

Connecticut

Sheet 1 of 2 - Biosolids Infrastructure & Quantities

Infrastructure & Wastewater

	2004 Data	2018 Data	
Total Number of WWTPs:	89 (survey), 94 CWNS	94	
WWTP & Biosolids Infrastructure Totals			
Number of Separate Preparers (in- or out-of-state, receiving solids from your state):	4	0	
Total number of your state's WWTPs sending to those Separate Preparers:	96	0	
Number of operating sludge incinerators in your state (total):	6	6	
Fluidized bed:	3	3	
Multiple hearth:	3	3	
Number of Part 258 landfills in your state accepting sewage sludge:	data not requested for 2004	1	
Number of WWTPs in your state with industrial pre-treatment programs:	data not requested for 2004	0	
Number of WWTPs in your state with <i>sludge</i> lagoons:	data not requested for 2004	0	
Wastewater Flow Totals			
Total statewide average daily wastewater flow (MGD):	data not requested for 2004	441	
Total statewide WWTP <i>design</i> capacity for wastewater flow (MGD):	data not requested for 2004	567	
Total statewide average daily <i>dry weather</i> flow (MGD):	data not requested for 2004	360	
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	0	
Number of WWTPs involved in those complaints:	data not requested for 2004	NA	
Percent of population served by on-site systems (e.g. septic systems):	no data	40%	

Publicly-owned & -operated incineration systems are at Hartford MDC (2 operating units, 1 back-up, all multiple-hearth), Mattabasset District (fluidized bed), and New Haven (multiple hearth). Private merchant incineration operations are at Waterbury (fluidized bed operated by Synagro) and Naugatuck (fluidized bed operated by Veolia). • One municipal landfill takes in its own WRRF's solids and the solids from one other small WRRF. • Dry weather flow was taken from 2020 data as there was a statewide drought. • All volumes of solids/biosolids in this table are estimated by the state biosolids coordinator at CT Department of Energy and Environmental Protection (CT DEEP). • CT DEEP estimated here that 70% of the state's population is served by septic systems, but the Dept. of Public Health, which oversees this form of wastewater management, estimates 40%, which NBDP uses here (<https://portal.ct.gov/dph/Environmental-Health/Environmental-Engineering/Environmental-Engineering----Subsurface-Sewage>).

Biosolids Use and Disposal

UNITS:	Dry U.S. tons	Dry U.S. tons	
BIOSOLIDS USED OR DISPOSED, 2018 (adjusted total): 140,000			
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)	2	2,000	2 6,929
Disposal & Alternative Dispositions	87	116,000	95 133,539
Other	0	0	
TOTAL	89	118,000	97 140,468
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	0	0	0
Forestland	0	0	0
Reclamation	0	0	0
Class A EQ Distribution	2	2,000	2 6,929
Beneficial Use Subtotal	2	2,000	2 6,929
Long-term storage	0	0	0
Number of <i>acres</i> to which biosolids were applied:	no data		0
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
MSW landfill (total)	7	5,000	7 11,213
Burial	data not requested for 2004	data not requested for 2004	7 11,213
Alternative daily (ADC), intermediate, or final cover	data not requested for 2004	data not requested for 2004	0 0

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

These data were provided by the CT Dept. of Energy & Environmental Protection (CT DEEP). CT DEEP did not indicate the source(s) of the data and how they compiled them. • Note that CT DEEP entered 133,847 dry U.S. tons in this summary at left, for disposal & alternative dispositions. This total did not match the total for the same category, below. NBDP updated this summary number to be the same as the total in the disposal section below. The difference was only a few hundred tons.

In 2018, one of the two beneficial use facilities, Fairfield, which makes biosolids compost, generated 684 dry U.S. tons (621 dry metric tons) of solids, as reported in the NBDP/NEIWPCC survey. The other Class A EQ facility is Stamford's heat drying operation. The Stamford biosolids were used in the past in a pilot gasification system, but are now mostly transported out of state for use as fertilizer. • In general, CT DEEP has discouraged the use in CT of any in-state biosolids, although out-of-state EQ products cannot be excluded and have been used in CT for many years. CT DEEP does not have any biosolids regulations, and the two facilities producing EQ products are mostly regulated through their NPDES permits.

Surface Disposal	0	0	0	0
Incineration	80	111,000	81	122,326
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	87	116,000	95	133,539
TOTAL	89	118,000	97	140,468

Regarding WRRFs sending solids to MSW landfills: 5 of the 7 go to Pennsylvania landfills; the other 2 go to the Town of Manchester landfill.

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	2,000	2	6,929	
Other Class A	0	0	0	0	
Class B	0	0	0	0	
Other (no data, etc.)	109	116,000	92	133,539	Stamford & Fairfield produce Class A EQ biosolids, the former by heat-drying and the latter by composting. All other solids are incinerated or landfilled, most without the stabilization that would make them Class A or Class B.
TOTAL	111	118,000	94	140,468	

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	3	267	
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	17,308	
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	0	N/A	
Biogas used (heating, electricity, fuel, etc.;scf/year)	data not requested for 2004	data not requested for 2004	Unreported	N/A	
Lime/Alkaline (total)	no data	no data	0	0	
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	0	0	
Composting	no data	no data	1	684	
Thermal (e.g. heat drying, not incineration/gasificatn/pyrol)	no data	no data	1	6,245	
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.)	no data	no data	0	N/A	
Oxidation ditch / extended aeration	data not requested for 2004	data not requested for 2004	0	N/A	
Other stabilization technology	no data	no data	0	0	
Dewatering					
Belt Filter Press	no data	no data	32	73,497	
Plate & Frame Press	no data	no data	0	0	
Screw Press	no data	no data	2	1	
Centrifuge	no data	no data	7	32,219	
Vacuum Filter	no data	no data	0	0	
Drying beds (open-air)	no data	no data	4	2,361	
Solar drying (e.g. in greenhouse)	data not requested for 2004	data not requested for 2004	0	0	
Other dewatering technology	no data	no data	0	0	
Thickening					
Gravity thickener	data not requested for 2004	data not requested for 2004	43	84,754	
Gravity belt thickener (GBT)	data not requested for 2004	data not requested for 2004	30	73,001	
Centrifuge	data not requested for 2004	data not requested for 2004	0	0	
Dissolved air flotation (DAF)	data not requested for 2004	data not requested for 2004	1	14,383	
Other thickening technology	data not requested for 2004	data not requested for 2004	13	13,576	
Other					
Biosolids sold in bags (explain at right what size bags)	data not requested for 2004	data not requested for 2004	0	0	

Regarding co-digestion: CT DEEP has a unique policy of not permitting co-digestion of wastewater solids with food waste. • Fairfield is the one compost facility. • Stamford is the one facility making a heat-dried product "being used in the fertilizer industry," according to the City's website. • The "other" thickening technology used by 13 facilities are rotary drum thickeners.