DASHBOARD

Texas State Biosolids Statistics

NATIONAL BIOSOLIDS DATA PROJECT
biosolidsdata.org

Data Quality & Methods	2018		explanations & sources
Quality & Confidence in this state's data:		**HIGH**	ranking by survey team based on information provided in survey (options: High, Moderate, Low, None)
Data sources & methods:		*State biosolids coordinator has many years experience and tracks land application well. Landfilled solids are calculated from reported data.*	
State biosolids included in 2018 EPA ECHO data	0%	% in ECHO vs. the total presented here. Texas is delegated for Part 503; no TX ECHO data	https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual
Demographics & Wastewater			
State population:	28,701,845		U. S. Census estimate for July 1, 2018
Total land area in state (acres):	167,188,480		https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html
Population density (persons/square mile):	109.9		calculated
Total number of WRRFs reported in state survey:	2800		survey response by state expert
total number of WRRFs permitted/reported elsewhere:	754		Seiple et al., 2020
number of WRRFs in EPA ECHO reports for 2018:	N/A	Texas is delegated for Part 503; no TX ECHO data	https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual
Average population served per WRRF:	**8,201**		calculated
Average wastewater flow statewide (MGD):	**2,525**		Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110852
reported by others: average MGD:	N/A		
Number of WRRFs that treat >75% of state flow:	**115**		Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110853
% of population served by on-site (septic) systems:	**~20%**		survey response by state expert
Biosolids used or disposed / person in 2018 (lbs):	**33**		calculated
Biosolids Application			
Agricultural land cropland (acres):	29,360,229		https://quickstats.nass.usda.gov/results/0CBBAD84-6032-3776-AFBB-624DB8825822
% of state area in cropland:	**18%**		calculated
Number of farms with that cropland:	127,510		https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30EF-9774-2F91CC0640EC
% cropland to which biosolids were applied:	**0.23%**		calculated
Application rate if all state biosolids were applied to cropland (dry U.S. tons/ac.):	**0.02**		calculated
% cropland needed if all state biosolids were applied at typical rate (~3 dt/ac):	**0.5%**		calculated
Nutrient Sources - Comparison			
Nitrogen (N) in all this state's biosolids (metric tonnes, 2018):	20,627		calculated assuming avg. 4.8% biosolids
N in this state's animal manures (metric tonnes):	699,431		https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure
N in this state's purchased fertilizer (metric tonnes, 2011):	560,879		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?	**2%**		calculated

Phosphorus (P) in this state's biosolids (metric tonnes, 2018):	8,595		calculated assuming avg. 2% biosolids P
P in this state's animal manures (metric tonnes):	206,361		https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure
P in this state's purchased fertilizer (metric tonnes, 2011):	62,974		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%**		calculated

State Regulatory Involvement

Biosolids oversight agency / division:		**Environment agency - water / wastewater program**	
Permitting.... of biosolids programs:		NPDES type permits, solid waste permits	
...of land application sites:		State-only Land Application and Processing Authorizations	
FTEs: state biosolids regulatory program:	3		survey response by state expert
Biosolids program FTEs per million population:	**0.10**		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:		**High**	
Amount of state regulation of nutrient management & phosphorus:		**Moderate**	rankings by survey team based on information provided in survey (options: High, Moderate, Low, None)
Accessibility of biosolids data to public:		**Low**	
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 (18,257 acres Class B; estimated 50,000 Class A, AB, EQ)	68,257		
Local regulations & their impacts?:		**Some**	
details...		no activity in 2018	
Legislative & state regulatory actions in 2018 & their impacts?:		**None**	
details...		5 known county ordinances related to limitations on biosolids land application	
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...		0	

Changes in Biosolids Use & Disposal

Change* in solids reported used or disposed (in units used by state):	(169,207)	*Change may be due to population increase/decrease and/or different systems of data tracking and reporting.
Beneficial Use - percentage point increase or decrease (-):	20%	
Landfill & surface disposal - % point increase or decrease (-):	5%	
Incineration - percentage point increase or decrease (-):	-0.1%	calculated comparing these 2018 data to 2004 data compiled by the same survey team (NEBRA, 2007)
Class A - percentage point increase or decrease (-):	16%	
Class B - percentage point increase or decrease (-):	4%	
No class or not known - percentage point increase or decrease (-):	-20%	

Pressures on biosolids, 2018

survey response by state expert

1 PUBLIC INVOLVEMENT- concerns of neighbors, environmental groups, and others
2 MANAGEMENT ISSUES - the hassle of biosolids recycling/land application
3 COST – disposal options are least expensive
4 AGRICULTURAL ISSUES - declining farmland due to less agriculture or due to development, sprawl, seasonal restrictions, or competition with manures, etc.
5 REGULATIONS ON BENEFICIAL USE– strict EPA and/or state regulation and enforcement