

Mississippi

Infrastructure & Wastewater

	2004 Data	2018 Data	
Total Number of WWTPs:	24 (survey), 317 CWNS	57	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	4	3 - 5	-----
Total number of your state's WWTPs sending to those Separate Preparers:	0	~12	-----
Number of operating sludge incinerators in your state (total):	0	0	-----
Fluidized bed:	0	0	-----
Multiple hearth:	0	0	-----
Number of Part 258 landfills in your state accepting sewage sludge:	data not requested for 2004	20	-----
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	many of the larger WRRFs	-----
Number of WWTPs in your state with <i>sludge</i> lagoons:	data not requested for 2004	many	-----
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	222	-----
Total statewide WWTP <i>design</i> capacity for wastewater flow (MGD):	data not requested for 2004	no data	-----
Total statewide average daily <i>dry weather</i> flow (MGD):	data not requested for 2004	no data	-----
Other Totals			
Number of documented odor & nuisance complaints received by state in 2018 related to biosolids transportation and use or disposal outside of the gates of the WWTP:	data not requested for 2004	3	-----
Number of WWTPs involved in those complaints:	data not requested for 2004	3	-----
Percent of population served by on-site systems (e.g. septic systems):	no data	50%	-----

2004 data were incomplete; see 2007 report, Appendix D, for more information. • Separate preparers include some mobile treatment systems used to prepare biosolids for land application after they are dredged from lagoons. • Many smaller MS communities rely on lagoons; some large cities do too, which is less common in the U.S. • The 50% of population served by onsite septic systems is based on information provided in the prior national survey (NEBRA et al, 2007).

Biosolids Use and Disposal

UNITS:	Dry U.S. tons	Dry U.S. tons	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total):		27,000	
Summary			
	Number of Entities (WWTPs & Sep. Preparers) Going To...	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Going To... Quantity of Biosolids
Beneficial Use (applied to soils, not including ADC)	24	54,200	25 14,172
Disposal & Alternative Dispositions	no data	no data	33 12,542
Other	no data	no data	
TOTAL	24	54,200	58 26,713
Beneficial Use			
	Number of Entities (WWTPs & Sep. Preparers) Going To...	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Going To... Quantity of Biosolids
Agricultural (EQ, Class A, & Class B)			23 14,053
Forestland (EQ, Class A, & Class B)			0 0
Reclamation (EQ, Class A, & Class B)			0 0
Class A EQ Distribution (bagged or bulk, public distribution, or unsure where it went)			2 119
Beneficial Use Subtotal	-	-	25 14,172
Long-term storage			many no data
Number of acres to which biosolids were applied:	6,075		no data
Disposal & Alternative Dispositions			

NOTE: Quantity of sewage sludge or biosolids used or disposed means the quantity that goes out the gate of the WWTPs. Quantities are in the units (the form of measurement) indicated above.

The data presented here are from the U.S. EPA ECHO database for 2018, which includes 14 WRRFs operated by 6 utilities. The MS Department of Environmental Quality (MS DEQ) provided the data on biosolids land applied - a total of 14,172 dry U.S. tons, almost all of it Class B used in agriculture. Because MS DEQ had no data on how much wastewater solids was sent to landfill in 2018, NBDP estimated it about 12,500 dry U.S. tons by calculating the average tons of solids per MGD produced by WRRFs for which data were available (152 dry U.S. tons per MGD) for all WRRFs >1 MGD. All together, the reported and estimated solids represent 85% of the wastewater flow in MS.

Land-applied biosolids data are from the 2018 Annual Report for Solid Waste Management Facilities and Activities provided by MDEQ. • Class A EQ biosolids are from Clinton and Natchez in 2018; other Class A EQ products that hold Beneficial Use Determinations (BUDs) include Milorganite, which is not produced in MS, and several that were inactive in 2018. • The many lagoon systems in MS contain thousands of dry tons of stored wastewater solids.

	Number of Entities (WWTPs & Sep. Preparers) Going To...	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Going To...	Quantity of Biosolids	
Landfill (total)			33	12,542	Landfill disposal tonnage is an NBDP estimate.
Burial	data not requested for 2004	data not requested for 2004	33	12,542	
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	0	0	
Surface Disposal			0	0	
Incineration			0	0	
Cement kiln or industrial furnace	data not requested for 2004	data not requested for 2004	0	0	
Deep well injection	data not requested for 2004	data not requested for 2004	0	0	
Gasification	data not requested for 2004	data not requested for 2004	0	0	
Pyrolysis	data not requested for 2004	data not requested for 2004	0	0	
Disposal & Alternative Dispositions Subtotal	-	-	33	12,542	
TOTAL	-	-	58	26,713	

Biosolids Quality Summary

	Number of Entities (WWTPs & Sep. Preparers) Producing...	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Producing...	Quantity of Biosolids	NOTE: For "number of entities," the total may not match because some entities go to more than one use or disposal.
Class A EQ			2	119	
Other Class A			0	0	
Class B			23	14,053	
Other (no data, etc.)			33	12,542	
TOTAL	-	-	58	26,713	

Biosolids Treatment Practices - No Data Available

State Pollutant (trace metal, etc.) Concentration Limits in Biosolids Applied to Land, 2018

Numbers entered only where state limits differed in 2018 from U.S. EPA limits.

	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Zinc (Zn)
EPA Table 1 (mg/kg)	75	85		4300	840	57	75	420	100	7500
EPA Table 3 (mg/kg) & CPLR (kg/ha)	41	39		1500	300	17		420	36 (CPLR = 100)	2800
State ceiling limit (higher limit) (mg/kg)										
State high quality (lower number) limit (mg/kg)										
State CPLR (kg/ha)	32	34		1338	267	15		374	89	2497
State APLR (kg/ha/365days)										

TESTING

For each of the following constituents, indicate if testing is required by your state, as of 2018.	Is testing required for all sewage sludge or biosolids?	Or is testing required only for biosolids being beneficially used as fertilizers and soil amendments?	Frequency of testing (indicate how often testing must be done for each parameter):		If frequency depends on wastewater flow or amount of biosolids used or disposed of, please explain:
			In accordance with Part 503 requirements	In accordance with other frequency required by state (if applicable, please specify)	
Part 503 metals (As, Cu, Hg, etc.)	yes	no	yes		
Other metals (boron, silver...)	no	no	not applicable (N/A)		
Dioxins/furans	no	no	not applicable (N/A)		
PCBs	no	no	not applicable (N/A)		
Priority pollutants (https://www.epa.gov/sites/production/files/2015-09/documents/priority-pollutant-list-epa.pdf)	no	no	not applicable (N/A)		
Other organic compounds (e.g. PDBEs, pharmaceutical)	no	no	not applicable (N/A)		
Radioactive isotopes (alpha, beta, Ra 226, etc.)	no	no	not applicable (N/A)		
Nutrients (NPK)	yes	no	yes		
Pathogen reduction (Class A or B)	yes	no	yes		
Vector attraction reduction (VAR)	yes	no	yes		
PFAS (as of 2018)	no	no	not applicable (N/A)		
Microplastics (as of 2018)	no	no	not applicable (N/A)		
TCLP (toxicity characteristic leaching procedure)	no	no	not applicable (N/A)		
Paint Filter Liquids Test	no	no	not applicable (N/A)		

REPORTING

For each of the following, indicate what WWTPs and/or biosolids preparers must report to the state:	Is reporting to the state required for these parameters?	Frequency of reporting (indicate how often testing must be done for each parameter):		How are these data stored by the state?	Are data compiled by the state in reports or summaries? Is so, please attach.
		In accordance with Part 503 requirements	In accordance with other frequency required (if applicable, please specify)		
The amounts of biosolids/ sewage sludge used or disposed	yes	yes		paper	yes
Part 503 metals (As, Cu, Hg, etc.)	yes	yes		paper	yes
Other metals (boron, silver...)	yes	yes		paper	yes
Dioxins/furans	no	not applicable (N/A)		not applicable (N/A)	no
PCBs	yes	yes		paper	yes
Priority pollutants (https://www.epa.gov/sites/production/files/2015-09/documents/priority-pollutant-list-epa.pdf)	no	not applicable (N/A)		not applicable (N/A)	no
Other organic compounds (e.g. PDBEs, pharmaceutical)	no	not applicable (N/A)		not applicable (N/A)	no
Radioactive isotopes (alpha, beta, Ra 226, etc.)	no	not applicable (N/A)		not applicable (N/A)	no
Nutrients (NPK)	yes			paper	yes
Cumulative Pollutant Loading Rates (CPLR)	yes			paper	yes
How biosolids achieve Class A or Class B	yes	not applicable (N/A)		paper	yes
How biosolids achieve vector attraction reduction (VAR)	yes	not applicable (N/A)		paper	yes
Solids stabilization process(es) used	yes	not applicable (N/A)		paper	yes
Other biosolids treatments	no	not applicable (N/A)		not applicable (N/A)	no
End use or disposal practice	yes	yes		paper	no
PFAS (as of 2018)	no	not applicable (N/A)		not applicable (N/A)	no
Microplastics (as of 2018)	no	not applicable (N/A)		not applicable (N/A)	no
TCLP (toxicity characteristic leaching procedure)	yes	yes		paper	yes
Paint Filter Liquids Test	no	not applicable (N/A)		not applicable (N/A)	no