depth of at least 36 inches or be dug into densic material, whichever is shallower.
5. Remove all loose soil from each test hole.
6. Carefully fill each hole with clean tap water. Keep the hole full of water for at least 12 hours.
7. After the 12-hour saturation period, allow the water in the hole to seep away until it is below any A soil horizons at the site.
8. If needed add additional water until it just reaches the top of the first subsoil (B) horizon.
9. Establish a reference point by use of a nail stuck in the side of the hole at the top of the first subsoil (B) horizon.
10. From this point obtain a measurement to the top of the water level. Record the date, exact time, and the measurement.
11. Continue the measurement to the top of the water surface while recording the date and time until at least three (3) consecutive readings of consistent rates are obtained.
12. Convert the time interval obtained in (11) above to minutes and divide this figure by the number of inches of water which has seeped away in that interval to obtain the time for one inch of water to seep away.

If any test hole in the area being tested fails, the area being tested for the proposed absorption field is deemed unsuitable for any type of on-site system. An adjacent area can be evaluated as a new site, as long as the new area is a minimum of fifty (50) feet away from the location of any test hole(s) that have failed. Any of the test holes that previously passed this test can be utilized as test holes for the new area, if they meet the requirements for the new location.

Frank L. O'Bannon
Governor

Gregory A. Wilson, M.D.
State Health Commissioner

Indiana State Department of Health

An Equal Opportunity Employer

DATE: June 19, 2001

TO: Adams, Allen, Blackford, DeKalb, Delaware, Grant, Howard, Huntington, Jay, Miami, Noble, Randolph, Steuben, Wabash, Wells, and Whitley Counties

FROM: Howard W. Cundiff, P.E., Director HWC
Consumer Protection
AC (317) 233-7182

SUBJECT: Residential and Commercial On-site Sewage Systems and Recessional Moraines in Northeastern Indiana

The Recessional Moraines in Northeastern Indiana include parts of: Adams, Allen, Blackford, DeKalb, Delaware, Grant, Howard, Huntington, Jay, Miami, Noble, Randolph, Steuben, Wabash, Wells, and Whitley Counties.

The staff of Sanitary Engineering, Indiana State Department of Health (ISDH) has become aware that there are serious problems with the proper function of on-site sewage systems in several, but not all, of the recessional moraines in northeastern Indiana. We have learned that there are on-site sewage systems (OSS) that have failed prematurely in these soils. ISDH staff has observed and studied some of these sites. As it is nearly impossible to repair failed on-site systems in the problem moraine soils, extra measures must be taken when on-site systems are to be installed in these recessional moraine areas. Therefore, this memorandum, and the procedures outlined, must be applied immediately to both residential and commercial projects.

These soil problems were first identified in Wells County, in an area known locally as "Buttermilk Ridge." Similar soil conditions occur in neighboring counties. This area first received attention when the soil absorption field of a newly constructed home failed immediately after installation. The investigations and studies that followed have pointed out that in northeastern Indiana there are soils that have special physical and chemical characteristics that cannot readily be observed in the field. Unfortunately, those characteristics severely limit their use for OSS.

Since that time, extensive studies have been done on this specific recessional moraine, the Wabash Recessional Moraine in Wells County. From the data collected, Wells County has been able to develop a policy and procedures for use in the Wabash Recessional Moraine areas. The policy and procedures appear to be working.

Last fall ISDH staff encountered similar on-site system failures in Allen County on some of their recessional moraine soils. At this time, we are unable to determine if these failures are specifically limited to only these recessional moraine areas. Individuals from ISDH, Natural Resources Conservation Service (NRCS), Indiana Geological Survey (IGS), and consulting soil scientists are studying these areas with the assistance of local health departments and OSS installers. All of the individuals are working on these studies with the ultimate goal of identifying the soil properties that are limiting the performance of on-site systems. When we are able to identify these properties we may then be able to delineate areas in the recessional moraines where OSS will function properly.

A properly conducted soil evaluation by a soil scientist does not adequately detect the specific soil properties or characteristics that are causing the OSS failures in the recessional moraines. Because of these undetected characteristics, backhoe soil pits are necessary so that the professional soil scientists and geologists can more closely study and identify small changes that exist in the soil profile. Local health departments need to be aware that where these soil properties exist, newly installed OSS will nearly always go into immediate failure. Repair of these failing systems becomes a very serious problem because, at the present time, we are not aware of any OSS that will function properly in these soil situations. With additional study and analysis, we hope to provide on-site technologies which will overcome the limitations posed by these soils. Until that time, when any "soil moraine" characteristics are encountered in a soil profile, that specific area should not be used for any type of OSS.

Because of this situation with recessional moraine soils, the following procedure must be implemented when evaluating proposed soil absorption fields for residential and commercial on-site sewage projects in these areas.

A. Use the "*FLOW CHART FOR EVALUATION OF RECESSIONAL MORAINE SOILS FOR ON-SITE SEWAGE SYSTEMS*" published by ISDH.

A flow chart has been developed to maintain a consistent procedure for the evaluation of sites located in or adjacent to the recessional moraine areas in northeastern Indiana. The flow chart is attached.

B. Soil Series And Geologic Materials Associated With The Recessional Moraines

The following geologic materials always appear to be involved with these OSS failures:

1. Glacial till materials
2. Lacustrine materials
3. Water reworked combination of both glacial till and lacustrine sediments

In addition, certain landscape conditions and NRCS soil series are present in areas where these on-site failures have been identified:

1. Morley
2. Glynwood
3. Blount
4. Pewamo
5. St. Clair
6. Nappanee
7. Hoytville
8. Montgomery
9. Sites that contain areas of severely eroded soils that have clay loam, silty clay loam, silty clay, or clay surface textures

C. Locating Potential Moraine Areas

A general map has been developed using the *Miscellaneous Map 49*, developed by Henry H. Gray, Quaternary Geologic Map of Indiana, 1989. It is used to generally locate those moraine areas in northeast Indiana that have a high potential for OSS failure. This map is included as an attachment.

D. Wabash Recessional Moraine Characteristics

1. These are the characteristics that have been identified in Wells County as being present when premature OSS failures have occurred. At the present time, not all of the characteristics have been identified in the other recessional moraine soils. Only an experienced professional soil scientist can look for these characteristics from an evaluation of the soil using a backhoe soil pit. Therefore, all soils descriptions in these areas must be conducted by a soil scientist, soil specialist, soil classifier, or registered professional soil scientist certified by:

   - the American Registry of Certified Professionals in Agronomy Crops, and Soils (ARCPACS),
   - the Indiana Association of Professional Soil Scientists (IAPSC), or
   - the Indiana Board of Registration for Soil Scientists.

2. A soil pit at least 24 inches wide must be used to closely examine the surface soil and the upper part of the subsoil for the Recessional Moraine characteristics. The soil must be described to a depth of 60 inches or to a layer which cannot be readily penetrated, whichever is shallower.

E. Mechanical Analysis (Particle Size Analysis)

1. When required, soil samples will be collected and mechanical analyses conducted on selected horizons in the individual soil profiles. These analyses will be completed using the Hydrometer Method of particle size analysis developed by Bouyoucos. A facility or laboratory accepted by the local health having jurisdiction must conduct the analyses. Copies of the Hydrometer Method of particle size analysis will be forwarded to local health departments by separate memorandum.

2. Collect soil samples (100 grams each) for mechanical analysis to determine percent clay, sand, and silt for each sample. The following horizons must be sampled:

   a. Surface horizon
   b. Any horizon or horizons that the soil scientist suspects might have problems with permeability or that the horizon has the highest percent clay in the subsoil
   c. If present, the horizon below suspected horizons that appear to be OK for "normal" permeability for these textures

F. Modified Permeability Test for Recessional Moraine Soils

When required, modified permeability tests will be used as a pass/fail test for water movement through the subsoil material. These tests will be required only when indicated by the results of the initial soil evaluation and mechanical analysis. An individual accepted by the local health department having jurisdiction will conduct the tests. A minimum of seven (7) test holes will be required for residential sites. Additional test holes may be required by ISDH for commercial on-site projects. The minimum 7 holes will be located as follows:

1. A minimum of five (5) test holes will be placed in the proposed soil absorption field site. One hole will be located near each inside corner of the site and the fifth hole located near the center of the site.

2. Two (2) additional test holes will be required in the downslope dispersal area for a residential site. These two (2) test holes will be dug so that they are located ten (10) feet below the proposed soil absorption field and located approximately 1/3 of the distance from each of the outside corners of the proposed soil absorption field.

A copy of the Modified Soil Permeability Test for Recessional Moraine Soils is attached.

G. Backhoe Soil Pits Will Be Used To Describe Soil Properties Used To Select System Type And Size OSS Soil Absorption Fields

The ISDH is adopting the procedure developed by the Wells County Health Department for their Wabash Recessional moraine soils to describe soils characteristics for selecting system type and size. During parts of the initial investigation, the soil scientist may have already completed some or all of the following requirements:

1. Minimum of two (2) soil pits.
   a. One soil pit dug ten (10) feet directly upslope of the upslope edge of the proposed soil absorption field.
   b. A second soil pit dug ten (10) feet below the downslope edge of the proposed soil absorption field.
   c. Each soil pit must be at least (six) 6 feet long and two (2) feet wide. The depth of each soil pit must be sufficient to adequately describe the subsoil, but may be no greater than five (5) feet.
2. A minimum of five (5) soil borings taken in the proposed soil absorption field site, with one hole located near each corner of the site and the fifth hole located near the center of the site.

Finally, the following requirements will be applied to sites where on-site sewage systems are installed in soils that are either in the recessional moraine delineation or soils containing more than 50 percent clay:

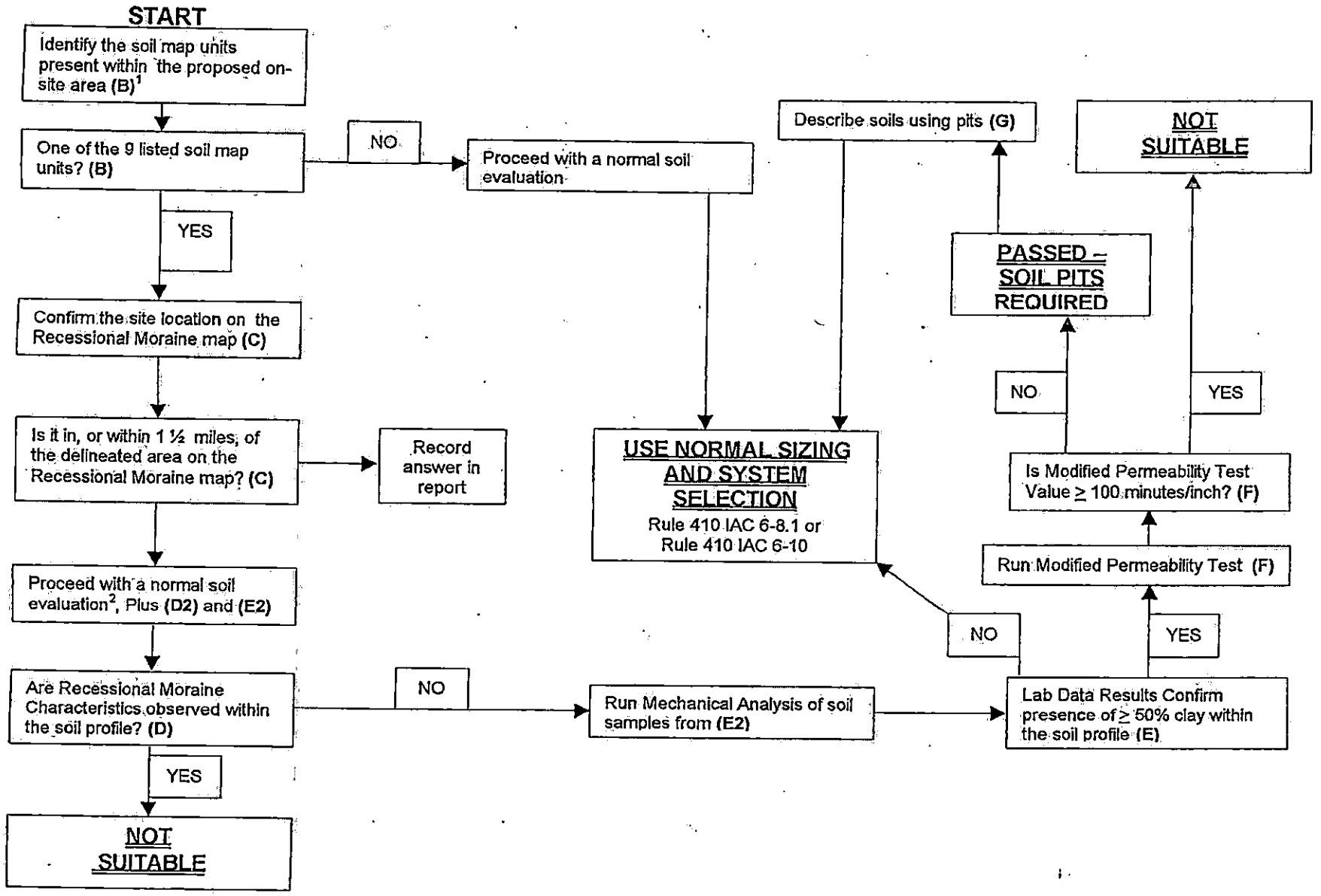
1. Observation ports will be installed in the absorption trench laterals and, when installed, in the perimeter drainage system.
2. The local health departments and ISDH will have the right to visit and inspect the system to determine the status of the system.
3. The local health departments and ISDH will have the right to conduct dye tests and to collect effluent and perimeter drain water samples for testing.
4. The testing and visits will be at the discretion of the local health departments and ISDH, but will be conducted during normal working hours unless the owner has been notified.

ISDH staff will contact local health departments to schedule workshops in the near future to review this information and address questions. If you have questions or desire assistance prior to the workshops, please contact my on-site sewage staff at (317) 233-7177.

cc: On-Site Sewage Staff
Soil Scientists
Attachments
General Map of Recessional Moraine Soils in northeast Indiana
Flow Chart for Evaluation of Recessional Moraine Soils for On-Site Sewage System
The Modified Soil Permeability Test for Recessional Moraine Soils

1. Wabash Recessional Moraine Characteristics
2. Hydrometer Method of particle size analysis developed by Bouyoucos

FLOW CHART FOR EVALUATION OF RECESSIONAL MORAINE SOILS FOR ON-SITE SEWAGE SYSTEMS



[1]Letter in parenthesis ( ) references corresponding letter in ISDH memorandum of 06/19/01 to local health departments
[2]Special care must be taken in observing and describing the soil horizons; especially the surface layers.

ISDH 06/19/01

The Modified Soil Permeability Test for Recessional Moraine Soils

When required, the Modified Soil Permeability Test will be used as a pass/fail test for water movement through the subsoil material in the Recessional Moraine soils. This test will be required only when indicated by the results of the initial soil evaluation and mechanical analysis. An individual accepted by the local health department having jurisdiction will conduct the tests.

For a variety of reasons, this test is not suitable for use in other applications. Therefore, its use shall be limited to this application.

The surface horizons cannot be included for determining the permeability rate for a specific test hole. The failure test value shall be equal to or greater than 100 minutes/inch.

Procedure for the Modified Soil Permeability Test:

1. A minimum of seven (7) test holes will be required for residential sites. Additional test holes may be required by ISDH for commercial on-site projects. The minimum 7 holes will be located as follows:
   a. A minimum of five (5) test holes will be placed in the proposed soil absorption field site. One hole will be located near each inside corner of the site and the fifth hole located near the center of the site.
   b. Two (2) additional test holes will be required in the downslope dispersal area for a residential site. These two (2) test holes will be dug so that they are located ten (10) feet below the proposed soil absorption field and located approximately 1/3 of the distance from each of the outside corners of the proposed soil absorption field.
2. Notify the local health department of the date and time of the start of the modified soil permeability test at least one working day prior to the start of the test.
3. Dig or bore each hole with horizontal diameter dimension of eight (8) to twelve (12) inches.
4. Each test hole must have a minimum hole depth of at least 36 inches.
5. Remove all loose soil from each test hole.
6. Carefully fill each hole with clean tap water. Keep the hole full of water for at least 12 hours.
7. After the 12-hour saturation period, allow the water in the hole to seep away until it is below any A soil horizons at the site.
8. If needed add additional water until it just reaches the top of the first subsoil (B) horizon.
9. Establish a reference point by use of a nail stuck in the side of the hole at the top of the first subsoil (B) horizon.
10. From this point obtain a measurement to the top of the water level. Record the measurement and the exact time.
11. Continue the measurement to the top of the water surface and time recording until at least three (3) consecutive readings of approximately the same rates are obtained.
12. Convert the time interval obtained in (11) above to minutes and divide this figure by the number of inches of water which has seeped away in that interval to obtain the time for one inch of water to seep away.

If any test hole in the area being tested fails, the area being tested for the proposed absorption field is deemed unsuitable for any type of on-site system. An adjacent area can be evaluated as a new site, as long as the new area is a minimum of fifty (50) feet away from the location of any test hole(s) that have failed. Any of the test holes that previously passed the Modified Permeability Test can be utilized as test holes for the new area, if their location permits. The new proposed area must then be retested using the procedures outlined above.

Frank L. O'Bannon
Governor
Gregory A. Wilson, M.D.
State Health Commissioner

Indiana State Department of Health

FOR IMMEDIATE RELEASE
June 21, 2001

CONTACT: Margaret Joseph
317-233-7315

MORAINE SOILS IN PARTS OF 16 NORTHEAST INDIANA COUNTIES MAY BE CAUSING SOME SEPTIC SYSTEMS TO FAIL

INDIANAPOLIS—The Indiana State Department of Health has notified local health departments in 16 counties in northeast Indiana that the recessional moraines may be causing some septic system failures in their area.

Some recessional moraines may have soils that don't absorb water well. Recessional moraine soils were formed by sediments from glaciers in the periods when the glaciers were receding.

The problem has been found in Indiana only in portions of these counties: Adams, Allen, Blackford, DeKalb, Delaware, Grant, Howard, Huntington, Jay, Miami, Noble, Randolph, Steuben, Wabash, Wells, and Whitley.

"We recently became aware that there are serious problems with the functioning of septic systems in several, but not all, of the recessional moraines in northeast Indiana," said Howard Cundiff, P.E., director of the Consumer Protection Division at the State Department of Health.

In a memorandum sent this week to the health departments in the affected counties, Cundiff said, "As it is nearly impossible to repair on-site systems (septic systems) in the problem moraine soils, extra measures must be taken when on-site systems are to be installed in these recessional moraine areas. Therefore, this memorandum, and the procedures outlined, must be applied immediately to both residential and commercial projects."

The procedures call for special soil tests for a proposed site for a septic system if that site is located in a recessional moraine area.

"At present, there is no known on-site sewage technology that will function properly in moraine soils," Cundiff said. "But it may be that as little as 10 percent of the land area in these recessional moraines contains these soils."

-MORE-

MORAINE SOILS
Add One

The soil problems were first identified in Wells County, in an area known as Buttermilk Ridge. Cundiff says that subsequent studies conducted on the recessional moraine in that county have enabled the Wells County Health Department to develop a septic systems policy and procedures that appear to be working.

Cundiff says that studies are underway to delineate areas in the recessional moraines where septic systems will function properly. The research is being conducted by the State Department of Health, the U.S. Natural Resources Conservation Service, the Indiana Geological Survey, and consulting soil scientists, assisted by local health departments and septic system installers.

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NOTICE OF ONSITE SEWAGE SYSTEM & BEDROOM AFFIDAVIT

This Notice of Onsite Sewage System ("Notice") is subscribed to and recorded by the undersigned owner of certain premises located at: _____("Real Estate") for the purposes of demonstrating compliance with Allen County Code Title 10, Article 4.5, Chapter 4, Section 1. The undersigned swears or affirms that the Real Estate is now, or will be, served by an onsite sewage system and/or sanitary vault privy, and is subject to all of the applicable requirements and conditions of the Allen County Private Sewage Disposal Ordinance, Allen County Code Title 10, Article 4.5, as amended from time to time.

The legal description of the real estate, as shown by the records of the Auditor of Allen County, Indiana, is as follows:

Bedroom Affidavit

The home at _____ contains_____bedrooms that can be occupied for sleeping; and I agree not to occupy any additional rooms for the purpose of sleeping or otherwise represent to others that any room, beyond the number specified above, may be utilized for sleeping, without approval from the Department of Health.

Dated:_____

_____
Signature

_____
Printed Name

STATE OF INDIANA, COUNTY OF ALLEN

Before me, the undersigned, a Notary Public in and for said County and State, this___day of_____, 20___, personally appeared _____,owner of the property located at_____ _____, and acknowledged the execution of the foregoing notice.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year above written.

My Commission Expires: _____

_____
Notary Public

Resides in: _____County

_____

_____
Printed Name

Indiana law relating to the recording of certain documents requires the below representations. Please print the name of the person preparing this notice in the "Prepared by" and "redaction of Social Security number" lines below, accordingly.
Prepared By: _____

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security number in this document, unless required by law: _____