NATIONAL BIOSOLIDS DATA PROJECT

STATE BIOSOLIDS SURVEY

2018 data
conducted 2020-2021
biosolidsdata.org

Montana

Sheet 1 of 2 - Biosolids Infrastructure & Quantities

Infrastructure & Wastewater

	2004 Data	2018 Data	
Total Number of WWTPs:	**26 (survey), 211 CWNS**	**15 (survey)**	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	3	4	----------
Total number of your state's WWTPs sending to those Separate Preparers:	3	4	----------
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	4	----------
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	no data	----------
Number of WWTPs in your state with *sludge* lagoons:	data not requested for 2004	no data	----------
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	no data	----------
Total statewide WWTP *design* capacity for wastewater flow (MGD):	data not requested for 2004	no data	----------
Total statewide average daily *dry weather* 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	no data	----------
Number of WWTPs involved in those complaints:	data not requested for 2004	no data	----------
Percent of population served by on-site systems (e.g. septic systems):	no data	no data	----------

Biosolids Use and Disposal

UNITS:	**Dry metric tons**	**Dry metric tons**	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total):		**10,700**	

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)	13	7,081	8	4,877
Disposal & Alternative Dispositions	5	2,569	7	5,834
Other	8	1,049		
TOTAL	**26**	**10,699**	**15**	**10,711**

NOTE: Quantity of sewage sludge or biosolids used or disposed means the quantity that goes out the gate of the WWTPs. Use the units (the form of measurement) you chose above.

Data compiled by long-experienced state biosolids coordinator. For comparison, 2009 data compiled by EPA regional biosolids expert confirms accuracy; those data show 10,864 dry metric tons produced that year.

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	8	3,555	6	4,044
Forestland	1	41	0	0
Reclamation	1	2,231	0	0
Class A EQ Distribution	3	1,254	2	833
Beneficial Use Subtotal	**13**	**7,081**	**8**	**4,877**
Long-term storage	8	1049	0	0
Number of *acres* to which biosolids were applied:		data not reported		no data

Helena land applies in the summer and uses the landfill in the winter, so 200 dry metric tons for Helena were listed as land applied, along with Harlem's 760 dry metric tons. • Kalispell and Whitefish composted biosolids become bagged Glacier Gold compost for sale. Composting facilities were counted as agricultural. Helena counted only as land app and Livingston counted only as landfill. Bigfork's volume for injection counted as agricultural. • The following facilities use biosolids in their composting process: Glacier Compost - Flathead County; Garden City Compost - Missoula, Missoula County; Lewis & Clark County Class II Landfill - Helena, Lewis & Clark County; Butte-Silver Bow County Class II Landfill - Rocker, Silver Bow County.

Disposal & Alternative Dispositions

	Number of Entities (WWTPs & Sep. Preparers) Going To…	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Going To…	Quantity of Biosolids	
MSW landfill (total)	4	2,551	7	5,834	
Burial	data not requested for 2004	data not requested for 2004	no data	no data	
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	no data	no data	
Surface Disposal	1	18	0	0	
Incineration	0	0	0	0	
Cement kiln or industrial furnace	data not requested for 2004	data not requested for 2004	0	0	Billings and Great Falls are the largest facilities that send wastewater solids to local landfills.
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	**5**	**2,569**	**7**	**5,834**	
TOTAL	**26**	**10,699**	**15**	**10,711**	

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	3	1,254	2	833	
Other Class A	0	0	11	8,676	
Class B	10	5,827	2	1,202	
Other (no data, etc.)	13	3,618	no data	0	
TOTAL	**26**	**10,699**	**15**	**10,711**	

Biosolids Treatment Practices

	Estimated Number of WWTPs or Separate Preparers Using…	Estimated Quantity of Biosolids Produced Using…	Estimated Number of WWTPs or Separate Preparers Using…	Estimated Quantity of Biosolids Produced Using…	
Stabilization					
Aerobic Digestion (total)	11	4,648	6	1,175	
Class A (ATAD/Other)	data not requested for 2004	data not requested for 2004	no data	no data	
Class B	data not requested for 2004	data not requested for 2004	no data	no data	
Anaerobic digestion (AD) (total)	9	6,528	7	8,334	
Class A (e.g. thermophilic)	data not requested for 2004	data not requested for 2004	no data	no data	
Class B (mesophilic)	data not requested for 2004	data not requested for 2004	no data	no data	
WWTPs co-digesting (FOG, food, glycol, etc.)	data not requested for 2004	data not requested for 2004	0	N/A	
Biogas used (heating, electicity, fuel, etc.;scf/year)	data not requested for 2004	data not requested for 2004	0	N/A	
Lime/Alkaline (total)	0	0	0	0	
Class A lime/alkaline	data not requested for 2004	data not requested for 2004	0	0	
Class B lime/alkaline	data not requested for 2004	data not requested for 2004	0	0	
Composting	2	2,860	0	0	
Thermal (e.g. heat drying, not incineration/gasificatn/pyrol)	0	0	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	
Hydrolysis (thermal, chemical, etc.)	data not requested for 2004	data not requested for 2004	0	N/A	
Long-term (lagoons, reed beds, etc.)	0	0	2	1,202	
Oxidation ditch / extended aeration	data not requested for 2004	data not requested for 2004	0	N/A	
Other stabilization technology	0	0	0	0	Glacier Gold compost is made from Kalispell and Whitefish biosolids. A 1.5 cu ft bag sells for $7.00 in 2021.
Dewatering					
Belt Filter Press	7	6,020	2	1,150	
Plate & Frame Press	0	0	0	0	
Screw Press	0	0	4	4,000	
Centrifuge	2	1,767	2	3,880	
Vaccuum Filter	0	0	0	0	
Drying beds (open-air)	9	804	4	399	
Solar drying (e.g. in greenhouse)	data not requested for 2004	data not requested for 2004	0	0	
Other dewatering technology	0	0	3	1,282	
Thickening					
Gravity thickener	data not requested for 2004	data not requested for 2004	2	2,558	
Gravity belt thickener (GBT)	data not requested for 2004	data not requested for 2004	0	0	
Centrifuge	data not requested for 2004	data not requested for 2004	0	0	
Dissolved air flotation (DAF)	data not requested for 2004	data not requested for 2004	4	5,592	
Other thickening technology	data not requested for 2004	data not requested for 2004	11	2,561	
Other					
Biosolids sold in bags (explain at right what size bags)	data not requested for 2004	data not requested for 2004	2	833	

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

Enter numbers 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)	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
State high quality (lower number) limit (mg/kg)	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
State CPLR (kg/ha)	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data
State APLR (kg/ha/365days)	no data	no data	no data	no data	no data	no data	no data	no data	no data	no data

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.)	no	yes	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)	no	yes	yes			
Pathogen reduction (Class A or B)	no	yes	yes			
Vector attraction reduction (VAR)	no	yes	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)	yes	no	not applicable (N/A)			
Paint Filter Liquids Test	yes	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	no	not applicable (N/A)		not applicable (N/A)	no	
Part 503 metals (As, Cu, Hg, etc.)	no	yes	reporting is to U. S. EPA	not applicable (N/A)	no	
Other metals (boron, silver…)	no	not applicable (N/A)		not applicable (N/A)	no	
Dioxins/furans	no	not applicable (N/A)		not applicable (N/A)	no	
PCBs	no	not applicable (N/A)		not applicable (N/A)	no	
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)	no	not applicable (N/A)		not applicable (N/A)	no	TCLP and Paint Filter Liquids Test is generally required by landfills.
Cumulative Pollutant Loading Rates (CPLR)	no	not applicable (N/A)		not applicable (N/A)	no	
How biosolids achieve Class A or Class B	no	not applicable (N/A)		not applicable (N/A)	no	
How biosolids achieve vector attraction reduction (VAR)	no	not applicable (N/A)		not applicable (N/A)	no	
Solids stabilization process(es) used	no	not applicable (N/A)		not applicable (N/A)	no	
Other biosolids treatments	no	not applicable (N/A)		not applicable (N/A)	no	
End use or disposal practice	no	not applicable (N/A)		not applicable (N/A)	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)	no	not applicable (N/A)		not applicable (N/A)	no	
Paint Filter Liquids Test	no	not applicable (N/A)		not applicable (N/A)	no	