



STATE BIOSOLIDS SURVEY

2018 data
conducted 2020-2021
biosolidsdata.org

New Mexico

Infrastructure & Wastewater

	2004 Data	2018 Data	
Total Number of WWTPs:	26 (survey), 66 CWNS	33	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	3	0	-----
Total number of your state's WWTPs sending to those Separate Preparers:	0	0	-----
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	19	-----
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	7	-----
Number of WWTPs in your state with sludge lagoons:	data not requested for 2004	several	-----
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	133	-----
Total statewide WWTP <i>design</i> capacity for wastewater flow (MGD):	data not requested for 2004	159	-----
Total statewide average daily <i>dry weather</i> flow (MGD):	data not requested for 2004	159	-----
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	new related to septage management	-----
Number of WWTPs involved in those complaints:	data not requested for 2004	0	-----
Percent of population served by on-site systems (e.g. septic systems):	38%	38%	-----

Only 33 WRRFs are represented here; they were chosen based on data available from U.S. EPA's ECHO database, plus a suggestion from contacts at NM Environment Department (NMED) to include all major WRRFs in the state (treating 1 MGD or more). Of those 33, 23 reported 2018 data to U.S. EPA; 3 responded to NBDP's WWTP survey. • Solids used or disposed were calculated by NBDP for 10 additional WRRFs using a process described below. The data presented here account for ~80% of the state's total wastewater flow. • There are apparently no separate preparers managing NM wastewater solids; however, there are 10 - 15 private companies who contract with NM WRRFs to help with treatment (e.g. drying beds) and disposal or land application. • Some additional information came from contacts at NMED. • The statewide average wastewater flow comes from Seiple et al. 2020.

Biosolids Use and Disposal

UNITS:	Dry metric tons	Dry metric tons	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total): 26,000			
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)	10	65,880	13 11,916
Disposal & Alternative Dispositions	14	6,874	14 14,134
Other	2	182	0 0
TOTAL	26	72,936	27 26,050
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)	8	28,304	4 2,140
Forestland (EQ, Class A, & Class B)	0	0	0 0
Reclamation (EQ, Class A, & Class B)	0	0	1 34
Class A EQ Distribution (bagged or bulk, public distribution, or unsure where it went)	2	37,576	8 9,742
Beneficial Use Subtotal	10	65,880	13 11,916
Long-term storage	2	182	some likely no data
Number of acres to which biosolids were applied:		no data	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.
NBDP estimated additional solids for 10 WRRFs without ECHO reports for 2018 to be 4711 dmt. Probable end uses were able to be determined for 1723 dmt through online research. The remaining 2988 dmt were split proportionally between the four most common management practices in the state: 5% to land application; 20% to EQ distribution; 50% to landfill; 25% to surface disposal. These percentages were determined by several considerations: 1) the proportional breakdown of the same categories for NM biosolids reported in ECHO (5%, 39%, 16%, 39%, respectively); 2) assuming the smaller, lower-resource facilities in question were less likely to be producing EQ biosolids than the dominant facilities like Albuquerque, Las Cruces, and Santa Fe, and the quantity of NM biosolids accepted at landfills in NM in 2017. This final factor was prioritized, since NMED informed NBDP that 26,797 wet tons of biosolids were accepted at NM landfills in 2017, and we could assume the 2018 number would be similar. Using the standard assumption of 22% solids, we calculated that 6335 dry U.S. tons or 5746 dry metric tons went to landfill in 2017. The 2018 landfilled solids number resulting from our calculations is 4859 dmt, and only accounts for 80% of the state's total MGD.

Numbers of facilities sending to each end use are only those reported or verified and do not include the 10 facilities for which solids and end uses/disposal practices were estimated. • NBDP estimated that most land applied biosolids go to agricultural or range lands, but there are exceptions. For instance, in 2018, Tucumcari land applied its biosolids, which have somewhat elevated arsenic levels, in bulk on city lands with low public contact. Often, land application sites have no crop, but just native plants and rangeland.

	Number of Entities (WWTPs & Sep. Preparers) Going To...	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Going To...	Quantity of Biosolids
Landfill (total)	8	4,447	10	5,045
Burial	data not requested for 2004	data not requested for 2004	9	4,859
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	1	186
Surface Disposal	6	2,427	4	9,088
Incineration	0	0	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	14	6,874	14	14,134
TOTAL	26	72,936	27	26,050

Numbers of facilities sending to each end use are only those reported or verified and do not include the 10 facilities for which solids and end uses/disposal practices were estimated.

Biosolids Quality Summary

	Number of Entities (WWTPs & Sep. Preparers) Producing...	Quantity of Biosolids	Number of Entities (WWTPs & Sep. Preparers) Producing...	Quantity of Biosolids
Class A EQ	no data	37,576	9	10,470
Other Class A	9	20,023	1	34
Class B	16	8,281	11	11,085
Other (no data, etc.)	no data	7,056	12	4,460
TOTAL	25	72,936	33	26,049

NOTE: For "number of entities," the total may not match because some entities go to more than one use or disposal.

Numbers of facilities sending to each end use are only those reported or verified and do not include the 10 facilities for which solids and end uses/disposal practices were estimated. Class A EQ includes all biosolids composted, plus 722 dmt from Hobbs (heat dried). "Other" includes solids that were estimated (their quality was unable to be determined) or that didn't have quality tracked (e.g. because they were landfilled).

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	2,536	14+	no data
Class A (ATAD/Other)	data not requested for 2004	data not requested for 2004	0	0
Class B	data not requested for 2004	data not requested for 2004	14+	no data
Anaerobic digestion (AD) (total)	4	5,624	4	a majority of NM solids
Class A (e.g. thermophilic)	data not requested for 2004	data not requested for 2004	0	0
Class B (mesophilic)	data not requested for 2004	data not requested for 2004	4	a majority of NM solids
WWTPs co-digesting (FOG, food, glycol, etc.)	data not requested for 2004	data not requested for 2004	0	N/A
Biogas used (heating, electricity, fuel, etc., scf/year)	data not requested for 2004	data not requested for 2004	yes	N/A
Lime/Alkaline (total)	1	1,653	a few, but less than in the past	no data
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	a few, but less than in the past	no data
Composting	7	28,358	10	9,748
Thermal (e.g. heat drying, not incineration/gasificatn/pyroly)	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.)	5	39,463	6+	N/A
Oxidation ditch / extended aeration	data not requested for 2004	data not requested for 2004	a few	N/A
Other stabilization technology	0	0	0	0
Dewatering				
Belt Filter Press	6	5,233	some	no data
Plate & Frame Press	1	175	no data	no data
Screw Press	0	0	no data	no data
Centrifuge	2	66,247	1+	no data
Vacuum Filter	1	108	no data	no data
Drying beds (open-air)	12	6,104	9+	no data
Solar drying (e.g. in greenhouse)	data not requested for 2004	data not requested for 2004	some drying beds	no data
Other dewatering technology	0	0	0	0
Thickening				
Gravity thickener	data not requested for 2004	data not requested for 2004	no data	no data
Gravity belt thickener (GBT)	data not requested for 2004	data not requested for 2004	no data	no data
Centrifuge	data not requested for 2004	data not requested for 2004	no data	no data
Dissolved air flotation (DAF)	data not requested for 2004	data not requested for 2004	1+	no data
Other thickening technology	data not requested for 2004	data not requested for 2004	no data	no data
Other				
Biosolids sold in bags (explain at right what size bags)	data not requested for 2004	data not requested for 2004	1	no data

Numbers of facilities and quantities of biosolids produced utilizing each technology are only those reported and do not include the 10 facilities for which solids and end uses/disposal practices were estimated. • Anaerobic digestion and composting are used by most of the largest WRRFs in NM, including Albuquerque, Las Cruces, Santa Fe, and Carlsbad. • Santa Fe uses DAF for thickening. • Hobbs is the one known facility producing a bagged product: 5% of its compost is bagged for local residents.

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)										
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	yes	yes		
Other metals (boron, silver...)	no	no	no		
Dioxins/furans	no	no	no		
PCBs	yes	yes	yes		
Priority pollutants (https://www.epa.gov/sites/production/files/2015-09/documents/priority-pollutant-list-epa.pdf)	no	no	no		
Other organic compounds (e.g. PDBEs, pharmaceutical)	no	no	no		
Radioactive isotopes (alpha, beta, Ra 226, etc.)	no	no	no		
Nutrients (NPK)	yes	yes	yes		
Pathogen reduction (Class A or B)	no	yes	yes		
Vector attraction reduction (VAR)	no	yes	yes		
PFAS (as of 2018)	no	no	no		
Microplastics (as of 2018)	no	no	no		
TCLP (toxicity characteristic leaching procedure)	no	no	no		
Paint Filter Liquids Test	no	no	no		

TCLP only required if sewage sludge is going to be landfilled.

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		not applicable (N/A)	no
Part 503 metals (As, Cu, Hg, etc.)	yes	yes		not applicable (N/A)	no
Other metals (boron, silver...)	no	no		not applicable (N/A)	no
Dioxins/furans	no	no		not applicable (N/A)	no
PCBs	yes	yes		not applicable (N/A)	no

Priority pollutants (https://www.epa.gov/sites/production/files/2015-09/documents/priority-pollutant-list-epa.pdf)	no	no		not applicable (N/A)	no
Other organic compounds (e.g. PDBEs, pharmaceutical)	no	no		not applicable (N/A)	no
Radioactive isotopes (alpha, beta, Ra 226, etc.)	no	no		not applicable (N/A)	no
Nutrients (NPK)	yes	yes		paper	no
Cumulative Pollutant Loading Rates (CPLR)	no	no		not applicable (N/A)	no
How biosolids achieve Class A or Class B	no	no		not applicable (N/A)	no
How biosolids achieve vector attraction reduction (VAR)	no	no		not applicable (N/A)	no
Solids stabilization process(es) used	no	no		not applicable (N/A)	no
Other biosolids treatments	no	no		not applicable (N/A)	no
End use or disposal practice	yes	no		paper	no
PFAS (as of 2018)	no	no		not applicable (N/A)	no
Microplastics (as of 2018)	no	no		not applicable (N/A)	no
TCLP (toxicity characteristic leaching procedure)	yes	no	Solid Waste Bureau	paper	no
Paint Filter Liquids Test	yes	no	Solid Waste Bureau	paper	no

EPA is still the permitting authority in New Mexico. 503 information is reported directly to EPA and is stored in their databases. NMED Solid Waste Bureau requires TCLP and Paint Filter Liquids Test for sludge going to Special Waste landfills but not for other disposal methods. Am not sure on the frequency of testing.