



STATE BIOSOLIDS SURVEY

2018 data
conducted 2020-2021
biosolidsdata.org

Nevada

WWTP Totals

	2004 Data	2018 Data	
Total Number of WWTPs:	11 (survey), 57 CWNS	14 (NBDP), 52 (CWNS)	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	1	1	-----
Total number of your state's WWTPs sending to those Separate Preparers:	2	3	-----
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	several	-----
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	several, including Clark County	-----
Number of WWTPs in your state with <i>sludge</i> lagoons:	data not requested for 2004	≥1	-----
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	no data	-----
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	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):	5%	no data	-----

The data here are mainly from 14 WRRFs in Nevada for which EPA Region 9 received biosolids reports for 2018. Those 14 WRRFs represent approximately 85% of the state's total wastewater flow. They generated 64,600 dry metric tons of biosolids in 2018. Additional solids were generated by other small WRRFs treating 15% of Nevada's wastewater flow; those solids were likely stored in lagoons or went to other, larger WRRFs, meaning that they did not significantly increase the tonnage of solids used or disposed in 2018. They are not included in the data presented here. • The one separate preparer is a composter: Bently Ranch, in Minden. They treat biosolids from Douglas County Lake Tahoe Sewer Authority (which serves communities in NV & CA), Minden-Gardenville Sanitation District, and Incline Village WRF. • The one identified sludge lagoon is in Boulder City; there are several more in rural communities around the state.

Biosolids Use and Disposal

UNITS:	Dry metric tons	Dry metric tons	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total): 64,600			
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)	4	10,552	4 1,776
Disposal & Alternative Dispositions	7	45,926	8 62,766
Other	0	0	1 100
TOTAL	11	56,478	13 64,642
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)	2	9,614	4 1,776
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	938	
Beneficial Use Subtotal	4	10,552	4 1,776
Long-term storage	0	0	1 100
Number of <i>acres</i> to which biosolids were applied:	no data		no data
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

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.

These four entities include Bently Ranch and the three WRRFs that send their solids there for treatment. Bently Ranch has 2,700+ acres of crop land and range land, some of which receive biosolids compost each year.

Landfill (total)	7	45,926	8	62,766
Burial	data not requested for 2004	data not requested for 2004	5	22,006
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	3	40,760
Surface Disposal	0	0	0	0
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	7	45,926	8	62,766
TOTAL	11	56,478	13	64,642

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	938	1	1,776	The one Class A EQ producer is Bently Ranch (compost). Two facilities reported Class B biosolids that went to landfill burial. • All other biosolids went to landfill; their quality was not tracked.
Other Class A	0	0			
Class B	2	25,344	2	3,690	
Other (no data, etc.)	7	30,196	11	59,176	
TOTAL	11	56,478	14	64,642	

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					The City of Las Vegas has anaerobic digesters. Notably, Clark County Flamingo WRRF, the largest WRRF in the state, only minimally treats its solids with lime, not reaching Class B standards, and then the solids are landfilled. In 2018, it landfilled 34,000+ dry metric tons.
Aerobic Digestion (total)	0	0			
Class A (ATAD/Other)	data not requested for 2004	data not requested for 2004			
Class B	data not requested for 2004	data not requested for 2004			
Anaerobic digestion (AD) (total)	2	> 30%	1		
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	1		
WWTPs co-digesting (FOG, food, glycol, etc.)	data not requested for 2004	data not requested for 2004		N/A	
Biogas used (heating, electricity, fuel, etc./scf/year)	data not requested for 2004	data not requested for 2004		N/A	
Lime/Alkaline (total)	0	0	1	34,143	
Class A lime/alkaline	data not requested for 2004	data not requested for 2004			
Class B lime/alkaline	data not requested for 2004	data not requested for 2004			
Composting	11	< 1			
Thermal (e.g. heat drying, not incineration/gasification/pyrolysis)	0	0			
Gasification	data not requested for 2004	data not requested for 2004			
Pyrolysis	data not requested for 2004	data not requested for 2004			
Hydrolysis (thermal, chemical, etc.)	data not requested for 2004	data not requested for 2004		N/A	
Long-term (agoons, reed beds, etc.)	20	< 1		N/A	
Oxidation ditch / extended aeration	data not requested for 2004	data not requested for 2004		N/A	
Other stabilization technology	0	0			
Dewatering					
Belt Filter Press	2	< 1			
Plate & Frame Press	0	0			
Screw Press	1	< 1			
Centrifuge	2	> 30%			
Vacuum Filter	0	0			
Drying beds (open-air)	20	< 1			
Solar drying (e.g. in greenhouse)	data not requested for 2004	data not requested for 2004			
Other dewatering technology	0	0			
Thickening					
Gravity thickener	data not requested for 2004	data not requested for 2004			
Gravity belt thickener (GBT)	data not requested for 2004	data not requested for 2004			
Centrifuge	data not requested for 2004	data not requested for 2004			
Dissolved air flotation (DAF)	data not requested for 2004	data not requested for 2004			
Other thickening technology	data not requested for 2004	data not requested for 2004			
Other					
Biosolids sold in bags (explain at right what size bags)	data not requested for 2004	data not requested for 2004			

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	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.)	no	yes	yes		
Other metals (boron, silver...)	no	no	not applicable (N/A)		
Dioxins/furans	no	no	not applicable (N/A)		
PCBs	no	yes	yes		
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)	no	no	not applicable (N/A)		
Paint Filter Liquids Test	no	no	not applicable (N/A)		

Nevada has no state biosolids beneficial use regulations. Biosolids use or disposal is specified in wastewater permits overseen by the Bureau of Water Pollution Control in the Nevada Department of Environmental Protection (NDEP). U. S. EPA oversees beneficial use under the 40 CFR Part 503 regulations. NDEP has a solids waste program that oversees landfill disposal. Most landfilling requires TCLP and paint filter tests for disposal of wastewater solids.

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? If 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	not applicable (N/A)		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
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

WRRFs and biosolids programs are not required to report to the state. Those meeting certain criteria under the EPA 40 CFR Part 503 regulations submit annual reports electronically each February; those data are available on the EPA ECHO database website.