# EPA Decentralized Wastewater Program: Overview and Updates Michael Mezzacapo, Carolina Cantu, & Kruttika Gopal U.S. EPA, Office of Wastewater Management

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EPA United States Environmental Protection Agency

# **Presentation Outline**

- EPA Decentralized Program Background
- Decentralized Wastewater MOU Partnership
- SepticSmart Week

Disclaimer: The comments made in this presentation are those of the presenter and not of NOWRA or the Mega-Conference sponsors.



## **Decentralized Program Background**

• 1997 Report to Congress on Decentralized Systems in the U.S.

- Primary Finding: Decentralized systems can provide the same level of treatment, and may be less expensive than centralized wastewater (sewer) treatment
- Early 2000s: Decentralized Program created including issuance of many guidance documents, and MOU Partnership
- EPA program provides non-regulatory program support focused on outreach tools for homeowners, counties and states



## **Decentralized Wastewater MOU Partnership**





## **Decentralized Wastewater MOU Partnership Priorities**

- 1. Increase outreach and public education to ensure decentralized wastewater and septic systems are properly maintained to protect water quality and human health
- 2. Identify and utilize current information and data on the use and performance of decentralized wastewater and septic systems in the US
- **3.** Promote the benefits of advanced decentralized treatment technologies within the wastewater industry and to the public
- 4. Share information on funding sources and pursue innovative public and private financing options to help communities and homeowners replace, upgrade, or maintain decentralized wastewater systems
- 5. Expand mechanisms to address workforce, education, training, and research needs related to the decentralized wastewater industry to improve future sustainability



## **Decentralized Wastewater MOU Partnership**

- MOU Renewed every 3 years
- MOU began in 2005 with 8 partners
- 20 partners in 2020
- 2023 was the 7<sup>th</sup> MOU Renewal, 5 new partners
  - International Code Council (ICC)
  - National Association of Clean Water Agencies (NACWA)
  - Ocean Sewage Alliance (OSA)
  - WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (WASH)
  - USDA-Rural Development (USDA-RD)



### **MOU Workplan Priorities**

### EPA and MOU Partners completed the following activities in 2024:

EPA expanded the number of communities receiving technical assistance - currently supporting 36 new communities

• Priority 2-1: Closing America's Wastewater Access Gap

#### Septic Tank Additives Fact Sheet & Climate Change Resource Guide

 Priority 3-1A: Develop materials that showcase decentralized research, technologies, and approaches relative to climate and weather impacts

Revise and update EPA's Homeowner's Guide to Septic Systems for Tribal Communities

• Priority 1-1B: Update resource materials for Tribal and indigenous audiences

Revise and update the SepticSmart Week Public Outreach Guide

• Priority 1-1C: Revise and update SepticSmart Week social media guide for partners



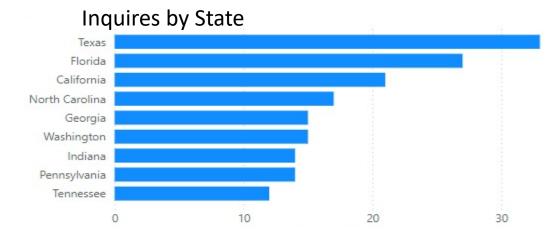
## **MOU Workplan Priorities**

- EPA has identified the following priorities for 2025:
- **Priority 1-2:** Identify opportunities to promote the SepticSmart program
- **Priority 2-2:** Connect communities to funding sources through technical assistance
- **Priority 4-1:** Develop a factsheet on septic system prevalence and distribution
- **Priority 4-2:** Update the EPA website with septic system information from U.S. Census
- **Priority 5-2:** Develop a prioritized list of decentralized research needs

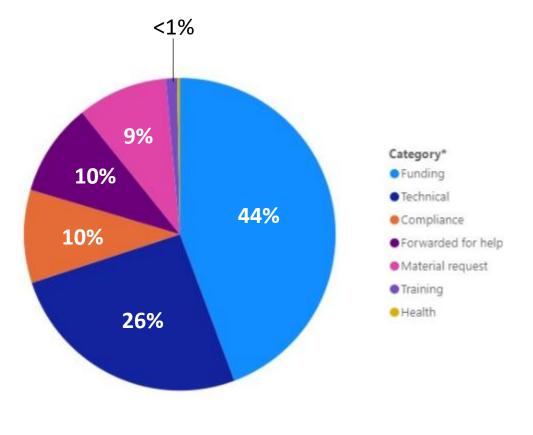


### **Septic System Contact Us Inquiries**





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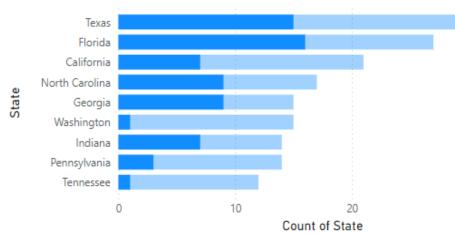
Office of Water

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## **Funding & Technical Inquiry Breakdown**

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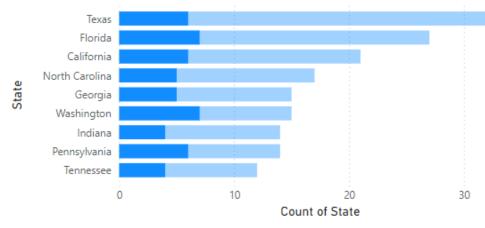
#### Funding Inquires by State FY 2024



- 1. Florida-16
- 2. Texas-15
- 3. North Carolina- 9
- 4. Georgia-9
- 5. California-9

#### Technical Inquires by State FY 2024

- 1. Florida- 7
- 2. Washington-7
- 3. Pennsylvania-6
- 4. Texas- 6
- 5. North Carolina- 6





## **Additives Fact Sheet & Climate Change Resource** Guide

#### €EPA

**Onsite Wastewater Treatment Systems** Septic Tank Additives Fact Sheet

#### **Overview**

water treatment systems (co nonly referred to as septic systems) treat human and domestic waste before water to the environment. Septic tank additives containing bacteria or chemicals are commonly marketed to improve system erformance. However, use of these additives is not recor nmended for domestic wastewater treatment because there is already a significant presence of bacteria, enzymes, yeasts, fungi, and other microorganisms in onsite wastewater treatment systems (U.S. EPA, 2002). Additive products can be ineffective or even harm system operation and the environment. Any operational issues should be assessed by a septic system professional or local regulator

#### **Potential Issues Associated with Septic Tank Additives**

The U.S. Environmental Protection Agency does not commend the use of septic system additives containing eria or chemicals for the following reasons:

> contain the bacteria, enzymes, yeasts, fungi, and microorganisms needed to function properly (Harwood, arch. Consumer goods sold as septic syster cleaners, decomposers, deodorizers, organic digesters, o rs may have only limited third-party r

For more information, visit https://www.epa.gov/septic

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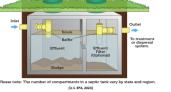
Potentially harmful impacts. Some of these products may interfere with the breakdown of waste contribute to system clogging, and contaminate groundwater and

ufacturer claims (Pradhan et al., 2011).

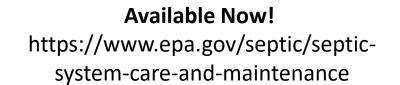
receiving waters (Pradhan et al., 2011; Lee & Coyne, 2012). Unnecessary for operation. Homeowners can save money by avoiding products that are marketed to improve system performance. Onsite wastewater treatment systems already

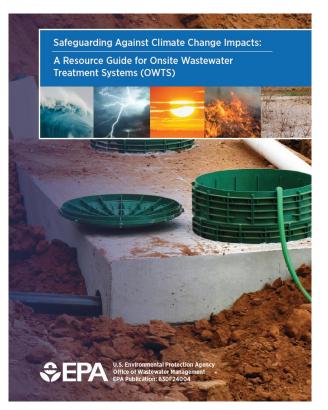
Septic Tank

Access Risers



itations. Many individual states and localities have information on the proper operation of septic systems, including lists o approved additives per their rules and/or regulations. Check with your local and/or state department of health or department of tion for additional information on allowable septic system additives in your area





**Coming Soon!** 



# SepticSmart Week

### 2024 Highlights

### September 16-20, 2024

https://www.epa.gov/septic/septicsmart-week



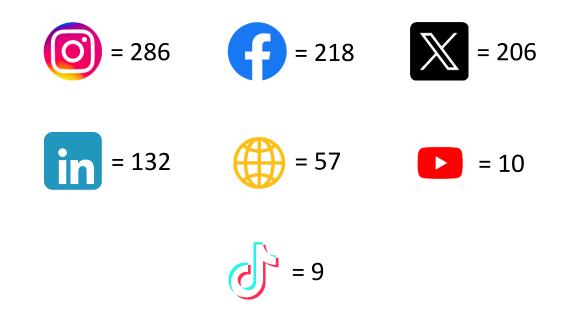


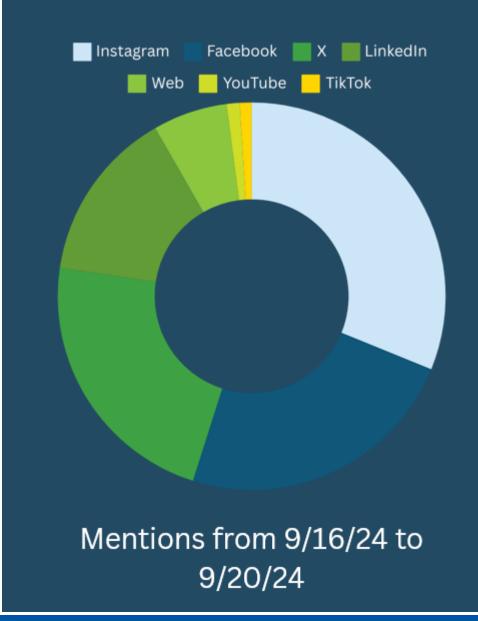


# **SepticSmart Success Metrics**

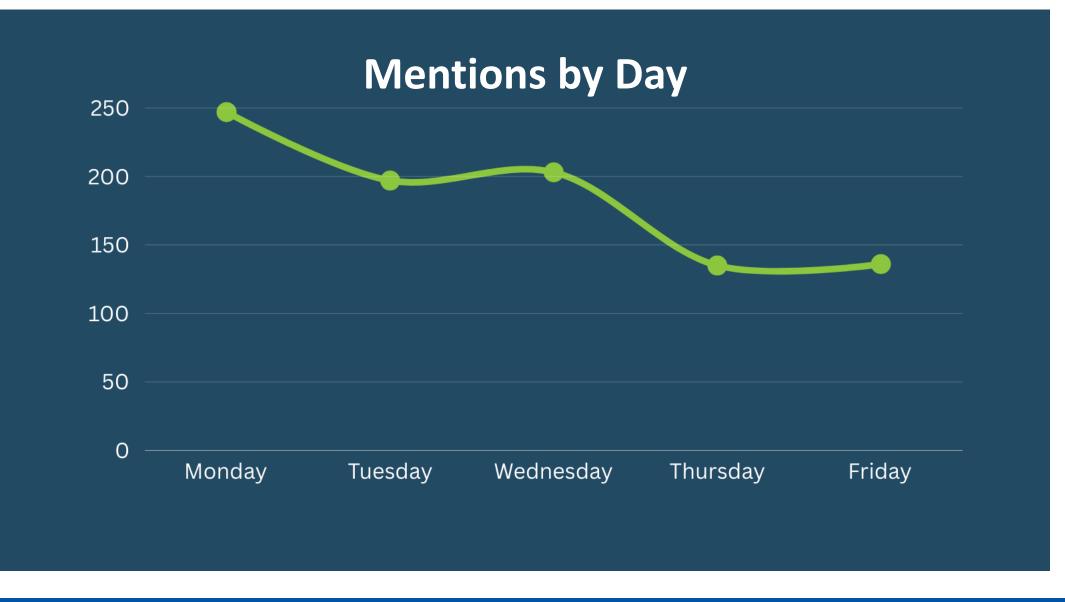


# **918 mentions** + 19% from 2023





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## Monday (9/16) Mentions by Hour

MOU "Thunderclap" messaging campaign from 12pm - 2pm ET

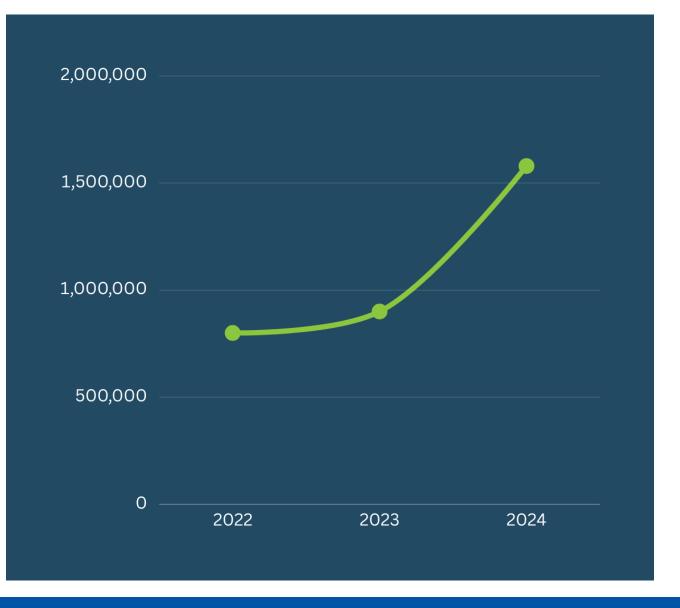


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# 1,579,369

unique social media accounts reached in 2024

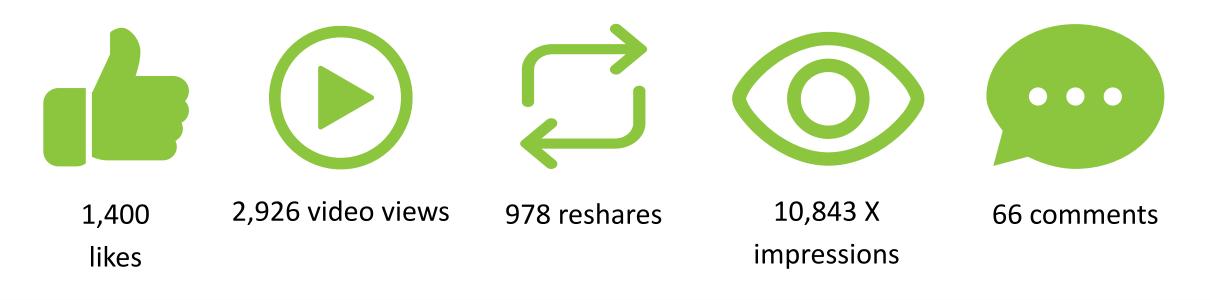
### + 75% from 2023





# 16,213 interactions

with SepticSmart Week posts





# **EPA Website Traffic**

Total Page Views	2024	2023
Avg Weekly Views: Jan-August	22,463	18,495
SepticSmart Week Views	32,065	18,532

### +43% increase in web traffic during SepticSmart Week 2024 +73% increase compared to 2023



# **11 Proclamations**









# SepticSmart 2024 Outreach



# **Community Events**

- Michigan Environment, Great Lakes, and Energy Department hosted a 'Septic System 101' webinar on Monday, 9/16.
- University of **Minnesota**'s Water Resource Center held a 'Being Septic Smart' webinar on Tuesday, 9/17.
- Geauga County (Ohio) Soil and Water Conservation District and Geauga Public Health held a free, in-person SepticSmart program at the Geauga County Public Library on Tuesday, 9/17.
- The Viriginia Cooperative Extension offered an in-person 'Septic System Best Management Practices' workshop in Page County, VA on Thursday, 9/19.





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# **SepticSmart Socials**

### **Spotlighted Posts**





In Nassau County, eligible property owners can take advantage of grants of up to \$20,000 to upgrade their antiquated cesspools and conventional septic systems to nitrogen-reducing systems.



A Hydro-Action System being installed (left) and Fuji Clean (right)



https://www.nassauswcd.org/SEPTIC

Manhasset Bay Protection Committee promotes Nassau County, NY, septic maintenance grants.



Synthetic DNA (sDNA) tracers are lab-created DNA strands that mimic natural DNA. Each tracer acts as a unique barcode that can be easily distinguished from each other and read in water samples. MONTANA septics MONITOR FLOW VOLUME **REGULAR MAINTENANCE** & PROPER DISPOSAL Be aware of the quantity and strength of wastewater checks to identify and address

generated by your HOU any potential issues early on activities to prevent overloading the OWTS MAINTENANCE TIPS FOR SEPTIC SYSTEMS (OWTS) WITH HOME CCUPANCY USE (HOU) LANDSCAPING EDUCATE CONSIDERATIONS **EMPLOYEES** Avoid planting trees or Ensure all employees are shrubs with deep roots near aware of proper waste the OWTS to prevent root disposal practices and their role in maintaining the OWTS. intrusion

Montana Waters, a Montana water conservation group, shares how they used synthetic DNA to monitor how septic systems impact local water quality.

The City of Malibu, CA, shares custom septic maintenance tips - highlighting the importance of home occupancy use.



#### Livingston County, MI, reminds residents that "toilets are not trash cans!"





80% of Nags Head properties have a septic system. Do you know about yours?





New Hampshire Lakes, a lake conservation nonprofit, connects #SepticSmart to #LakeSmart.

Nags Head, a town on North Carolina's outer banks, provides tips for preparing septic systems for inevitable hurricanes and storms.







Licking County, OH, developed custom graphics with #SepticSmart tips for county residents.



Jim-Bob, West Virginia amateur comedian, advocates for Yoda as a spokesperson for Septic Smart Week. He writes, "There is no try, only doo."



Orange County Sanitation District promotes the "3 Ps," encouraging septic system owners to only flush, pee, poop, and (toilet) paper.

## Web

### Spotlighted stories

MiamiDade County RER MiamiDadeRER - Follow

Did you know that King Tide flooding can cause your septic tank to malfunction? This can have an impact on the health of Biscayne Bay. Be #SepticSmart! If you see flooding, be sure to call 311 to report the time and location.

6:00 PM - Sep 19, 2024 2 Reply Copy link Read more on X WNMF, Tampa Bay-area nonprofit news

station, writes story about king tides as a threat to septic systems.

#### **County Sanitarian does Vining a solid**

Grants fund new septic systems for several Tama Co. communities

Download

**PDF File** 

File size:

146MB. OS:



Arlo Cibula and hia pup Mr. Wilson pictured at his and wife Nancy Cibula's Vinnig home earlier this month following the installation of a new septic system financed through a grant from the low Finance Authority's Water Infrastructure Fuul. The grant—which replaces aging private septic systems in unservered communities like Vining – was funded by the American Rescue Plan Act (ARPA) PHOTO BY RUBY F. MCALLISTER

VINING – After being injured in a serious car accident earlier this year. Vining residents Arlo and Nancy Cibula recently received a solid win by way of a completely free, new septic system – arriving just in time for SepticSmart Week – and it's all thanks to the efforts of County Sanitarian Chris Behrens. Tama-Toledo News Chronicle, local Iowa newspaper, published a story promoting state septic grants in relation to SepticSmart Week.



Oklahoma Farm Report promotes SepticSmart Week for their agricultural news audience across five states.

# YouTube

### Spotlighted videos



Washington Department of Ecology developed two new educational videos: "Intro to Septic" and "Septic Maintenance"



Indiana Onsite Wastewater Professionals Association animated a SepticSmart Week video.



Iowa Department of Natural Resources created a video "investigating criminals," like dishwasher pods and disposable wipes, that disrupt septic systems.



That Septic Girl posted a series of SepticSmart tips, amplifying SepticSmart Week messaging.



# **EPA Socials**



You need to add store-bought performance enhancers to your septic system

Image shared across Instagram, X, and LinkedIn.



EPA filmed a two-part series of septic maintenance tips featuring EPA Office of Water's Heidi Faller. The videos were shared





Instagram reel with tips for what can, and can't, go down the drain.





# New! 2024 ASTHO Podcast



752: EPA Wastewater Gap Initiative, New PH Warehouse Expansion

Tweet	f Share	< Share		C1
Zach Lowenstein, program manager with the EPA's Office of				Sign Wee
			Closing America's	
Wastewater Access Gap initiative; Jon Lujan, public health				Ente
emergency p	preparedness	program mana	ager for the Guam	
Department	The Publi			
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Subscribe

- The Association of State and Territorial Health Officials, featured an interview with EPA's Zach Lowenstein about EPA's Closing America's Wastewater Access Gap Initiative during SepticSmart Week.
- Host Jansen Silvers also highlighted the ASTHO SepticSmart Week proclamation.
- The podcast was shared to ASTHO social media accounts on X, LinkedIn, and Facebook.



# SepticSmart Stakeholder Profiles

United States Environmental Protection Agency

### Michelle Jenkins Creator profile

- Information Officer at the New England
   Interstate Water Pollution Control Commission
- Developed 10 infographics for a series titled: *Toilet Time Travel for Septic Smart Week* 
  - Explored the history of toilets, from prehistoric times until now
- Shared to personal LinkedIn, and received 1,422
   impressions, 30 likes, 3 reposts, and 4
   comments

#### TOILET TIME TRAVEL FOR SEPTICSMART WEEK!

Ancient Pit Toilets Time Period: Prehistoric times to early civilizations.

Early humans likely used simple pit toilets, which were holes dug into the ground to collect waste. This was one of the most basic forms of waste management.





#### TOILET TIME TRAVEL FOR SEPTICSMART WEEK!

- Castles' Garderobes
- Time Period: Medieval Europe.
- Castles often had "garderobes," which were small rooms with
- holes leading to vertical shafts or directly to the outsid
- Waste would fall into a pit or moat. These were usually located



#### **TOILET TIME TRAVEL FOR SEPTICSMART WEEK!** Space Toilets Time Period: Late 20th century to present. Space exploration required the development of specialized toilets for use in zero-gravity environments. These high-tech devices use suction to manage waste and are designed to operate in the unique conditions of space.



# Geauga County, OH

- Geauga County Soil and Water Conservation District and Public Health Department
  - Hosted annual workshops since 2017
  - 31 participants in 2024
  - **Door prize:** one free septic pumping! Winners?
- Sanitarians use EPA SepticSmart materials to provide lessons on proper septic system maintenance
- "To Flush or Not To Flush" Game
  - Attendees reach into a box and pick up flushable wipes, paper towels, and other items
  - Learn what can and can't enter their septic system





### Michigan Environment, Great Lakes, and Energy Department (EGLE)

State agency profile

- SepticSmart/Septic System 101 Webinar
  - Training geared towards homeowners
  - 1,686 registrants
  - 146 questions asked in the chat
- Post-webinar survey indicated nearly all respondents thought the webinar was Good or Excellent
  - 47.7% response rate
- Produced SepticSmart article for MiEnvironment Newsletter
- Posted: 3 Facebook posts to EGLE's page with 6K+ followers and 1 LinkedIn post to LinkedIn page with 11,967 followers



# Goals for 2025

- Convene the SepticSmart steering group to provide input on outreach and messaging for 2025
- Develop engaging content for targeted audiences
- Increase promotion of SepticSmart materials to Tribal and Pacific Islander communities
- Identify new strategies for promoting SepticSmart materials directly to homeowners
- Increase the number of states that promote SepticSmart Week
  - Blog posts, newsletters, proclamations



# **QUESTIONS?**

