

- **Statements in this presentation are opinions of the presenter, not NORWA.**

MJC Septic Pumper Pro Application

Powered by AWS

Maintained/Created by MJC Septic Services with technical work from WonderTour Consulting





Agenda

- Current State
 - MJC Septic Pumper Pro Application
 - Stoplight System Concept
 - Next Steps
-

Ohio Department of Health

Mission statement

<https://odh.ohio.gov/about-us>

The Ohio Department of Health's mission is advancing the health and well-being of all Ohioans by transforming the state's public health system through unique partnerships and funding streams; addressing the community conditions and inequities that lead to disparities in health outcomes; and implementing data-driven, evidence-based solutions.

We organize our agency according to our core public health responsibilities:

- Prevent and control the spread of infectious diseases (Bureau of Infectious Diseases)
- Provide direction, support and coordination in preventing, preparing for and responding to events that threaten the public's health (Office of Health Preparedness)
- Build strong communities to enable Ohioans of all ages and abilities live disease and injury-free (Bureau of Health Promotion and Office of Health Improvement and Wellness)
- Address health inequities and disparities, and support access to comprehensive, integrated healthcare for all to achieve the best possible outcomes (Office of Health Policy and Performance Improvement)
- Assess and monitor environmental factors that potentially impact public health including air, water, soil, food and physical and social features of our surroundings (Bureau of Environmental Health and Radiation Protection)
- Assure quality in health care facilities, health care services, and environmental health through smart regulation to protect the health and safety of Ohioans (Office of Health Assurance and Licensing)

Septic Pumper App enables ODH to better accomplish its mission

Be the Leader of Change for the environment and OUR water

- The industry acknowledges the need for change
- Data illumination promotes improvements
- Pumper Magazine: Developed for pumpers to keep learning every day

P [Pumper.com](#)

Abandoning Sewage Tanks Properly Saves Lives

Follow these decommissioning tips to prevent dangerous collapses, ongoing pollution issues and unnecessary underground obstacles in a customer's yard. [Read more](#)



“If this industry is truly about protecting the environment, why do we have to wait so long to put in technology that allows us to clean things up to the clean water standards?”

From the article: [Treat Customers Right and Enjoy Success For Generations](#)

P [From the Magazine](#)

Classy Truck of the Month: Creech's Plumbing, Wilson, North Carolina

[Read more](#)

Current State - Septage Pumping Report Form

Form is Confusing and Time-Consuming to Fill Out, Easy to Make Mistakes

- Paper form, scan to make electronic
- Multiple manual steps prone to error
- Where are lids located on multiple tanks?
- Could risers be located over different parts of tank 1 vs tank 2?
- Difference of "thoughts" from pumper to pumper

Local Health District		SEPTAGE PUMPING REPORT FORM	
<i>The information contained in this report reflects the observations recorded at the time the system was pumped and includes any actions completed by the registered septage hauler. This report shall not be construed as a declaration of approval or disapproval or the proper function of the system.</i>			
Pumping Date:	County:	Township:	
Pumping Location Address (include city & zip)			
Name of Person making Request: <input type="checkbox"/> check if this person is the owner			Phone #:
TANK PUMPING INFORMATION		<input type="radio"/> Residential <input type="radio"/> Commercial	# of Tanks: _____ Total Gallons Pumped: _____ gal.
Check all that apply. If multiple tanks, number the tanks in order beside the tank type. More than one of the same type should also be numbered in succession.			
<input type="checkbox"/> Septic <input type="checkbox"/> Aeration <input type="checkbox"/> Holding <input type="checkbox"/> Dosing <input type="checkbox"/> Privy Vault <input type="checkbox"/> Portable tank <input type="checkbox"/> Other _____ Type: _____ If applicable, what type Aeration tank? _____ Was the aerator motor? <input type="checkbox"/> Present <input type="checkbox"/> Missing			
Check all that apply and place the number of the tank listed above next to the material type.			
<input type="checkbox"/> Concrete <input type="checkbox"/> Fiberglass <input type="checkbox"/> Plastic <input type="checkbox"/> Brick <input type="checkbox"/> Metal			
Give the volume of each tank pumped:			
Tank 1 _____ gal	Tank 2 _____ gal	Tank 3 _____ gal	Tank 4 _____ gal
TANK CONDITION OBSERVATIONS			
Tank Condition <input type="checkbox"/> Good <input type="checkbox"/> Poor <input type="checkbox"/> Could not determine		If Poor, which tank? <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all	
Risers: <input type="checkbox"/> Present <input type="checkbox"/> Absent, which tank <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all		Riser located over: <input type="checkbox"/> Inlet <input type="checkbox"/> Center of Tank <input type="checkbox"/> Outlet	
Riser Lids: <input type="checkbox"/> Present <input type="checkbox"/> Absent, which tank <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all		Risers and Lids Condition: <input type="checkbox"/> Good <input type="checkbox"/> Poor	
Evidence of Leaking? <input type="checkbox"/> Yes <input type="checkbox"/> Inconclusive			
Which tank? <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all at the (check all that apply) <input type="checkbox"/> Tank <input type="checkbox"/> Riser <input type="checkbox"/> Inlet <input type="checkbox"/> Outlet <input type="checkbox"/> Inconclusive			
High Water Level at time of pumping <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Could not determine If yes which tank? <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all			
Evidence of previous tank high water level observed <input type="checkbox"/> Yes <input type="checkbox"/> Inconclusive If yes which tank? <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all			
Baffle(s) and Tee(s) <input type="checkbox"/> Present <input type="checkbox"/> Absent <input type="checkbox"/> Not observed If absent which tank? <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all			
Baffle(s) or Tee(s) Condition (if observed): <input type="checkbox"/> Good <input type="checkbox"/> Poor If Poor, which tank? <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> all			
Effluent Filters <input type="checkbox"/> Present <input type="checkbox"/> Missing <input type="checkbox"/> N/A, tank older than 2007 If present, were they cleaned? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Other Solids Removed Type of Material: <input type="checkbox"/> Filter Media <input type="checkbox"/> Peat <input type="checkbox"/> Other: _____			
Was dewatering necessary? <input type="checkbox"/> Yes, _____ gal <input type="checkbox"/> No <input type="checkbox"/> N/A Solid Waste Facility taken to: _____			
Did spillage occur during pumping process? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, was area properly cleaned and disinfected? <input type="checkbox"/> Yes <input type="checkbox"/> No			
List all Repairs, Additional Work and Comments:			
Disposal Location:			
<input type="checkbox"/> Waste Water Treatment Facility Name of Facility: _____			
<input type="checkbox"/> Land Application Permit #: _____ Address: _____			
Driver/Technician Name (printed)		Company Phone #:	
Septage Hauling Company:		Registration #:	
YOUR TANK(S) IS RECOMMENDED FOR SERVICE AGAIN IN: _____ Years _____ Months			
REGULAR MAINTENANCE IS NECESSARY TO PROLONG THE USEFUL LIFE OF YOUR SEWAGE TREATMENT SYSTEM.			

Benefits of MJC Septic Pumper Pro Application



Tracking for Homeowners of last/next service



Updated online data for the HD



Alert and Prevent Additional Environmental Harm



Improved tracking of septic systems – Data Analysis



Time savings for pumpers and the local HD's



Standardized and more "complete" septage pumping record

The screenshot shows a digital form titled "Septic Pumping Form". It is divided into sections: "Customer Information" and "Tank System Information". Under "Customer Information", there are fields for "First Name:", "Last Name:", "Pumping Date:" (with a date picker showing 03/09/2024), "Customer Address (Street Address, City, State, Zip Code):" (with a location input field), "County:", "Township:", "Phone:", and "Email:". Under "Customer Type:", there are radio buttons for "Residential" and "Commercial". There is also a checkbox for "Is Owner:". At the bottom of the form, there is a blue button labeled "Add Tank".

Example Digital Form

Application Concept



Septic Pumper Inspects Septic System, Starts Filling Out Form



Septic Pumper Finishes Filling Out Electronic form on Phone and Submits It



Phone Transmits Data to the Cloud; Convert to PDF



AI Judges Red, Yellow, Green, Adds Data to PDF



PDF is Delivered Electronically to Health Department

Who Wins?

- Pumpers
- Service providers
- Installers
- Health Departments
- Sanitarians
- Inspectors
- Homeowners
- Realtors
- Counties short on manpower



Benefits to Health Dept

HD Efficiency: Improve efficiency local health departments.

Mission Fulfillment: Support the ODH's environmental mission.

Efficient Information Management: Streamline information development and accessibility.

Resource Optimization: Manage time and resources effectively.

Environmental Protection: Better Visibility to Correct and prevent harm to the environment and natural resources.

Accountability: Hold pumpers and homeowners accountable.

Standardized Forms: Implement comprehensive, standardized septage pumping forms.

Ease of Form Creation: Easily generate new standardized forms.

For sake of argument: Let's say each pumper pumps 5 tanks a week (1 per day).

26 pumpers x 5 pumps per week = 130 pumps/week

130 pumps/week x 4.33 weeks/month

= 563 pumping reports coming in each month from pumpers

MJC averages 8 pumps a week. And we know that we are not the busiest pumper out there! Last year MJC pumped 388 customers.

Now let's look at inspectors, 27 inspectors x 2 inspections/week
= 54 x 4.33 weeks/month = **233 inspections.**

Does the local HD really have enough manpower to look over each report and inspection to thoroughly make sure everything is to code?

Are we just going to say we are ABOUT It or are we going to BE ABOUT IT!

BE THE CHANGE YOU WANT TO SEE IN THE WORLD!

By the Numbers:

Delaware County in 2023

- 26 pumpers
- 52 Installers
- 27 Inspectors



Anticipated Challenges

- A new technology that pumpers/ inspectors must learn to manage
 - Process Change for Local HD
 - Home owner issue of trying to "pass off" a system
 - Home owner not wanting to pump for fear of HD involvement
 - Cost to replace/ fix the systems as needed
 - Bringing a "stone age" industry to the "modern" age
-



Application Details

- Each pumping company would have its own log in providing **private credentials and tracking**
 - When on the job site, they can **enter data from any smart phone or tablet**
 - Data will be **updated to local HD address profile in real time**
 - "Stop light" artificial intelligence (AI) system will modify where the Individual pumping report goes
 - IE. Green means good to go, Yellow needs further evaluation when time is allowed, Red means needs action as soon as possible
-

Would this be considered a "RED" Light

- Is this an issue?
- Is this a safety hazard?
- Should this be immediately addressed?



👍👍 9

8 comments

< Septic Tank Pumper Trucks / PUM...

Garett Hunting · Nov 29, 2023 · 📷

Hide and seek

Under the natural thicket

Layers of:

Plywood on

Rotten tin on

Shingles on

Cor plastic on

Rotted timbers as lid of OLD steel single chamber "tank" that I know is below the creek a few feet away in spring



👍 2

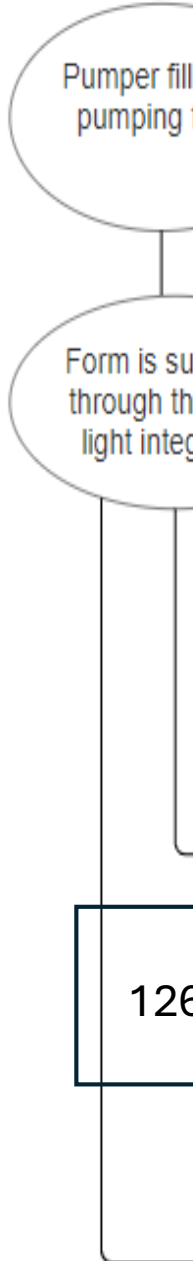
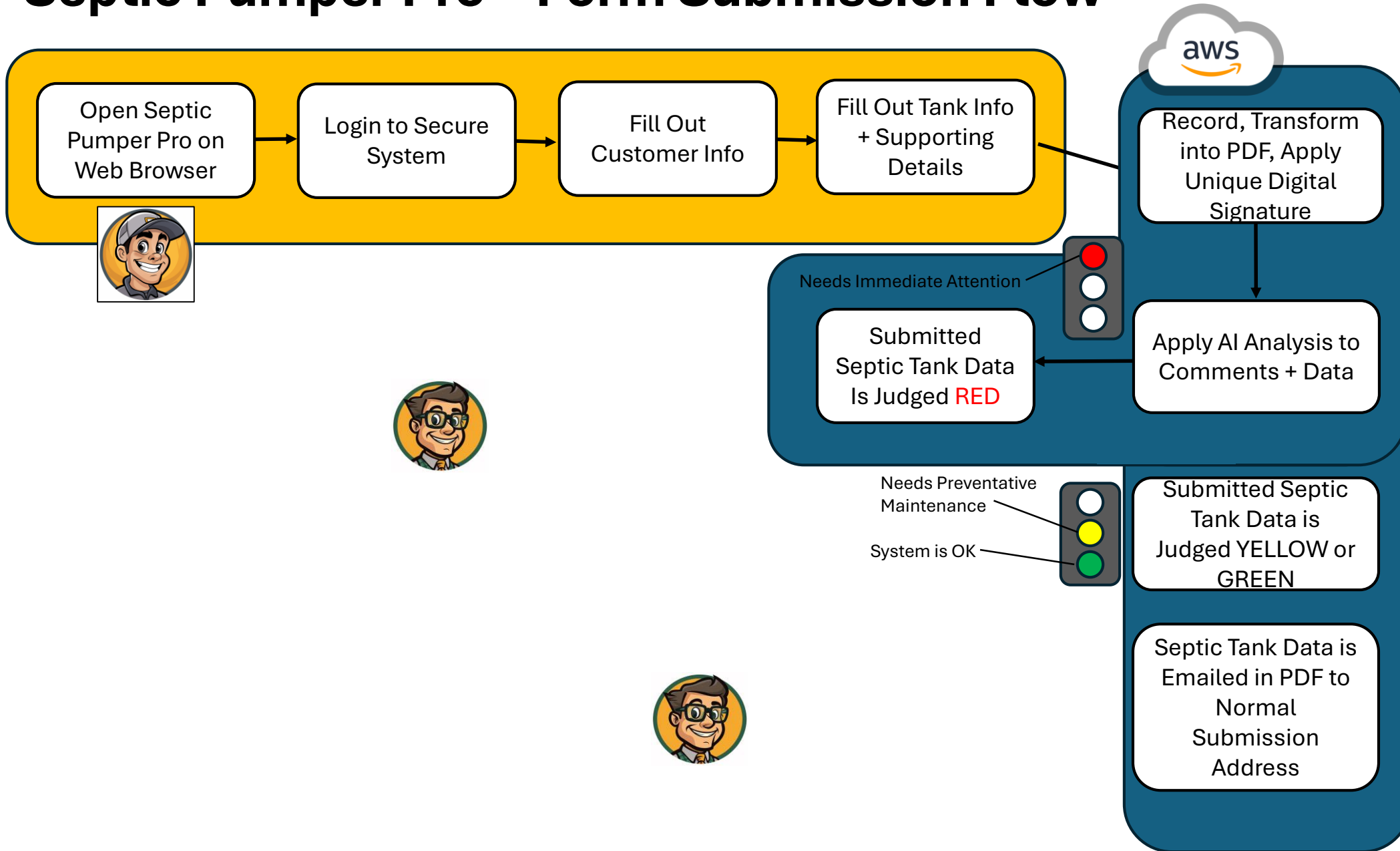
1 comment

Stop light system - Details

- Red: System needs to be immediately addressed
 - Examples: surfacing of sewage anywhere on the system, absences of lids/risers, missing aerators, UV missing, Chlorine tablets missing
 - Integral parts of the septic system functioning incorrectly
- Yellow: System items that should be addressed (Bring up to code..etc)
 - Examples of this would be inlet/outlet baffle collapsed, DB corrosion,
 - Need outside clean out.
- Green: System in good shape until next time

Can be customized per HD direction

Septic Pumper Pro – Form Submission Flow



Happening in OUR own backyard

Showing the flow of the report



Government Funding for SST

- Union Co.
 - WPCLF Grant with EPA
 - CHIPS program through the county commissioners (not funded in past 2 years)
 - National:
 - US department of Rural development Grants 62+ income, Loans-20 year at 1% interest
 - Water Well Trust-USDA
 - Great lakes community action program

- Franklin Co.
 - Water Pollution Control Loan Fund (WPCLF)
 - 150k Epa
 - 400k Franklin

Following are programs which may be able to assist homeowners with septic &/or well repair or replacement.

Great Lakes Community Action Partnership - Decentralized Water Systems Program

Available for septic system repair or replacement (including aerator repairs), water well improvements & in home water treatment. This program is based on household income and property location.

Applicants must own and occupy the home being improved or be purchasing the home. Ohio household income may not exceed \$33,600/yr. Maximum loan amount: \$15,000 at 1% interest for max of 20 years.

Valerie Van Fleet 419-333-6074 vjvanfleet@glcap.org

USDA - Rural Development Loans

This program is based on household income and property location. Typically, a septic/well repair or replacement would fall under the 504 home repair loan program. In 2021, in Union County the maximum gross total household income in the very low income category for a family of 2 would be \$42,100 to qualify for the 504 program. Those loans are 1% interest over 20 years for up to \$20,000.00.

USDA - Rural Development Grants

Grants for people ages 62 and over in that same very low income category (as the loan program) for up to \$10,000 lifetime maximum. Those do not have to be paid back if the borrower stays in the household for 3 years.

The two USDA Rural Development programs may be combined for a total of \$27,500. See the [USDA Grant/Loan Program](#) with more information on the 504 loan/grant program.

Nadine DeRan 419-581-4505 nadine.deran@usda.gov

Water Well Trust - a non-profit organization that helps low-income homeowners with the financing of their wells, well rehabs, pumps and septic systems. They do this through funding from the USDA and use that funding for loans at a 1% interest rate, up to \$15,000 and up to 20-year terms.

Please [complete the online interest form](#) and they will contact you or contact the office by calling 833-539-8200 or email at info@waterwelltrust.org.

CHIPs Program - this program is managed by the Union County Commissioners and has not been funded for the current grant cycle. Contact the Commissioners for more info.

If you have any questions, concerns or comments, contact:
Holly Rast at 937-645-2043 (direct line) or holly.rast@uchd.net (best way to reach me)

Next Steps

MJC would like to:

- Begin sending Septage Pumping Report Forms to HD via email automatically
- Pilot Stop Light Feature to validate usefulness



MJC Septic Pumper Pro Application is developed
By Pumpers For Pumpers

Questions?

- Thank you for taking time today to hear our presentation

Need to work with Marcus to integrate the following section into the above

Facts:

- [https://www.usbr.gov/mp/arc/wec/water-facts-ww-water-sup.html#:~:text=Water%20covers%20about%2071%25%20of%20the%20earth's%20surface.&text=97%25%20of%20the%20earth's%20water,most%20industrial%20uses%20except%20cooling\).&text=3%25%20of%20the%20earth's%20water%20is%20fresh.](https://www.usbr.gov/mp/arc/wec/water-facts-ww-water-sup.html#:~:text=Water%20covers%20about%2071%25%20of%20the%20earth's%20surface.&text=97%25%20of%20the%20earth's%20water,most%20industrial%20uses%20except%20cooling).&text=3%25%20of%20the%20earth's%20water%20is%20fresh.)
- We are not getting "new" water. We must protect what we have

<https://ohiowatersheds.osu.edu/resources/human-dimensions/mental-models/septic-maintenance-and-upgrades#:~:text=Breadcrumb%20Menu&text=Roughly%201%20million%20Ohio%20homes,upkeep%20are%20the%20homeowner's%20responsibility.>

Roughly 1 million septic systems in ohio

How many septic pumbers in Ohio?

Septic Tank Pumper Trucks / PUMPER NATION

Ryan Henry · 55m ·

Went to second job, the customer showed up to the home site, which they just rehab the house to sell, he popped the lid off riser for tank. Lol there is no tank the previous owner did away with tank and pipes it in to creek over hill lol

Like Comment Send

14

Top comments

Dylan Rosales 51m Like Reply

Jessica Lappin Wagner I swear every rehabber we work with around here puts all their time and money into the house and the system is failing and doesn't pass inspection. Sheesh! 36m Like Reply 2

Septic Tank Pumper Trucks / PUMPER NATION

Shawn Graham · 1h ·

System discharging directly into puget sound.



Evidence

Evidence in the field

Verizon 1:17 PM 98%



Septic Tank Pumper Trucks /
PUMPER NATION

Ronnie Tamez · 22m · 📷

First emergency call. Servicing effluent on the distal end of a drain field line. 1970s home. I told the client we will dig up the big box next week and shut that line off. Utility locates has been filed, fiber optics in the front yard. I told them I would contact an engineer to start the process of getting a new septic system. I wouldn't put in too much more money into this old thing.



👍 4

3 comments

<https://ohiowatersheds.osu.edu/resources/human-dimensions/mental-models/septic-maintenance-and-upgrades#:~:text=Breadcrumb%20Menu&text=Roughly%201%20million%20Ohio%20homes,upkeep%20are%20the%200homeowner's%20responsibility.>

<https://www.farmanddairy.com/top-stories/ohio-septic-system-regulations-overhauled/238023.html>