

# Septage Hauling Disposal

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Kelly Thompson  
Certification & Licensing Coordinator  
608-266-8948  
[Kelly.Thompson@wisconsin.gov](mailto:Kelly.Thompson@wisconsin.gov)



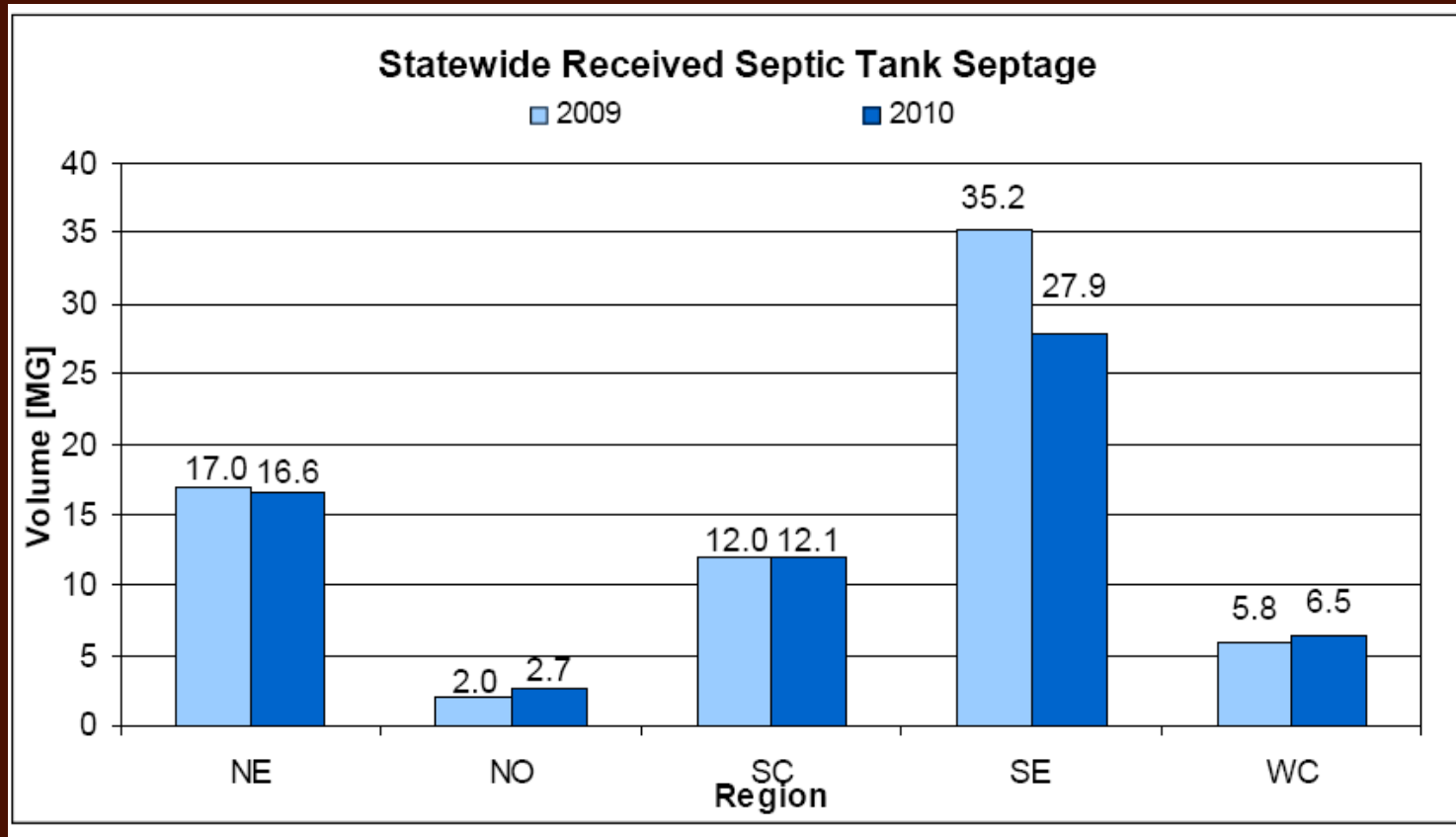
# WWTP Plant Disposal

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	# Grade T
NER	35
NOR	7
SCR	25
SER	33
WCR	16
Out of State	18

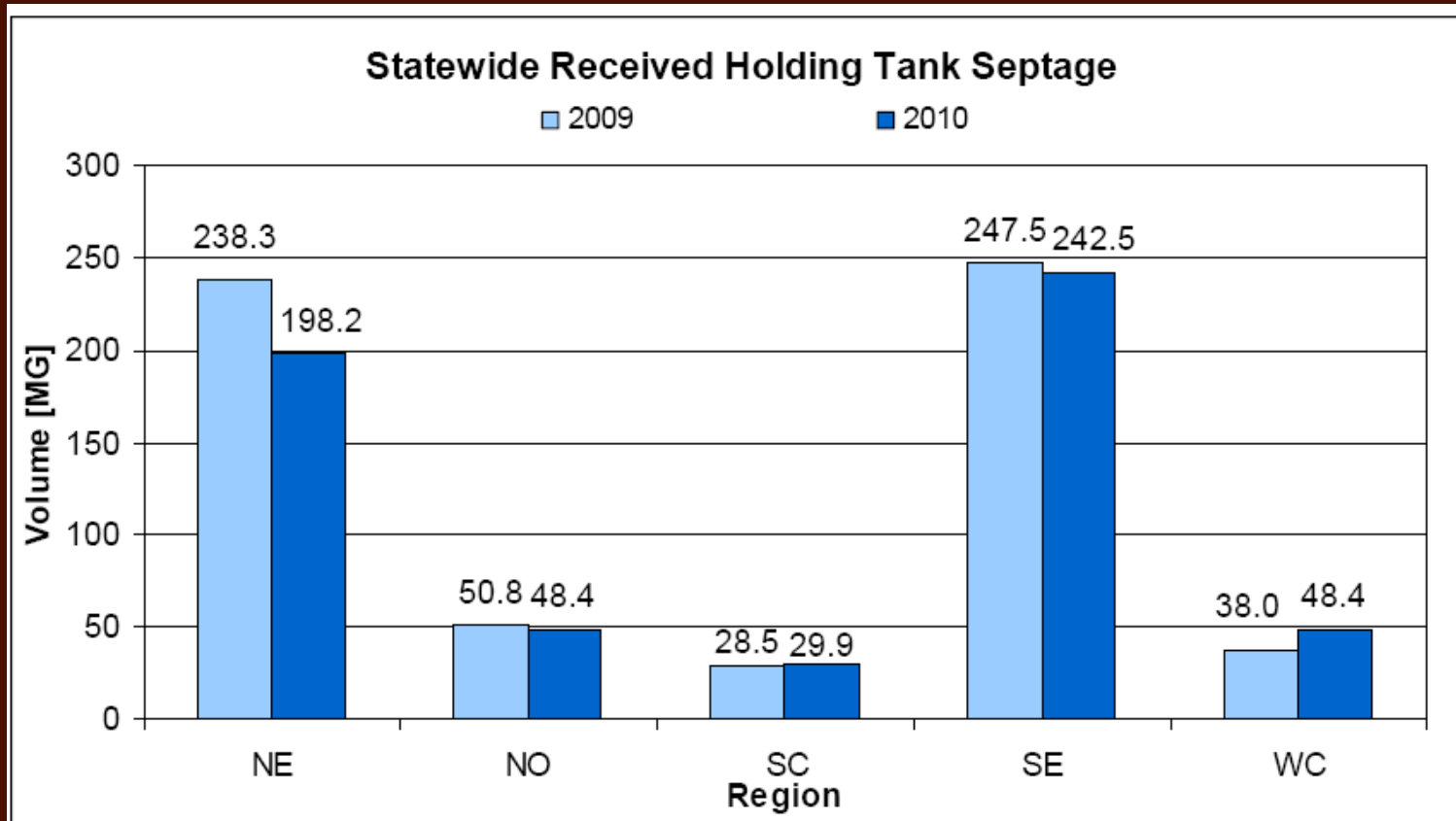
- ~350 Grade L businesses (land application, some TP disposal)
- ~140 Grade T (dispose at TP only)

# Septage Tank Waste



Courtesy of Amy Schmidt

# Holding Tank Waste



Courtesy of Amy Schmidt

# Advantages vs. Disadvantages

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- Costs
  - Good public relations
  - Environmental Protection
  - Less paperwork!  
(pertaining to DNR/EPA Septage Audits)
- Costs
  - Coordination with the plant
  - Location of the nearest plant

# Advantages vs. Disadvantages

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- Revenue for the plants
- Good public relations
- Environmental Protection
- Late pay/no pay
- Improper loads
- Additional labor/equipment needs

# Solutions to the No Pay Hauler (uncontrolled collection systems)

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Cameras

Card readers

Flow meters

Rejection

# Disposal of septage at a POTW

April 16 – November 14

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## POTW Conditions

- Apply for permission to discharge
- If approved, the POTW can and do set conditions that prevent plant maintenance and equipment issues and in accordance with their Sewer Use Ordinance.

# Disposal of septage at a POTW

## November 15 – April 15

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### POTW winter conditions:

- Apply by **September 1** for permission to dispose during winter months.
- If approved, the POTW can and do set conditions that prevent plant maintenance and equipment issues and in accordance with their Sewer Use Ordinance.

# Improper Loads

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- Strength of septage
- Impact of septage

# TYPICAL WASTEWATER / SEPTIC TANK COMPARISON

	Residential Wastewater	Septic Tank	
BOD	250 mg/l	6,500 mg/l	26x
TSS	250 mg/l	13,000 mg/l	52x
P	8 mg/l	210 mg/l	25x
NH3	20 mg/l	97 mg/l	5x

# IMPACT OF SEPTAGE BOD AND TSS

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2,000 gallons of septic tank waste is equivalent to the wastewater generated by 600 people in one day

# IMPACT OF SEPTAGE BOD AND TSS

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Imagine the impact of  
wastewater from 600 people in  
10 minutes, on a system  
designed to serve 1,000 people  
vs. a system designed for  
50,000 people

# SHOCK LOADING

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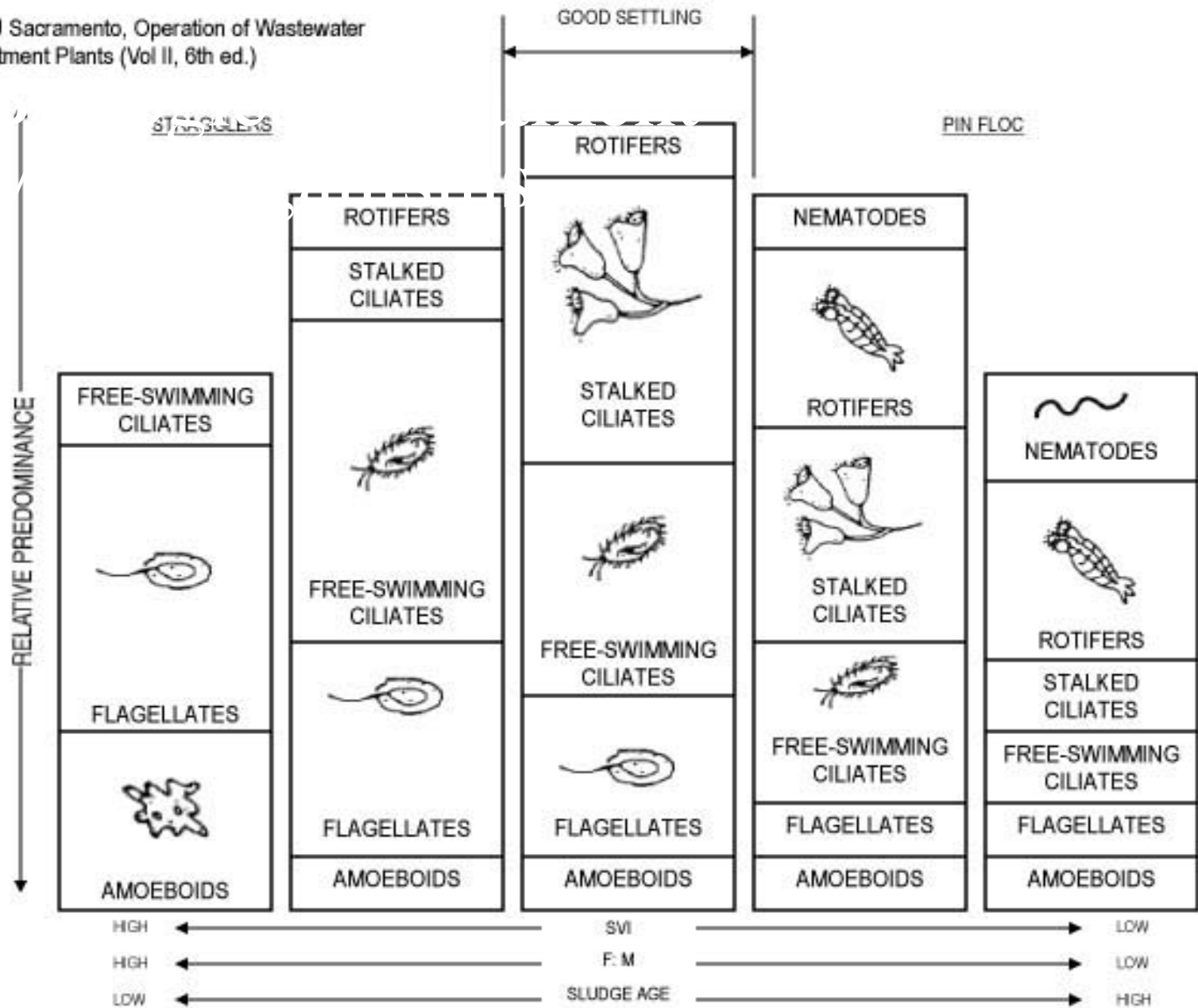
- High volume discharges can overwhelm tanks and equipment
- High organic strength waste can overwhelm biological processes
- Some types of systems handle sudden changes and shock loading better than others

# Treatment Plant Processes - BOD

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- Biochemical Oxygen Demand.

Measures the amount of oxygen (O) used biologically (by bacteria), in other words the organic strength of the wastewater (measured in milligrams per liter (mg/L)).



# Treatment Plant Processes - TSS

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- Total Suspended Solids.

Measures the amount of solids in wastewater. Too many solids cause process flow issues like pump clogging and sewer blockages.

# Treatment Plant Processes - P

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- Total Phosphorus

Outflow with high amounts of phosphorus supports a toxic environment for algae to grow – in abundance.

# Treatment Plant Processes - $\text{NH}_3$

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- Ammonia

Outflow with high amounts of ammonia has lead to the death of thousands of fish and is capable of destroying water ecology systems.



# TYPICAL WASTEWATER / SEPTIC TANK COMPARISON

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# Ch. NR113 Wis. Admin. Code

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NR113 are authorized to haul septage waste, but not hazardous or industrial waste. Know your customers to be sure you're not transporting toxic waste that can disrupt treatment plants and destroy cropland.



In Conclusion

# Special Thanks

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- Amy Schmidt, Jack Saltes P.E., Andy Kempen, Dave Carper P.E. – DNR
- Casey Schaefer - Potosi WWTP
- Dennis Moen – Platteville WWTP
- Rich Boden – Plover WWTP
- Connie Wilson – Burlington WWTP