

New York

Infrastructure & Wastewater

	2004 Data	2015 (assumed representative of 2018)	
Total Number of WWTPs:	584 (survey), 588 CWNS	612	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	0	53	-----
Total number of your state's WWTPs sending to those Separate Preparers:	32	100+	-----
Number of operating sludge incinerators in your state (total):	15	locations, 10 SSI units, plus 1 WF	-----
Fluidized bed:	8	8	-----
Multiple hearth:	7	2	-----
Number of Part 258 landfills in your state accepting sewage sludge:	data not requested for 2004	24	-----
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	58	-----
Number of WWTPs in your state with sludge lagoons:	data not requested for 2004	many	-----
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	2,400	-----
Total statewide WWTP design capacity for wastewater flow (MGD):	data not requested for 2004	3,800	-----
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):	20%	20%	-----

Data presented in this report are taken from New York Department of Environmental Conservation (NY DEC), 2015: *Biosolids Management in New York State*, report dated March 2018, available at https://www.dec.ny.gov/docs/materials_minerals_pdf/bsmgmt2015.pdf. That report is based on a survey that obtained data from 580 New York water resource recovery facilities (WRRFs) representing >99% of the design flow in the state. • According to that report, in 2018 there were "53 solid waste management facilities permitted to beneficially use biosolids in NYS... This included 28 biosolids composting, 22 direct land application, 2 heat drying, and 1 autothermal thermophilic aerobic digester (ATAD) facilities." For this report, these are all assumed to be "separate preparers" able to manage solids from one to several WRRFs. • In 2015, 8 WRRFs had operating sewage sludge incinerators (SSIs); however, in 2018, there were only 5 SSIs operating. Those that closed in the interim were at Glens Falls STP in Warren County (1 fluidized bed incinerator (FBI) closed in March 2016), Saratoga County SD #1 (1 FBI closed in March 2016), and Watertown WPCF (1 FBI closed in March 2016). The 5 SSIs continuing operations in 2018 were: Albany County Sanitation District North and South (2 multiple hearth incinerators, MHIs), Bird Island STP in Erie County (3 SSIs), Oneida County WPCF (3 FBIs), and Southtowns STP in Erie County (2 FBIs). In addition, the Hudson Falls waste-to-energy incinerator took in some sewage sludge; it is included here as the 6th sludge incineration system. Prior closures of SSIs due to stricter federal EPA air emissions regulations and aging infrastructure occurred earlier in the 2010s and included Bergen Point STP, Poughkeepsie WWTP, Little Falls STP, Watertown WPCF, and Tonawanda SD#2 STP. In 2015, there were 87 WRRFs that sent their wastewater solids to SSIs. This number was reduced significantly by 2018, when it was likely on the order of ~50 WRRFs going to incineration.

Biosolids Use and Disposal

UNITS:	Dry U.S. tons	Dry U.S. tons	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total): 378,000			

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)	147	169,198	92	63,676	NOTE: Quantity of sewage sludge or biosolids used or disposed means the quantity that goes out the gate of the WWTPs. Quantities are measured in the units (the form of measurement) indicated above. 2015 survey data collected from 580 facilities representing 99.7% of the total design flow rates in all NYS. • "Other" may include on-site lagoons/septic tanks/reed beds, stockpiling on-site, and non-specified septic haulers. • WRRFs reported generating 374,110 dry U.S. tons of solids in 2015, but used or disposed of more: the 377,663 shown here. This is because some solids had been stored in previous years and were sent to end use or disposal in 2015.
Disposal & Alternative Dispositions	373	182,005	395	312,817	
Other	64	2,057	93	1,170	
TOTAL	584	353,260	580	377,663	

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)	72	65,464	39	15,565	Land application reported as all agricultural; it was assumed there was no forest land application.
Forestland (EQ, Class A, & Class B)	0	0	0	0	
Reclamation (EQ, Class A, & Class B)	0	0	3	2,202	
Class A EQ Distribution (bagged or bulk, public distribution, or unsure where it went)	75	103,734	50	45,909	
Beneficial Use Subtotal	147	169,198	92	63,676	
Long-term storage	64	2,057	some - see "other" above	some - see "other" above	
Number of acres to which biosolids were applied:		4,000		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)	292	92,103	315	262,817
Burial	data not requested for 2004	data not requested for 2004	315	262,817
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	0	0
Surface Disposal	1	1,382	0	0
Incineration	80	88,520	80	50,000
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	373	182,005	395	312,817
TOTAL	584	353,260	487	377,663

The Office of State Comptroller (OSC) report on 2017 landfill disposal shows 450,000 (likely wet U.S.) tons of sewage sludge landfilled in 2017 (<https://www.osc.state.ny.us/files/local-government/publications/pdf/landfills-2018.pdf>). This confirms that the landfill data included here is in the right range. NY DEC confirms a steady increase in the percentage of wastewater solids landfilled over the past 20+ years. In the data presented here, NBDP has reduced the number of facilities sending solids to incineration from 87 in 2015 to an estimated 80 in 2018 and the tonnage from 58,031 to 50,000 because of the closure of 3 SSI facilities as discussed above. NBDP has assumed 2/3 of these solids went to landfill and 1/3 went to agricultural uses, and those data have been adjusted accordingly here.

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	88	135,071	63	51,000	For the Class A EQ totals, NBDP has assumed that 1/3 of the agricultural biosolids listed above were Class A EQ. That amount is added to the amount of distributed EQ. For the Class B totals, NBDP assumed that 2/3 of the agricultural biosolids and all of the reclamation biosolids were Class B. The "Other" solids are those for which there may not be a Class, because they are untreated, or their Class is not known. These assumptions are supported by the percentages of Class A EQ, Class B, and "Other" in NY WRRF responses to the NBDP survey.
Other Class A	0	0	0	0	
Class B	59	34,127	29	12,579	
Other (no data, etc.)	437	184,062	488	312,817	
TOTAL	584	353,260	580	377,566	

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					Some WRRFs use multiple treatment and/or dewatering methods at their facility, and thus the total number of WRRFs listed in these tables does not match the total number of WRRFs using and/or disposing of biosolids. Alkaline stabilization is used at the Casella Organics Grasslands separate preparer facility and at a few other facilities. Other stabilization technologies include septic tanks, Imhoff Tanks, Holding Tanks, Sand Filters and RBC. Other dewatering methods include Settling/Decanting and Drying and Polymers.
Aerobic Digestion (total)	215	36,131	260	no data	
Class A (ATAD/Other)	data not requested for 2004	data not requested for 2004	1	no data	
Class B	data not requested for 2004	data not requested for 2004	259	no data	
Anaerobic digestion (AD) (total)	145	216,254	136	no data	
Class A (e.g. thermophilic)	data not requested for 2004	data not requested for 2004	maybe a few	no data	
Class B (mesophilic)	data not requested for 2004	data not requested for 2004	most	no data	
WWTPs co-digesting (FOG, food, glycol, etc.)	data not requested for 2004	data not requested for 2004	several	N/A	
Biogas used (heating, electricity, fuel, etc. scf/year)	data not requested for 2004	data not requested for 2004	several	N/A	
Lime/Alkaline (total)	22	40,489	16	no data	
Class A lime/alkaline	data not requested for 2004	data not requested for 2004	several	no data	
Class B lime/alkaline	data not requested for 2004	data not requested for 2004	several	no data	
Composting	60	41,208	47	45,012	
Thermal (e.g. heat drying, not incineration/gasificatn/pyrol)	15	62,526	3	897	
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.)	28	1,595	49	N/A	
Oxidation ditch/extended aeration	data not requested for 2004	data not requested for 2004	3	N/A	
Other stabilization technology	2	3,457	87	N/A	
Dewatering					
Belt Filter Press	146	123,332	167	no data	
Plate & Frame Press	23	10,362	25	no data	
Screw Press	0	0	9	no data	
Centrifuge	25	134,081	33	no data	
Vacuum Filter	5	3,863	1	no data	
Drying beds (open-air)	112	5,937	109	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	0	0	32	no data	
Thickening					
Gravity thickener	data not requested for 2004	data not requested for 2004	21	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	no data	no data	