DASHBOARD

Illinois State Biosolids Statistics

NATIONAL BIOSOLIDS DATA PROJECT
biosolidsdata.org

Data Quality & Methods	2018	explanations & sources
Quality & Confidence in this state's data:	**MODERATE**	ranking by survey team based on information provided in survey (options: High, Moderate, Low, None)
Data sources & methods:	*IL WRRFs had high rate of reporting to EPA ECHO database. State compilation in 2011 & Chicago data provide confirmation of estimated totals presented here. See notes on data spreadsheet.*	
State biosolids included in 2018 EPA ECHO data	95% % in ECHO vs. the total presented here	https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual
Demographics & Wastewater		
State population:	12,741,080	U. S. Census estimate for July 1, 2018
Total land area in state (acres):	35,532,160	https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html
Population density (persons/square mile):	229.5	calculated
Total number of WRRFs reported in state survey:	460	survey response by state expert, 2009 data
total number of WRRFs permitted/reported elsewhere:	509	Seiple et al., 2020
number of WRRFs in EPA ECHO reports for 2018:	157	https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual
Average population served per WRRF:	**20,025**	calculated
Average wastewater flow statewide (MGD, NBDP):	**2,312**	Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110852
avg.wastewater flow statewide (MGD, Seiple):	2312	Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110852
Number of WRRFs that treat >75% of state flow:	**25**	Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110853
% of population served by on-site (septic) systems:	**20%**	default estimate by NBDP
Biosolids used or disposed / person in 2018 (lbs):	**48**	calculated
Biosolids Application		
Agricultural land cropland (acres):	24,003,086	https://quickstats.nass.usda.gov/results/0CBBAD84-6032-3776-AFBB-624DB8825822
% of state area in cropland:	**68%**	calculated
Number of farms with that cropland:	64,958	https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30EF-9774-2F91CC0640EC
% cropland to which biosolids were applied:	**no data**	calculated
Application rate if all state biosolids were applied to cropland (dry U.S. tons/ac.):	**0.01**	calculated
% cropland needed if all state biosolids were applied at typical rate (~3 dt/ac):	**0.4%**	calculated
Nutrient Sources - Comparison		
Nitrogen (N) in all this state's biosolids (metric tonnes, 2018):	13,282	calculated assuming avg. 4.8% biosolids N
N in this state's animal manures (metric tonnes):	105,906	https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure
N in this state's purchased fertilizer (metric tonnes, 2011):	964,434	https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased
If all state's biosolids applied, what % of state's applied N would come from biosolids?	**1.2%**	calculated

Phosphorus (P) in this state's biosolids (metric tonnes, 2018):	5,534		calculated assuming avg. 2% biosolids P
P in this state's animal manures (metric tonnes):	36,690		https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure
P in this state's purchased fertilizer (metric tonnes, 2011):	130,320		https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased
If all state's biosolids applied, what % of state's applied P would come from biosolids?	**3.2%**		calculated

State Regulatory Involvement

Biosolids oversight agency / division:		**Environment agency - water / wastewater program**	
Permitting.... of biosolids programs:		State Operating Permits are issued to each generator & user if biosolids go to land application.	
...of land application sites:		Site-specific permits are issued.	
FTEs: state biosolids regulatory program:	0.6	12 employees, but only ~5% of each	survey response by state expert
Biosolids program FTEs per million population:	**0.05**	employee's time is spent on biosolids	calculated
Enforcement: Inspections of biosolids facilities & field sites in 2018:	**0**		survey response by state expert
Formal violations issued:	**0**		survey response by state expert
Amount of state regulations beyond Part 503:		**Low**	
Amount of state regulation of nutrient management & phosphorus:		**Low**	rankings by survey team based on information provided in survey (options: High, Moderate, Low, None)
Accessibility of biosolids data to public:		**Moderate**	
State encouragement of biosolids recycling to soils:		**Moderate**	
Voluntary additional protections by land appliers known & reported by state coordinator:		Low	

Trends

New land application activity, 2018 - new permits & acreage, acres applied:		**Moderate**	rankings by survey team based on information provided in survey (options: High, Moderate, Low, None)... With quotes of survey responses by state expert(s)
acres applied in 2018:		no data	
Local regulations & their impacts?:		**None**	
details...		no activity in 2018	
Legislative & state regulatory actions in 2018 & their impacts?:		**None**	
details...		In 2015, a new law precluded additional state regulation of Class A biosolids products, helping advance Class A use.	
Biosolids beneficial use increasing... ...in 2018?:		**It's staying the same.**	survey response by state expert
....in 2020?:		**It's staying the same.**	survey response by state expert
details...			

Changes in Biosolids Use & Disposal

		dry U. S. tons... Note: 2004 data are adjusted in this calculation to not include stored solids, which are not included in 2018 data....	*Change may be due to population increase/decrease, change in treatment at a large WWTP, and/or different systems of data tracking and reporting.
Change* in solids reported used or disposed (in units used by state):	(23,421)		
Beneficial Use - percentage point increase or decrease (-):	17%		
Landfill & surface disposal - % point increase or decrease (-):	-18%		
Incineration - percentage point increase or decrease (-):	0%		calculated comparing these 2018 data to 2004 data compiled by the same survey team (NEBRA, 2007)
Class A - percentage point increase or decrease (-):	35%		
Class B - percentage point increase or decrease (-):	-43%		
No class or not known - percentage point increase or decrease (-):	8%		