



STATE BIOSOLIDS SURVEY

2018 data
conducted 2020-2021
biosolidsdata.org

Nebraska

Infrastructure & Wastewater

	2004 Data	2018 Data	
Total Number of WWTPs:	16 (survey), 469 CWNS	29	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	0	0	-----
Total number of your state's WWTPs sending to those Separate Preparers:		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	no data	-----
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	11	-----
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	193	-----
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):	no data	20%	-----

Wastewater flow data presented here and used in NBDP calculations are from Seiple et al. 2020. • Biosolids data presented here are from the U.S. EPA's ECHO database, where 27 Nebraska WRRFs reported managing solids in 2018. Two facilities in Omaha responded to the NBDP WWTP survey - data for those facilities come from that survey. Additionally, NBDP estimated biosolids quantities for the only two NE WRRFs treating >1 MGD that did not have reports in ECHO for 2018. Those biosolids quantities were calculated based on the average annual solids generated per million gallons treated daily by other state facilities that reported to ECHO. Quantities for 10 out of the 27 facilities were not used in that calculation due to being well outside the normal range. (Some of those 10 facilities use lime to stabilize biosolids, which increases the weight of the final product and can lead to higher-than-normal tons produced per million gallons treated.) • The 400+ WRRFs not represented in these data are lagoons or small mechanical plants, many of which only manage solids every 5-30 years, when they are dredged out and either treated and land applied or hauled to a large mechanical WRRF. • There are 11 formal, robust industrial pretreatment programs, according to the NE Department of Environment and Energy (NE DEE) (<http://dee.ne.gov/NDEOProg.nsf/OnWeb/PP>). DEE also works with other smaller WRRFs on pretreatment. • Percent of population served by onsite systems is the NBDP default: 20%.

Biosolids Use and Disposal

UNITS:	Dry metric tons**	Dry metric tons	**2004 data have been converted to dry metric tons, to allow for comparisons.	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total): 44,700				
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)	14	30,090	25	42,197
Disposal & Alternative Dispositions	1	206	4	2,535
Other	1	454	3	214
TOTAL	16	30,749	32	44,733
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)	13	29,795	23	41,776
Forestland (EQ, Class A, & Class B)	0	0	0	0
Reclamation (EQ, Class A, & Class B)	0	0	0	0
Class A EQ Distribution (bagged or bulk, public distribution, or unsure where it went)	1	295	2	421
Beneficial Use Subtotal	14	30,090	25	42,197
Long-term storage	1	454	3	214
Number of acres to which biosolids were applied:	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
Landfill (total)	1	206	4	2,535

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

Other includes biosolids going to storage; those quantities are not included in the total biosolids managed (used or disposed).

Fremont stored 1950 dmt of biosolids in 2018, instead of land applying (its usual practice). Because that quantity is rather large, NBDP decided to include it in the land application totals here, since those 1950 dmt were eventually applied to agricultural lands and including it makes the 2018 numbers more representative of typical years. • Beatrice and Scotts Bluff are the WRRFs producing EQ compost.

Burial	data not requested for 2004	data not requested for 2004	4	2,535
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	0	0
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	1	206	4	2,535
TOTAL	16	30,749	32	44,733

Grand Island is the largest WRRF relying on landfill disposal; its 1,938 dry metric tons (dmt) of solids went to 3 different landfills in 2018. In addition, Elkhorn, Kimball, and Omaha each sent <200 dmt to landfills in 2018.

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	860	2	421	
Other Class A	0	0	2	967	
Class B	11	29,229	21	40,809	
Other (no data, etc.)	2	659	4	2,535	
TOTAL	16	30,748	29	44,732	*Other* here includes biosolids that went to landfill, for which stabilization and classification may not have happened and/or quality was not tracked.

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)	no data	no data	10+	
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)	no data	no data	11	
Class A (e.g. thermophilic)	data not requested for 2004	data not requested for 2004		
Class B (mesophilic)	data not requested for 2004	data not requested for 2004		
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)	no data	no data	4+	
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	no data	no data	2	421
Thermal (e.g. heat drying, not incineration/gasificatn/pyrol)	no data	no data	1	
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 (lagoons, reed beds, etc.)	no data	no data	1+	N/A
Oxidation ditch / extended aeration	data not requested for 2004	data not requested for 2004		N/A
Other stabilization technology	no data	no data		
Dewatering				
Belt Filter Press	no data	no data		
Plate & Frame Press	no data	no data		
Screw Press	no data	no data		
Centrifuge	no data	no data		
Vacuum Filter	no data	no data		
Drying beds (open-air)	no data	no data	5+	
Solar drying (e.g. in greenhouse)	data not requested for 2004	data not requested for 2004		
Other dewatering technology	no data	no data		
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		

These data are partial, gleaned from the U.S. EPA's ECHO database.