



STATE BIOSOLIDS SURVEY

2018 data
conducted 2020-2021
biosolidsdata.org

Alaska

Infrastructure & Wastewater

	2004 Data	2018 Data	
Total Number of WWTPs:	4 (from survey), 172 CWNS	11	11
The 2004 data for Alaska include Juneau, Anchorage, and Fairbanks.			
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	1	0	-----
Total number of your state's WWTPs sending to those Separate Preparers:	0	0	-----
Number of operating sludge incinerators in your state (total):	2	1	-----
Fluidized bed:	1	0	-----
Multiple hearth:	1	1	-----
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	no data	-----
Number of WWTPs in your state with <i>sludge</i> lagoons:	data not requested for 2004	several	-----
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	60	-----
Total statewide WWTP design 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 2019 related to biosolids transportation and use or disposal outside of the gates of the WWTP:	data not requested for 2004	0	-----
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):	50%	50%	-----

Data for three water resource recovery facilities (WRRFs) (Anchorage, Kodiak, Fairbanks) comes from the U.S. EPA's ECHO database. Information for an additional 8 facilities (3 in the City and Borough of Juneau; Sitka; Ketchikan; Soldotna; Petersburg; and Valdez) came from online sources. Quantities of solids managed in 2018 for those 8 facilities were calculated based on the average annual dry metric tons (dmt) generated per million gallons of wastewater influent (MGD) of the three facilities for which data were available (190 dmt / MGD). With these estimates, roughly 90% of Alaska's total wastewater flow (and, presumably, solids production) is represented here. • The operating SSI is in Anchorage at the state's largest WRRF, the John M. Asplund Wastewater Treatment Facility. The Anchorage Water & Wastewater Utility also operates WRRFs at Eagle River (1.4 MGD average) and Girdwood (<.5 MGD average). • The statewide wastewater flow of 60 MGD comes from Seiple et al. 2020. Seiple estimates a total of 21 WRRFs statewide. Both numbers may be low due to the localized/decentralized nature of wastewater treatment and reporting in AK and a likely undercounting of smaller systems in the state's vast rural areas. • The percentage of septic systems is an NBDP estimate kept consistent with 2004.

Biosolids Use and Disposal

	UNITS:	Dry U.S. tons	Dry metric tons	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total): 11,700				
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)	1	9,497	1	1,583
Disposal & Alternative Dispositions	3	7,424	6	10,163
Other	0	0	0	0
TOTAL	4	16,921	7	11,746
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)	0	0	0	0
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	9,497	1	1,583
Beneficial Use Subtotal	1	9,497	1	1,583
Long-term storage	0	0	1	40
Number of acres to which biosolids were applied:		29		5
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	10	3	2,749

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.

Agricultural uses of local (e.g. Eagle River, Wasilla) biosolids and septage has occurred some in Alaska's central agricultural area in and around Palmer. Some public and organic farmer concerns led to consideration of a prohibition on biosolids use in the Matanuska-Susitna Borough in 2017, but the ordinance does not seem to have been adopted. • In 2018, Fairbanks produced 1,583 dry metric tons of solids and publicly distributed 675 dmt of biosolids compost. Ketchikan and Kodiak both have had composting systems and may have produced biosolids compost in 2018, but all if it likely went to landfills. In 2019, Fairbanks' compost distribution was suspended by its operator (Golden Heart Utilities), citing uncertainty about PFAS. • Acres applied is an NBDP estimate based on understanding that some septage is applied in the the MatSu Borough sometimes.

Burial	data not requested for 2004	data not requested for 2004	2	1,478
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	1	1,271
Surface Disposal	0	0	2	791
Incineration	2	7,414	1	6,623
Cement kiln or industrial furnace	data not requested for 2004	data not requested for 2004		
Deep well injection	data not requested for 2004	data not requested for 2004		
Gasification	data not requested for 2004	data not requested for 2004		
Pyrolysis	data not requested for 2004	data not requested for 2004		
Disposal & Alternative Dispositions Subtotal	3	7,424	6	10,163
TOTAL	4	16,921	8	11,746

The total tonnage of solids going to landfill likely includes composted biosolids from Ketchikan and Kodiak. • Sitka solids are treated with alkaline stabilization, dewatered, and surface disposed. Some of Juneau's solids go to surface disposal. • Anchorage has the one incinerator.

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	1	9,497	4	3,049	It is assumed here that Ketchikan composts biosolids before using them as landfill ADC. Fairbanks, Kodiak, & Petersburg are the other three facilities producing Class A EQ compost, but only Fairbanks marketed and distributed the compost in 2018. Kodiak's went to landfill. Petersburg started developing its composting program in 2015, and it is uncertain where the compost went in 2018.
Other Class A	1	10	0	0	
Class B	0	0	0	0	
Other (no data, etc.)	2	7,414	6	8,697	
TOTAL	4	16,921	10	11,746	

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	several	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	several	no data
Anaerobic digestion (AD) (total)	no data	no data	0	0
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	0	0
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	0	N/A
Lime/Alkaline (total)	a few	no data	2	341
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	2	341
Composting	2	9,507	4	3,049
Thermal (e.g. heat drying, not incineration/gasificatn/pyrol)	0	0	1	6,623
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.)	several	no data	many	N/A
Oxidation ditch / extended aeration	data not requested for 2004	data not requested for 2004	no data	N/A
Other stabilization technology	no data	no data	0	0
Dewatering				
Belt Filter Press	no data	no data	no data	no data
Plate & Frame Press	no data	no data	no data	no data
Screw Press	no data	no data	no data	no data
Centrifuge	no data	no data	no data	no data
Vacuum Filter	no data	no data	no data	no data
Drying beds (open-air)	no data	no data	no data	no data
Solar drying (e.g. in greenhouse)	data not requested for 2004	data not requested for 2004	no data	no data
Other dewatering technology	no data	no data	no data	no data
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	no data	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	0	0