

Septage Economics 2014 Spring Biosolids Symposium

Stevens Point, WI
March 18, 2014

MSA

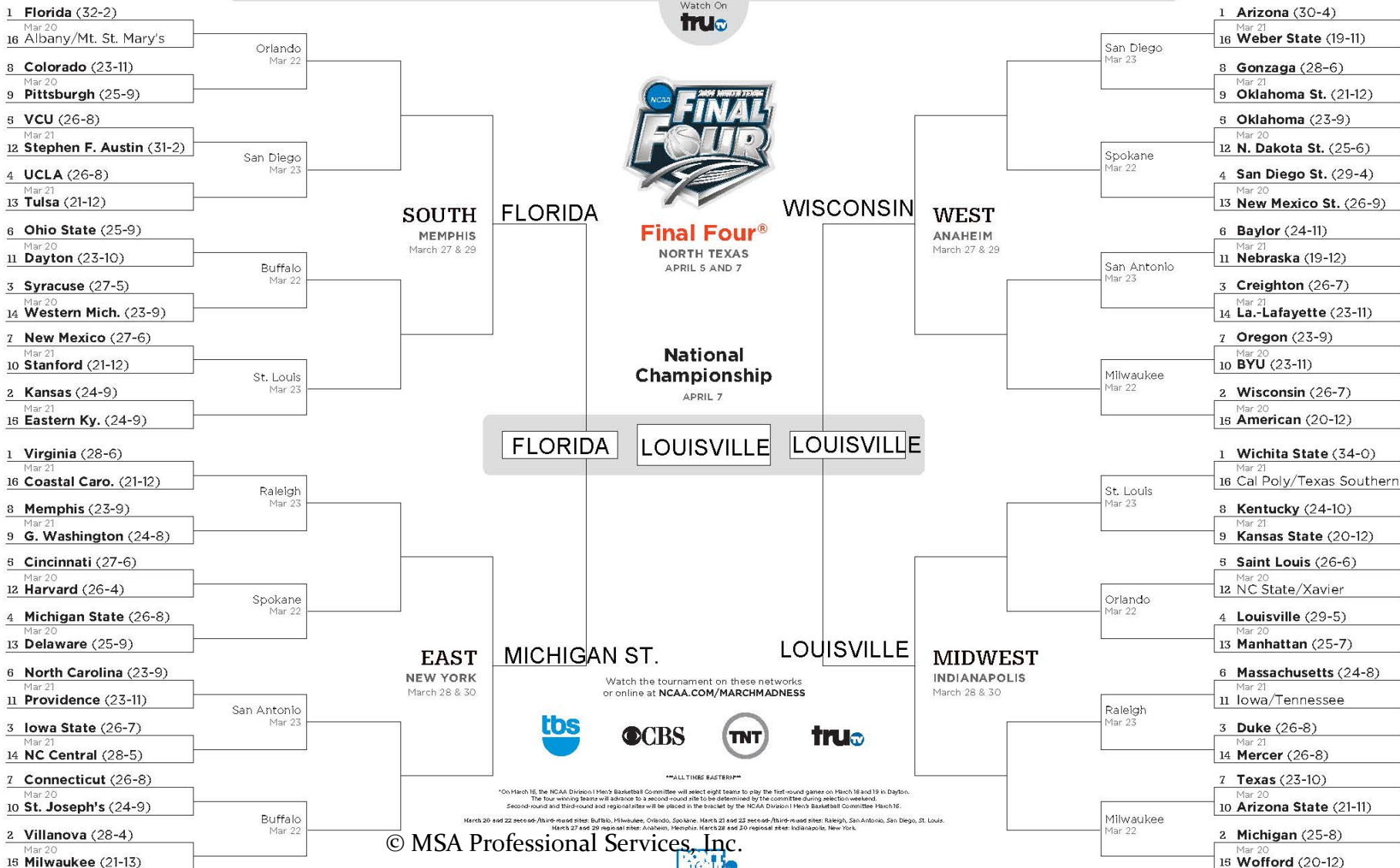
PROFESSIONAL SERVICES

More ideas. Better solutions.

Second Round MARCH 20-21 | Third Round MARCH 22-23 | Regional Semifinals MARCH 27-28 | Regional Finals MARCH 29-30 | National Semifinals APRIL 5 | National Semifinals APRIL 5 | Regional Finals MARCH 29-30 | Regional Semifinals MARCH 27-28 | Third Round MARCH 22-23 | Second Round MARCH 20-21

First Four®

16 Albany (18-14) Mar 18 - truTV | 16 Mt. St. Mary's (16-16) S | 12 NC State (21-13) Mar 18 - truTV | 12 Xavier (21-12) MW | First Round* DAYTON MARCH 18-19 | Watch On truTV | 16 Cal Poly (13-19) Mar 19 - truTV | 16 Texas Southern (19-14) MW | 11 Iowa (20-12) Mar 19 - truTV | 11 Tennessee (21-12)



2013 Statewide Survey

- Statewide sewer user charge survey
- This is the 17th year of the survey

2013 Statewide Survey

- Survey Form

2013 WISCONSIN SEWER USER CHARGE SURVEY
WPOES PERMITTEES
 Please fill out to the best of your ability and return by January 18, 2013

CONTACT INFORMATION

Name / Title: _____
 Company: _____
 Address: _____
 City, State, Zip: _____
 Email: _____ Phone #: _____

COMMUNITY INFORMATION

1. Current population served by wastewater treatment facility: _____
(Number of people, not number of households)
 2. Does your facility treat wastewater from other communities? _____
List all other Cities, Villages, and Sanitary Districts from which wastewater is accepted (attach a separate page if necessary)

RATE INFORMATION Please attach rate card.

3. What is your Billing Frequency?
 Monthly Bi-Monthly Quarterly Annually

4. What are your Sewer Rates as of 1/1/13?
 a. Fixed Charges
 i. Residential Fixed Fee (per bill): \$ _____
 ii. Volume Included in Fixed Fee, if any: _____ gal or _____ cu. ft.
 b. Volume Charge
 Per 1,000 Gallons OR Per 100 cu. ft.

5. Effective Date Last Rate Increase: _____
 No Yes: Approx. % Increase: _____

6. Do You Anticipate a Rate Increase in 2013?
 No Yes: _____

7. Residential Sewer Connection Fees:
 a. Residential Hook-Up Fee: \$ _____ per _____
 b. Hauled Waste
 i. Holding Tanks
 Don't Accept Do Accept: _____ Per 1,000 Gallons _____ Per Load
 ii. Septic Tanks
 Don't Accept Do Accept: _____ Per 1,000 Gallons _____ Per Load

9. High Strength Wastewater:
 No Yes: _____ Per B. BOD _____ Per B. Nitrogen _____
 No Yes: _____ Per B. TSS _____ Per B. Phosphorus _____

BUDGET INFORMATION

10. What is your projected sewer utility budget for 2013? (or Actual Expenditures for 2012) \$ _____
(Include Operation, Maintenance, Replacements, and Debt)

11. Are any General Fund Revenues (derived from property tax levies) allocated to the sewer utility?
 No Yes: If so, how much: \$ _____ OR mill rate: _____

TREATMENT FACILITY INFORMATION

12. Type of Treatment Facility? (check all that apply)

a. Lagoon System
 Aerated Lagoon
 Stabilization Pond

b. Activated Sludge System
 Conventional Activated Sludge
 Oxidation Ditch
 Package Plant
 Sequencing Batch Reactor (SBR)

c. Fixed Film Systems
 Trickling Filter/Bio-Tower
 Rotating Biological Contactor (RBC)
 Recirculating Sand Filter

d. Effluent Filtration
 Deep Bed Sand Media
 Travelling Bridge Sand Media
 Cloth Media

e. Other: _____

13. Sludge Handling (if applicable)

a. Sludge Disposal
 Land Application
 Landfill
 Incineration
 Public Distribution

b. Do you produce a Class A or Class B Sludge?
 Class A Class B
 Both Neither

c. Do you foresee the need to move towards Class A?
 Yes No

14. Discharge/Disposal Method
 Surface Water (rivers, lakes, wetland, etc.)
 Groundwater (seepage cells, etc.)
 Land Application (open irrigation, etc.)

15. Design Capacity (MGD): _____
 16. Approx. Average Daily Flow (MGD): _____
 17. Year of Last Major Facility Upgrade: _____

Please return by January 18, 2013 via email to ratesurvey@msa-ps.com © 2013 MSA Professional Services. All rights reserved.

8. Hauled Waste

a. Holding Tanks

Don't Accept

Do Accept:

If Accept: Per 1,000 Gallons Per Load

b. Septic Tanks

Don't Accept

Do Accept:

If Accept: Per 1,000 Gallons Per Load



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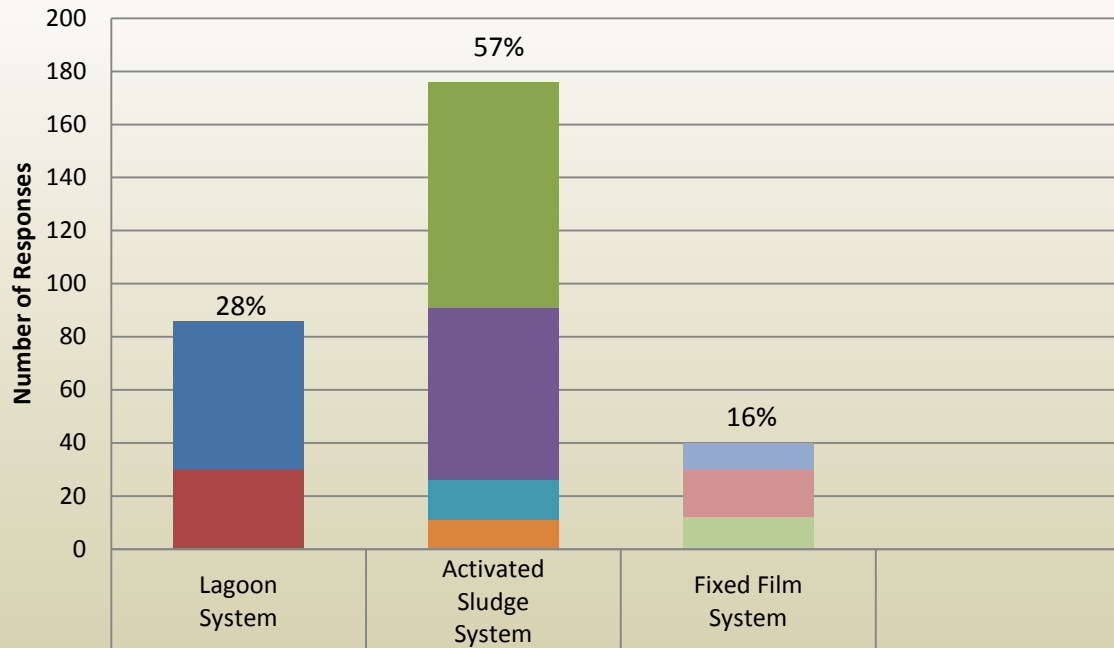
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Survey Responses

- Out of 530 permitted facilities, 308 responded (58%)
 - 28% Lagoons
 - 57% Activated Sludge (Conventional, Ditch, SBR)
 - 16% Fixed Film Systems (Trickling Filter, RBC, RSF)

Types of Facilities

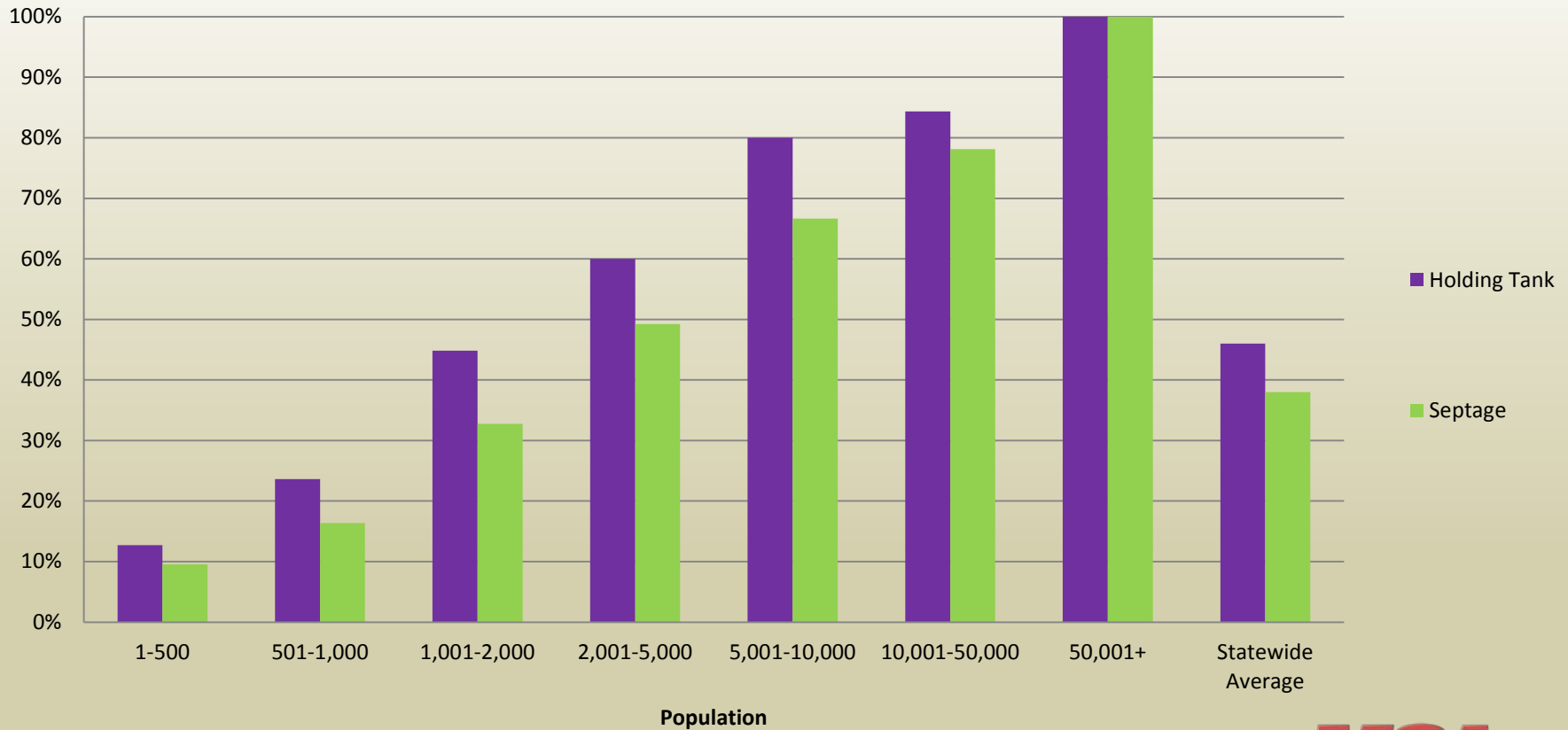
Treatment Types by Responses



■ Aerated Lagoon	56		
■ Stabilization Pond	30		
■ Conventional Activated Sludge		85	
■ Oxidation Ditch		65	
■ Package Plant		15	
■ Sequencing Batch Reactor (SBR)		11	
■ Trickling Film/Bio-Tower			10
■ Rotating Biological Contactor (RBC)			18
■ Recirculating Sand Filter (RSF)			12

Hauled Waste Acceptance

Percent of WWTFs Accepting Hauled Waste by Population



Hauled Waste Acceptance

Population Categories	Accept Holding Tank Waste	Accept Septage	Total In Category
1-500	8	6	63
501-1,000	13	9	55
1,001-2,000	26	19	58
2,001-5,000	39	32	65
5,001-10,000	24	20	30
10,001-50,000	27	25	32
50,001+	5	5	5
TOTAL	142	116	308

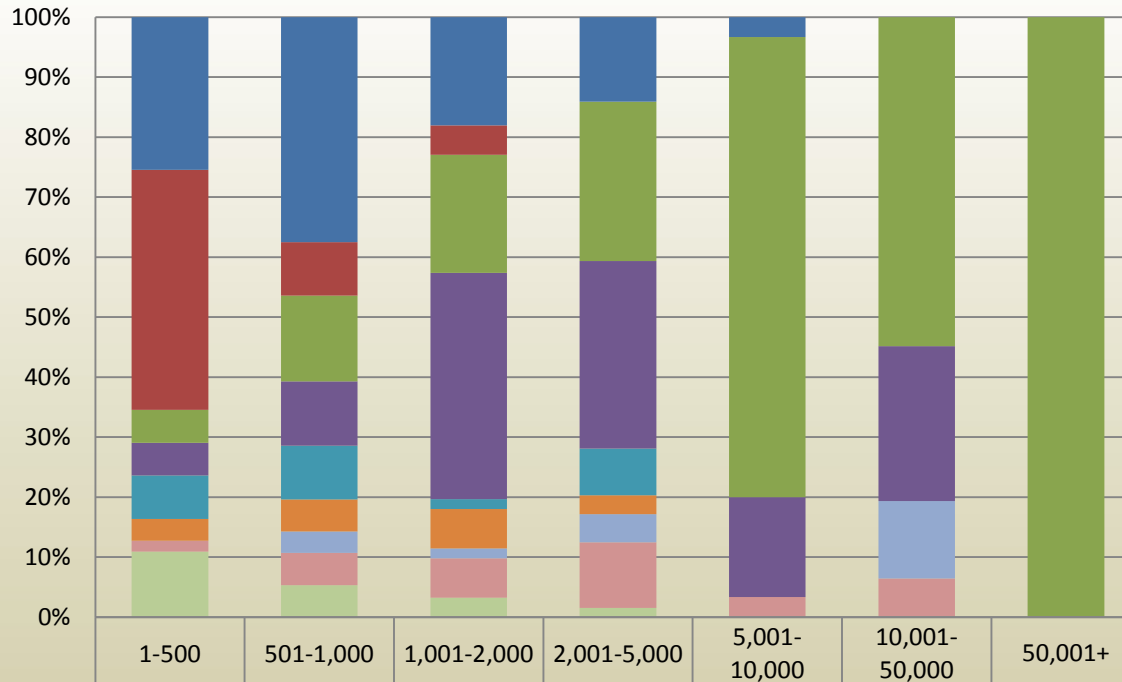


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Type of Treatment

Treatment Type by Population



	1-500	501-1,000	1,001-2,000	2,001-5,000	5,001-10,000	10,001-50,000	50,001+
Aerated Lagoon	16%	29%	15%	10%	2%	0%	0%
Stabilization Pond	26%	7%	4%	0%	0%	0%	0%
Conventional Activated Sludge	4%	11%	16%	18%	44%	33%	71%
Oxidation Ditch	4%	8%	32%	22%	10%	16%	0%
Package Plant	5%	7%	1%	5%	0%	0%	0%
SBR	2%	4%	5%	2%	0%	0%	0%
Trickling Filter	0%	3%	1%	3%	0%	8%	0%
RBC	1%	4%	5%	8%	2%	4%	0%
Recirculating Sand Filter	7%	4%	3%	1%	0%	0%	0%

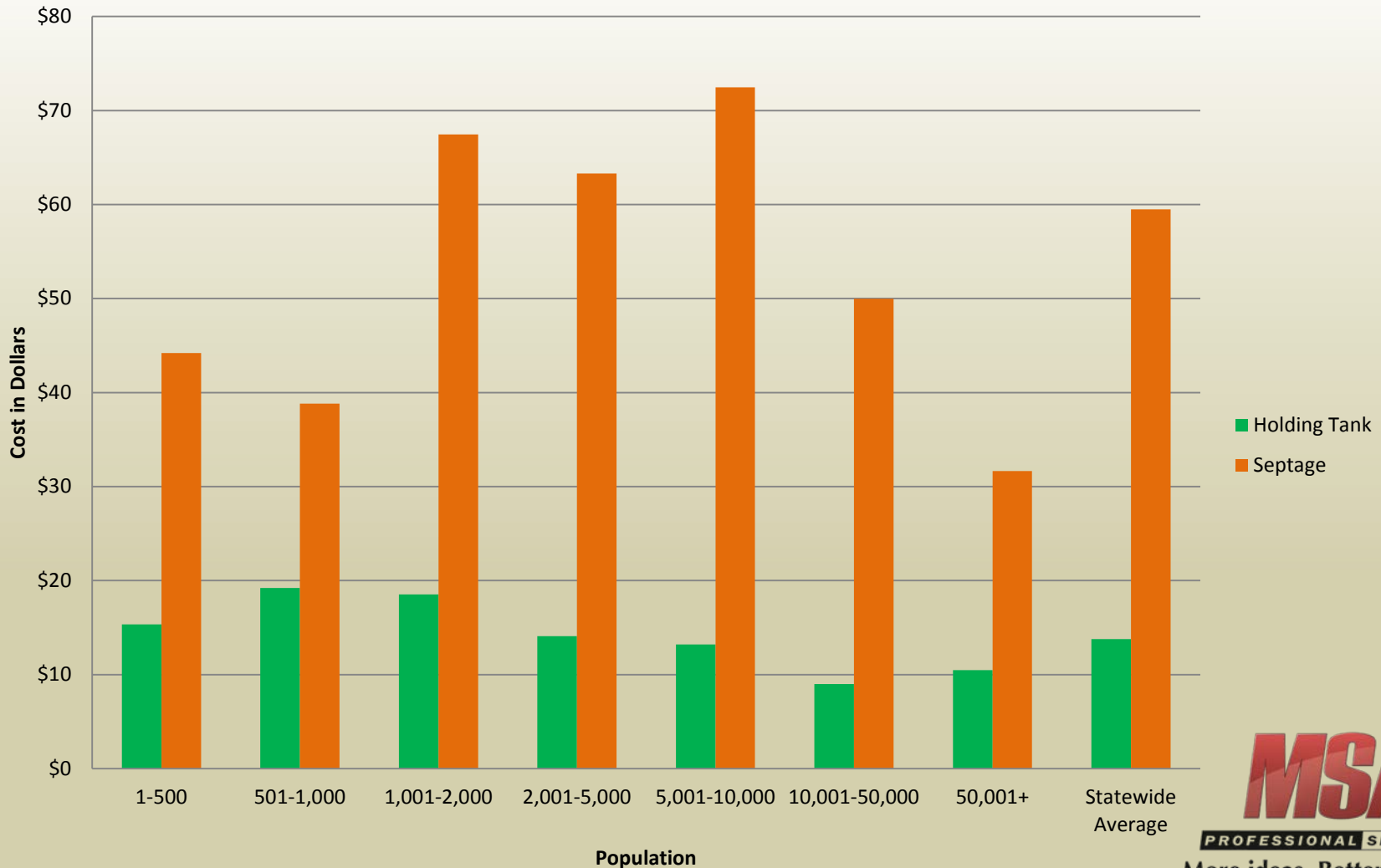


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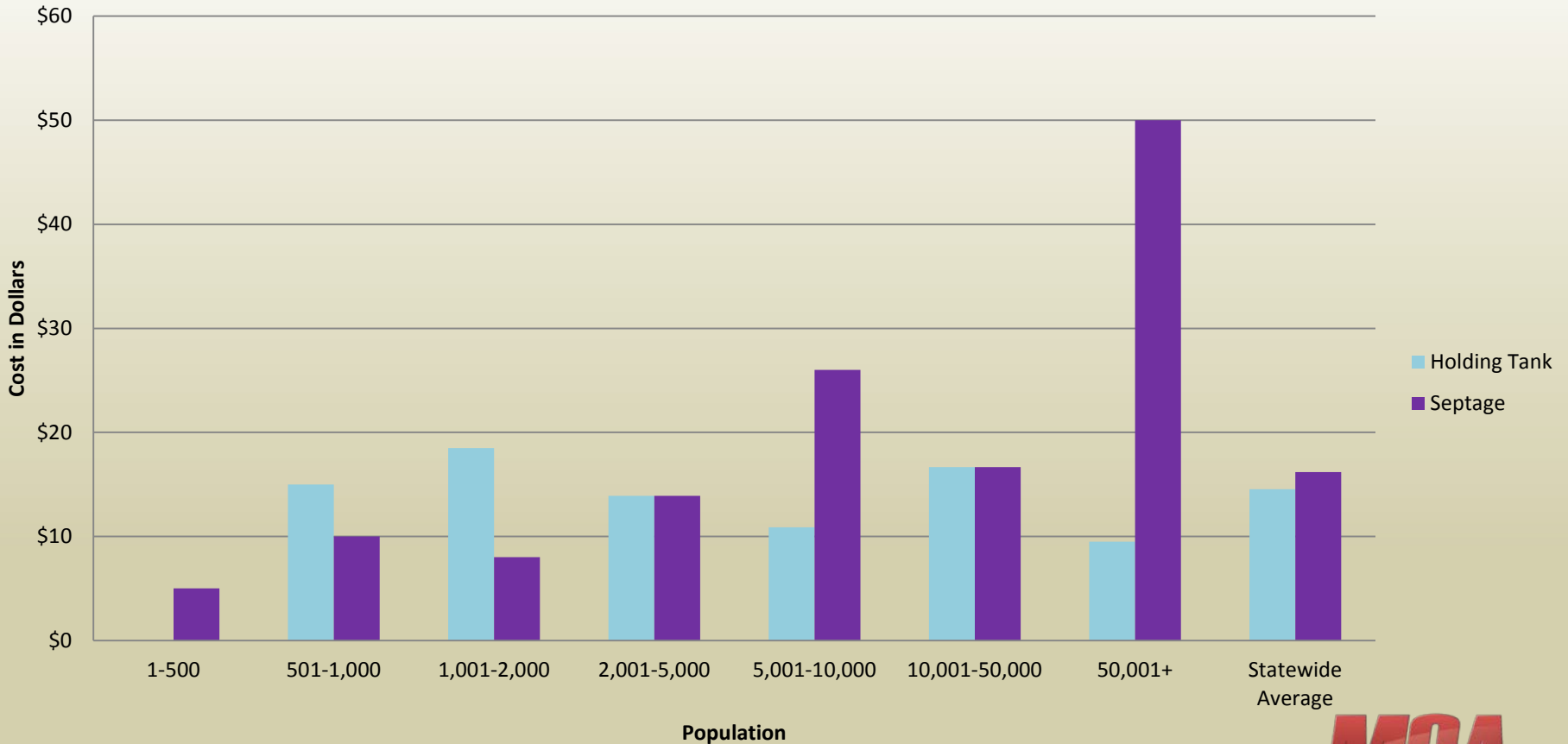
Hauled Waste Charges

Average Cost per 1,000 Gallons of Hauled Waste
by Population



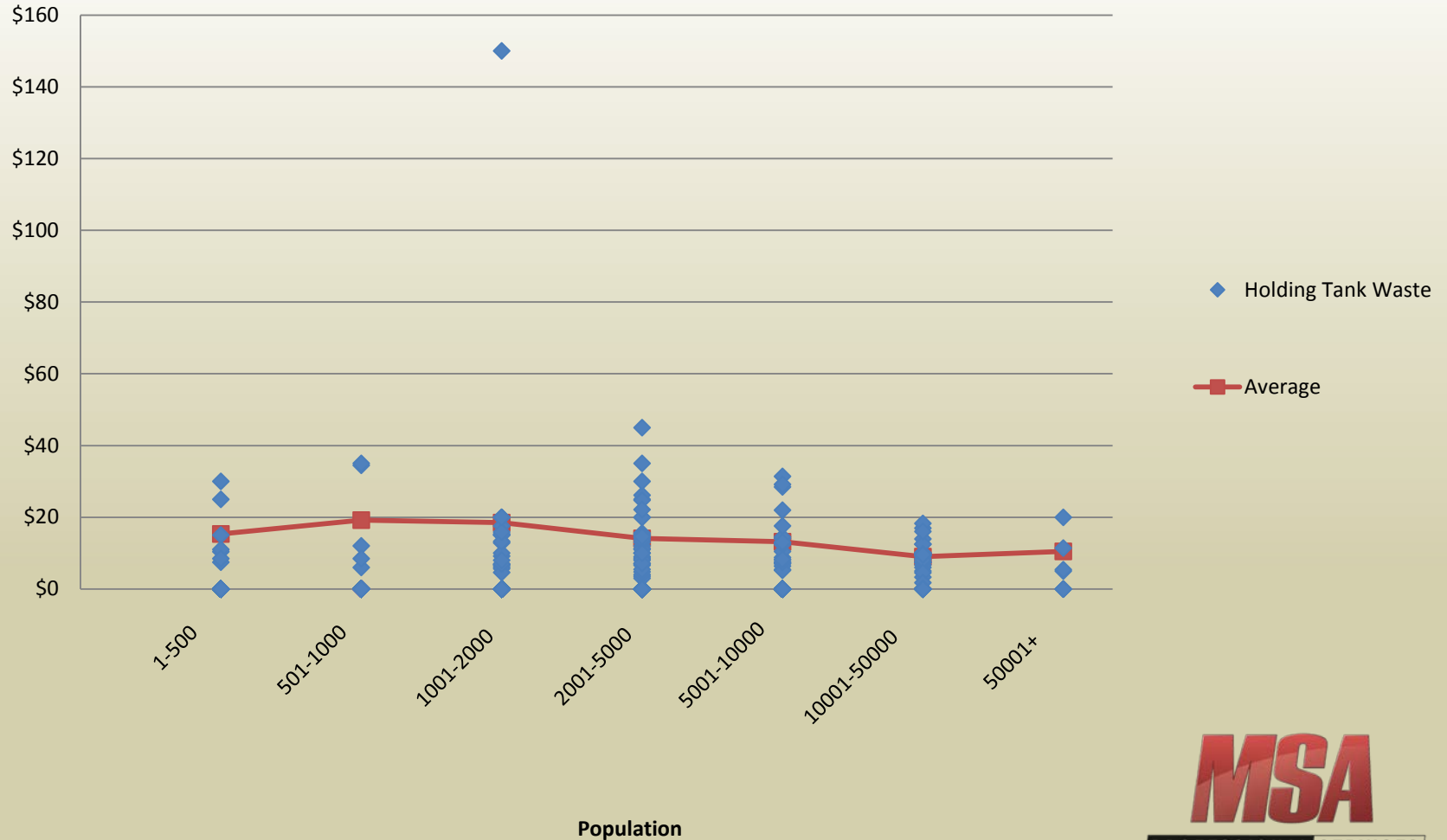
Hauled Waste Charges

Average Administrative Cost Per Load of Hauled Waste
by Population



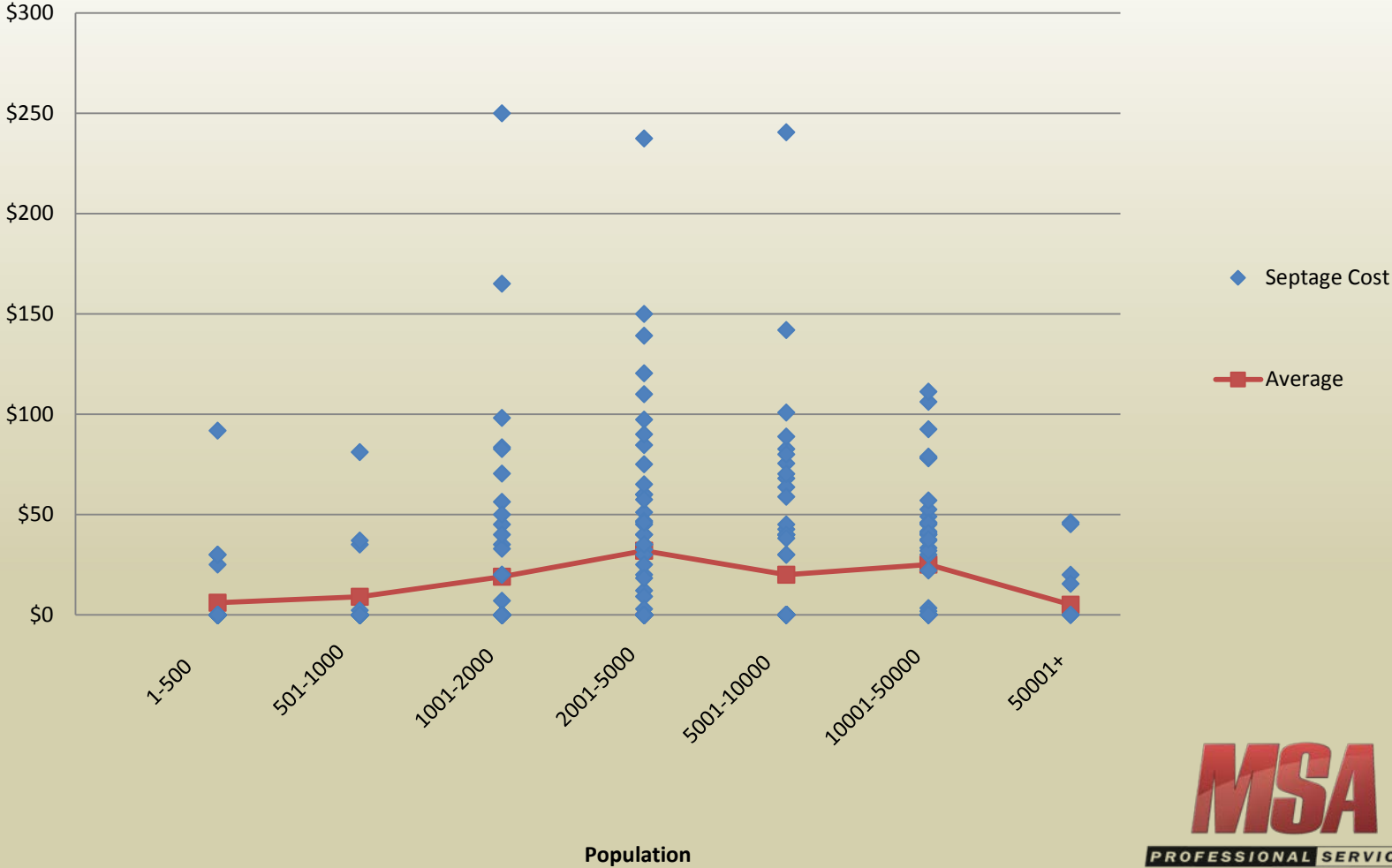
Holding Tank Charges

Cost per 1,000 Gallons of Holding Tank Waste



Septage Charges

Cost per 1,000 Gallons of Septage



Example Data

- Holding Tank Waste Example
 - Disposal Fee: 5,000 gallons x \$14/1,000 gal = \$70
 - Administrative Fee: \$15/load x 4 = \$60
 - Total Fee = \$130

- Septage Example
 - Disposal Fee: 5,000 gallons x \$59/1,000 gal = \$294
 - Administrative Fee: \$16/load x 4 = \$64
 - Total Fee = \$358

Conclusions

- Less than half of the WWTFs in Wisconsin accept hauled wastes:
 - 142 accept Holding Tank Waste (46%)
 - 116 accept Septage (38%)
- Communities with mechanical WWTFs and populations more than 5,000 people are more likely to accept hauled wastes
 - Related to ability to accept and treat

Conclusions

- There is a wide variation in septage disposal charges
 - Range from \$2 to \$250 per 1,000 gallons
 - Related to
 - strength of waste
 - type of treatment required
 - willingness to accept
- Statewide Average Disposal Costs
 - Holding Tank Waste = \$14 per 1,000 gallons
 - Septage = \$59 per 1,000 gallons

Thank you

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