



**Septic System  
Maintenance Webinar**

Annette DeMaria, P.E.  
Executive Director

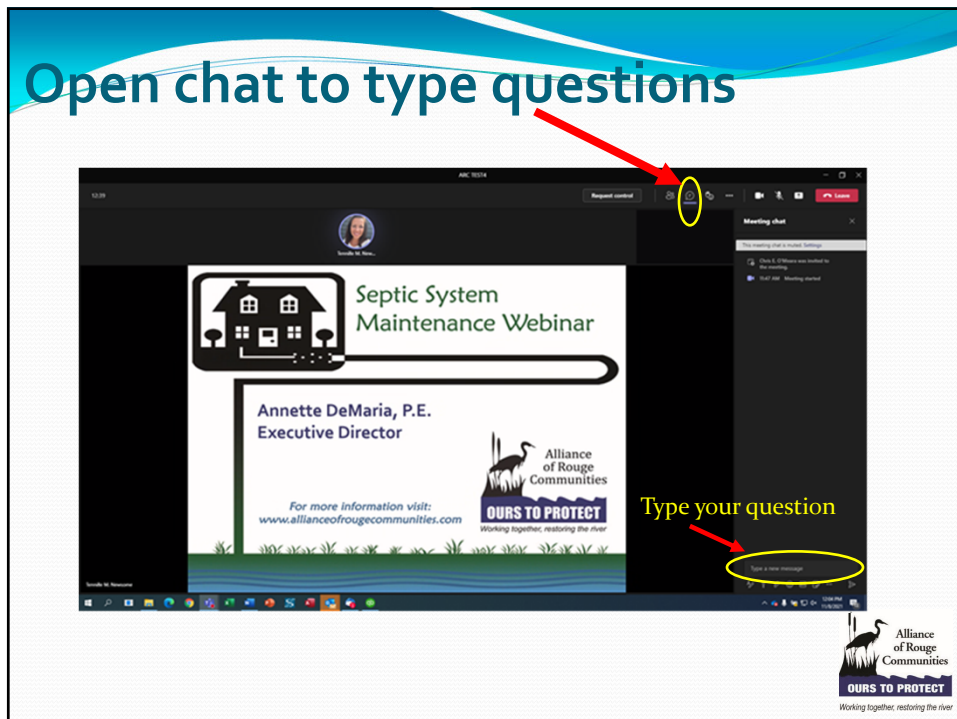
For more information visit:  
[www.allianceofrougecommunities.com](http://www.allianceofrougecommunities.com)

**Alliance  
of Rouge  
Communities**

**OURS TO PROTECT**  
Working together, restoring the river

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**Open chat to type questions**



Type your question

2



## Septic System Maintenance Webinar

**Meghan Price**  
Environmental Scientist

For more information visit:  
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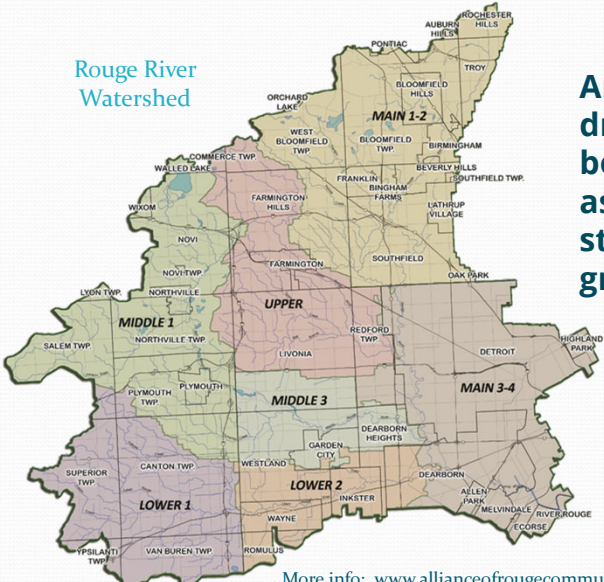
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## We all live in a watershed

Rouge River Watershed



An area of land that drains to a common body of water, such as a lake, river or stream (and even groundwater)

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## We all live in a watershed

- Pollutants travel from upstream to downstream areas
- As land becomes altered or developed it increases the amount of pollutants traveling



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## What is stormwater?

- Water that originates during rain events and snow/ice melt
- Carries the pollutants
- Travels over land or through storm drains, catch basins or pipes (called outfalls)
- Ends up untreated in our rivers, streams and lakes



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## What is wastewater?

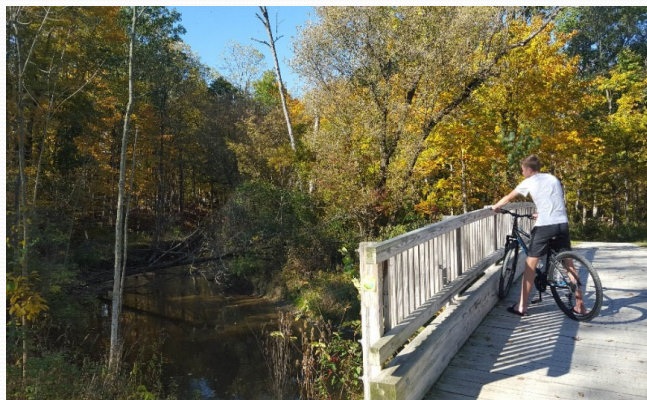
- Water that has been used in the home, in a business, or as part of an industrial process
- Is treated before it is released back to the environment

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Why protect water quality?



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## What does Improved water quality mean?



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Sources of bacteria (*E. coli*)

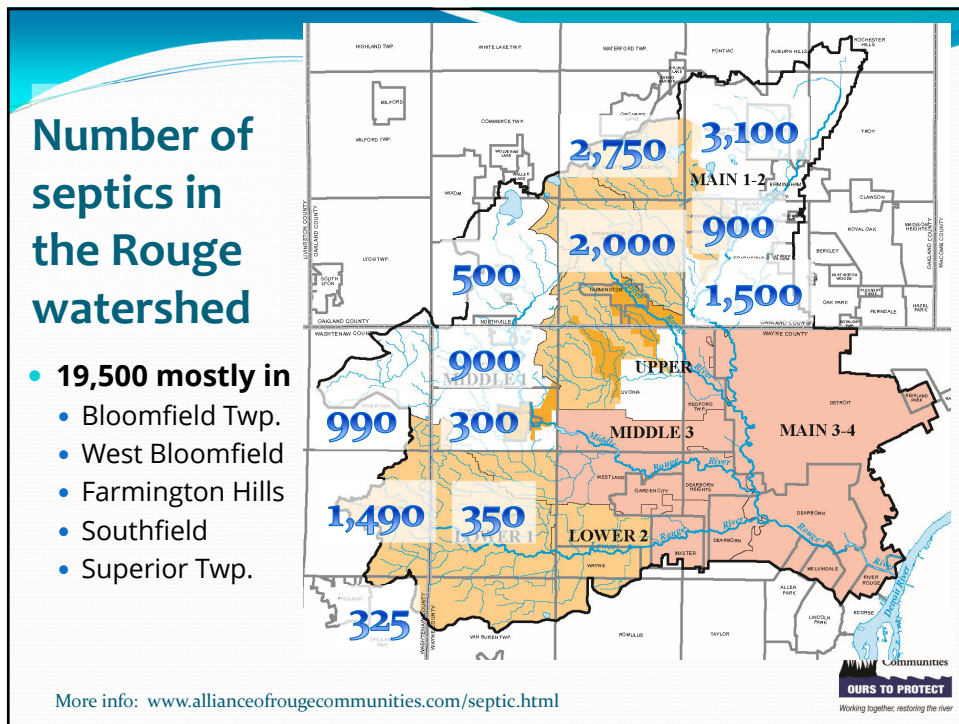
- **Humans**
  - Illicit connections
  - Failing septic systems
  - Sanitary sewer overflows
- **Pets**
  - Lack of waste pick-up
- **Wildlife**
  - Don't feed them



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Pollution Complaint Lines

Michigan's Pollution Alert System	800-292-4706
Macomb County	877-679-4337 IDEP@macombcountymi.gov
Oakland County	248-858-0931
St. Clair County	877-504-SWIM
Washtenaw County	734-222-3880
Wayne County	888-223-2363

**Illegal Dumping**  
What to Do and Who to Call

? ? ? ?

**Emergencies**  
9-1-1

**Non-emergency issues**  
(734) 222-3880

[www.ewashtenaw.org](http://www.ewashtenaw.org)

**STORM DRAIN AREN'T GARBAGE CANS**  
OAKLAND COUNTY HOTLINE (508) 789-7899

**Alliance of Rouge Communities**  
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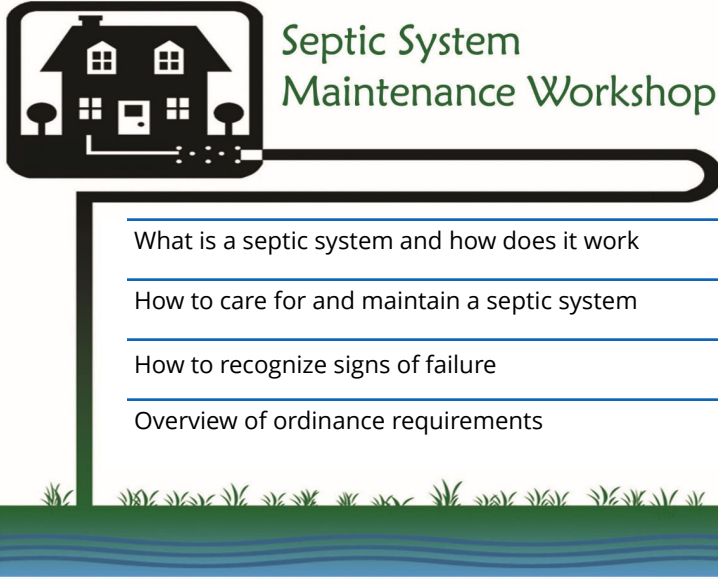
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## Septic System Maintenance Webinar

**Alice Bailey, P.E.**  
**Environmental Engineer**


*For more information visit:*  
[\*www.allianceofrougecommunities.com\*](http://www.allianceofrougecommunities.com)

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## Septic System Maintenance Workshop

- What is a septic system and how does it work
- How to care for and maintain a septic system
- How to recognize signs of failure
- Overview of ordinance requirements



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## Why are we concerned about septic systems?



Failing septic systems are suspected to be a significant contributing source of pollution in the Rouge River Watershed.

Septic systems are often neglected and not routinely maintained after the initial installation.

A malfunctioning system can contaminate our waterways and groundwater supply.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## What is a septic system?



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)

Individual wastewater treatment systems that use the soil to treat small wastewater flows, usually from individual homes.

Treats the wastewater from household plumbing by bathrooms, kitchen drains, dishwasher and laundry.

Common in rural areas without centralized sewer systems.



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## Do you have a septic system?



You use well water.

The waterline coming into your home doesn't have a meter.

You show a "\$0.00 Sewer Amount Charged" on your water bill.

Your neighbors have a septic system.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## How to find your septic system

Look on your home's "as built" drawing.

Checking your yard for lids and manhole covers.

Contacting a septic inspector/pumper to help you locate it.



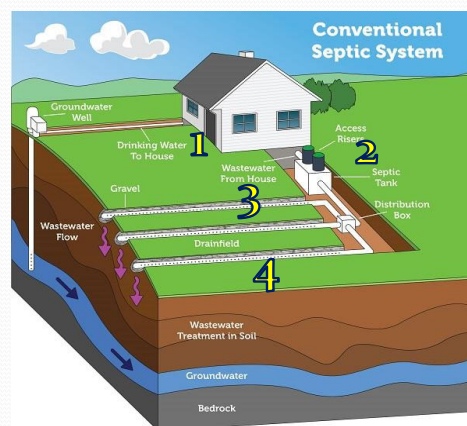
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## How it works - Overview

1. Drainage Pipe
2. Septic Tank
3. Drain Field
4. Soils



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

[www.epa.gov](http://www.epa.gov)

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)

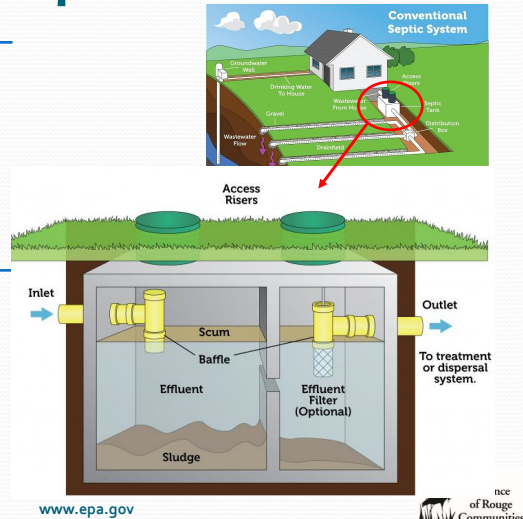


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## How it works- Septic Tank

Temporarily holds wastewater in the septic tank to separate heavy solids and lighter scum, this process is called primary treatment.

The solids are stored in the tank and are decomposed by bacteria and later removed by a professional septic tank pumper.



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



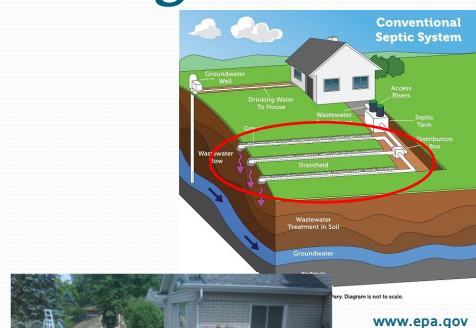
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## How it works- Discharge

Once the wastewater leaves the tank it flows into a distribution box which separates this flow evenly into a network of drainfield trenches.

Drainage holes at the bottom of each line allow the wastewater to drain into gravel trenches for temporary storage.

This effluent slowly seeps into the subsurface soil where it is further treated and purified. This process is known as secondary treatment.



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## A properly functioning septic system will:



Help protect and enhance the quality of the County's surface and groundwater resources.

Protect public health from disease causing organisms and nuisance conditions.

Properly dispose of your wastewater.

Preserve the County's waterways, including the Rouge River, for recreational enjoyment.

Saves you money!

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Caring for your septic system

As the homeowner, it is your responsibility to maintain the septic system.

### **Neglect or abuse of your septic system can cause it to fail and:**

Can cause a serious health threat to your family and neighbors.

Can degrade the environment, especially lakes, streams and groundwater.

Can reduce the value of your property.

Can be very expensive to repair.

Can put thousands of water supply users at risk if you live in a public water supply watershed and fail to maintain your system.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Caring for your septic system

- ✓ Inspect and Pump
- ✓ Watch for signs of failure
- ✓ Use water efficiently
- ✓ Take care what is sent down the drain.  
"Think at the Sink"
- ✓ Take care what is flushed.  
"Don't overload the commode."
- ✓ Landscape properly

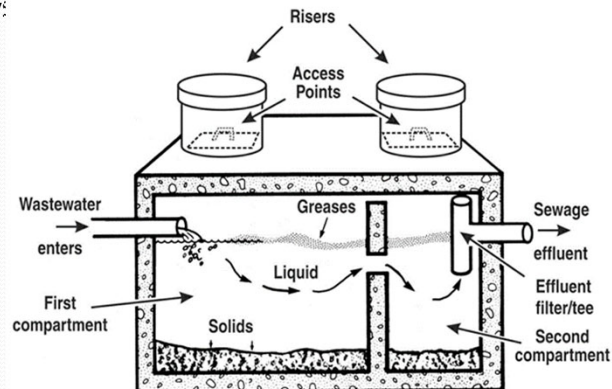
More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Inspect and Pump

The accumulated solids in the bottom of the septic tank should be pumped out every 3-5 years to prolong the life of the sy:



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## Additives

Companies make a lot of claims to sell their products, even promoting and claiming that no pumping is ever required.

The effectiveness of additives is not always agreed on (break down sludge).

We already give tanks all they need.

Every tank needs periodic pumping.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Watch for signs of failure

Sewage surfacing over the drainfield (especially after storms).

Sewage back-ups in the house.

Lush, green growth over the drainfield.

Slow draining toilets or drains.

Sewage odors.



More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Use water efficiently



Leaky fixtures can add hundreds of extra gallons of water to your system every day.

Overloading with water is a leading cause of failure.



Replacing existing toilets with high-efficiency models is an easy way to reduce the amount of household water entering your septic system.

Faucet aerators and high-efficiency showerheads help reduce water use as well as the volume of water entering your septic system.



Washing small loads of laundry on the large-load cycle wastes water and energy. Use the proper load size to reduce water waste.

Spread your laundry task throughout the week instead of all on one day to allow your septic tank time to adequately treat waste and reduce the possibility of flooding your drainfield.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Take care at the drain

Whether you're at the kitchen sink, bathtub or utility sink:



Avoid chemical drain openers for clogged drains, use boiling water or a drain snake.

Never pour cooking oil or grease down the drain.

Never pour oil-based paints, solvents or toxic cleaners down the drain.

Eliminate or limit the use of a garbage disposal which will reduce the amount of fats, grease and solids that enter your septic tank and can clog its drainfield.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Toilets aren't trash cans

Never flush:



- Disposable wipes
- Feminine hygiene products
- Condoms
- Dental floss
- Diapers
- Cigarette butts
- Coffee grounds
- Cat litter
- Household chemicals like gasoline, oil and paint
- Pharmaceuticals

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Use proper landscaping on and around your septic system

Locate your septic tank and drainfield and make sure the area is clear of:

- Underground sprinkler lines
- Driveways, decks and patios
- Sports courts
- Storage sheds
- Swing sets, sandboxes
- Vehicles, swimming pools

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# Use proper landscaping on and around your septic system

Plant native, drought-tolerant plants.

Direct all surface drainage away from the septic system.

Use shallow-rooted plants, tree and shrub roots can grow into the drainlines, clogging and breaking them.

Avoid water-loving plants and trees.

Make sure the tank lid is secure.

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## Ordinances

- Find the ordinances that apply to you
- [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)

<p><b>CHAPTER 1</b> <b>GENERAL PROVISIONS</b></p> <p><b>Section 101. TITLE</b> This Ordinance shall be known and may be cited as the "Wayne County On-Site Sewage Disposal System Evaluation and Maintenance Ordinance."</p> <p><b>Section 102. FINDINGS, POLICIES AND PURPOSES</b></p> <p><b>A. County Commission Findings</b> The Wayne County Commission finds as follows:</p> <ol style="list-style-type: none"> <li>Wayne County's Rouge River National Wet Weather Demonstration Project and other recent studies have plainly and consistently demonstrated that surface waters of the County are being impacted by point and nonpoint source pollution.</li> <li>Nonpoint source pollution is contamination of which cause or source cannot be easily identified. Failing on-site sewage disposal systems are traditional contributors to point and nonpoint source pollution. Research indicates that at least twenty percent of Wayne County's on-site sewage disposal systems are failing or manifest indications of probable failure.</li> <li>These failures result in sewage discharges to ditches, drains or directly to surface waters. To minimize the water quality problems that originate from failed on-site sewage disposal systems, and to reduce premature failure of these systems, a program to regularly evaluate on-site sewage disposal systems and effect their periodic maintenance is necessary.</li> <li>Wayne County's National Pollutant Discharge Elimination System Certificate of General Permit Coverage No. MIG610040, issued June 1, 1999 by the Michigan Department of Environmental Quality, provides for implementation, in cooperation with local communities, of a County-wide evaluation and maintenance program for on-site sewage disposal systems.</li> </ol>	<p><b>OAKLAND COUNTY HEALTH DIVISION</b> <b>SANITARY CODE</b></p> <p><b>ARTICLE III</b> <b>SEWAGE DISPOSAL AND TREATMENT</b></p> <p>To protect the public health and safety from nuisances, hazards and causes of illness resulting from improper sewage disposal and treatment, there are hereby provided the following rules and regulations relating to the design, location, construction, operation and maintenance of Onsite Wastewater Treatment Systems within the County of Oakland.</p> <p><b>SECTION 1 - DEFINITIONS:</b></p> <ol style="list-style-type: none"> <li><b>Acceptable Soils</b> - Acceptable Soils are those which consist of sand, sand and silt mixture, or clay silt sand mixture with the sand comprising at least fifty (50) percent of the mixture.</li> <li><b>Available Public Sewer</b> - The term Available Public Sewer shall mean a public system, which is under the jurisdiction of 1994 PA 451, as amended, specifically MCL 224.4101 et seq, and is located not more than two hundred (200) feet at its nearest point to a structure from which Sanitary Sewage originates and the use of which is permitted by the responsible governmental entity.</li> <li><b>Code</b> - The term Code shall mean the Oakland County Sanitary Code.</li> <li><b>Commercial</b> - The term Commercial shall mean all public, semi-public, and non-residential Premises, including structures or buildings not herein defined as a single or two-family residence.</li> <li><b>Failure</b> - The term Failure shall mean one of the following conditions:             <ol style="list-style-type: none"> <li>The discharge of sewage to the surface of the ground</li> </ol> </li> </ol>
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More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## As a homeowner under the ordinance

Maintain your septic system to prevent failure.



Septic tank overflow

Notify the health department of any known or suspected disposal system failure.

Remedy any disposal system failure.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Building a house under the ordinance



A site/soil evaluation is required before building a home that is not served by a municipal or centralized sewage treatment facility.

The evaluation, also referred to as a "perk test", is an assessment performed by the County Environmental Health Department.

The evaluation determines a site's suitability for installing a new onsite sewage system.

County building inspectors require either proof of municipal sewer connection or a sewage permit before building permits can be issued.

The evaluation must be **completed and approved** before you can construct your sewage system.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Selling a house under the ordinance



Have your disposal system evaluated by a registered evaluator.

Cooperate with the registered evaluator by providing pertinent information and paying the costs for the evaluation.

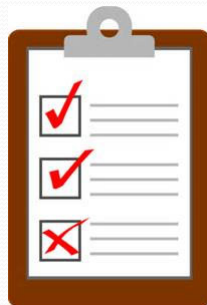
Obtain an authorization for sale or transfer prior to closing from the County Health Department

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## What is included in a septic system evaluation



Identification of your septic tank and drainfield locations.

Pumping out of your septic tank at the time of evaluation.

Exposing the drainfield for inspection.

Determining if your disposal system is functioning satisfactorily, is in a state of failure or contains potential failure conditions.

The evaluation may also identify recommendations which may prevent premature failure of your disposal system.

Educational materials are provided as part of the evaluation.

More info: [www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)



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## Disposal system evaluation report



A report must be provided to the owner within a certain number of days of the evaluation.

The registered evaluator must send the report to the health department within a certain time frame of evaluation and a minimum amount of days prior to closing on a sale of a house.

Disposal system evaluation reports are maintained by the County and are available to prospective buyers or other interested persons.

Reports are valid for certain number of months.

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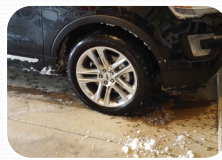


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## Above and beyond



In your yard



With your vehicles



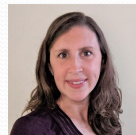
In your community



In your business

### Report Illegal Dumping

Michigan's Pollution Alert System	800-292-4706
Macomb County	877-679-4337 IDEP@macombcountymi.gov
Oakland County	248-858-0931
St. Clair County	877-504-SWIM
Washtenaw County	734-222-3880
Wayne County	888-223-2363



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## Questions & thank you!

**How did we do? – please take our survey:**

**[www.surveymonkey.com/r/septicsys](https://www.surveymonkey.com/r/septicsys)**



**For more information on septic systems and  
to download a copy of the webinar slides visit:**

**[www.allianceofrougecommunities.com/septic.html](http://www.allianceofrougecommunities.com/septic.html)**

**If you would like septic system information mailed to  
you, please email your address to:**

**[info@allianceofrougecommunities.com](mailto:info@allianceofrougecommunities.com)**

