

DASHBOARD

Iowa State Biosolids Statistics

Data Quality & Methods

Quality & Confidence in this state's data:

Data sources & methods:

State biosolids included in 2018 EPA ECHO data

2018

HIGH

State biosolids coordinator, who was very thorough in completing this survey, tracks land application closely & compiles data from annual reports from WRRFs, which are now submitted electronically.

104% % in ECHO vs. the total presented here

explanations & sources

ranking by survey team based on information provided in survey (options: High, Moderate, Low, None)

<https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual>

Demographics & Wastewater

State population:

Total land area in state (acres):

Population density (persons/square mile):

Total number of WRRFs reported in state survey:

total number of WRRFs permitted/reported elsewhere:

number of WRRFs in EPA ECHO reports for 2018:

Average population served per WRRF:

Average wastewater flow statewide (MGD, NBDP):

avg. wastewater flow statewide (MGD, Seiple):

Number of WRRFs that treat >75% of state flow:

% of population served by on-site (septic) systems:

Biosolids used or disposed / person in 2018 (lbs):

3,156,145

35,748,480

56.5

871

763

82

2,718

507

371

70

25%

39

U.S. Census estimate for July 1, 2018

<https://www.census.gov/newsroom/prass-kits/2018/cen-estimates-national-state.html>

calculated

survey response by state expert

Seiple et al., 2020; state experts, etc.

<https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual>

calculated

survey response by state expert

Seiple et al., 2020

<https://doi.org/10.1016/j.jenvman.2020.110852>

Seiple et al., 2020

<https://doi.org/10.1016/j.jenvman.2020.110853>

survey response by state expert

calculated

Biosolids Application

Agricultural land cropland (acres):

% of state area in cropland:

Number of farms with that cropland:

% cropland to which biosolids were applied:

Application rate if all state biosolids were applied to cropland (dry metric tons/ac.):

% cropland needed if all state biosolids were applied at typical rate (~3 dt/ac):

26,545,960

74%

77,943

0.07%

0.002

0.1%

<https://quickstats.nass.usda.gov/results/0CRBAD84-6032-3776-ARBB-6240B8825822>

calculated

<https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30FE-9274-2F91C0640FC>

calculated

calculated

calculated

calculated

Nutrient Sources - Comparison

Nitrogen (N) in all this state's biosolids (metric tonnes, 2018):

N in this state's animal manures (metric tonnes):

N in this state's purchased fertilizer (metric tonnes, 2011):

If all state's biosolids applied, what % of state's applied N would come from biosolids?

Phosphorus (P) in this state's biosolids (metric tonnes, 2018):

P in this state's animal manures (metric tonnes):

P in this state's purchased fertilizer (metric tonnes, 2011):

2,966

398,551

1,214,110

0.2%

1,236

144,981

200,085

calculated assuming avg. 4.8% biosolids N

<https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure>

<https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased>

calculated

calculated

calculated assuming avg. 2% biosolids P

<https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure>

<https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased>

<p>If all state's biosolids applied, what % of state's applied P would come from biosolids?</p>	<p>0.4%</p>	<p>calculated</p>
<p>State Regulatory Involvement Biosolids oversight agency / division: Permitting.... of biosolids programs: ...of land application sites: FTEs: state biosolids regulatory program: Biosolids program FTEs per million population: Enforcement: Inspections of biosolids facilities & field sites in 2018: Formal violations issued: Amount of state regulations beyond Part 503: Amount of state regulation of nutrient management & phosphorus: Accessibility of biosolids data to public: State encouragement of biosolids recycling to soils: Voluntary additional protections by land appliers known & reported by state coordinator:</p>	<p>Environment agency - water / wastewater program</p> <p>0.10 20 0</p> <p>0.3 Iowa sewage sludge land application regulation IAC 567-67 is currently being revised. The draft revision is complete. Public hearing has been done. It is in the rulemaking process. The anticipation rule change will possibly be in 2021.</p> <p>Low only) Moderate High None</p>	<p>survey response by state expert calculated</p> <p>survey response by state expert</p> <p>survey response by state expert</p> <p>rankings by survey team based on information provided in survey (options: High, Moderate, Low, None)</p>
<p>Trends New land application activity, 2018 - new permits & acreage, acres applied: acres applied in 2018: Local regulations & their impacts?: details... Legislative & state regulatory actions in 2018 & their impacts?: details... Biosolids beneficial use increasing... ..in 2018?: in 2020?: details...</p>	<p>No data</p> <p>18,889</p> <p>None</p> <p>Some</p> <p>It's staying the same. It's staying the same.</p>	<p>rankings by survey team based on information provided in survey (options: High, Moderate, Low, None)... With quotes of survey responses by state expert(s)</p> <p>survey response by state expert</p> <p>survey response by state expert</p>
<p>Changes in Biosolids Use & Disposal</p> <p>Change* in solids reported used or disposed (in units used by state): Beneficial Use - percentage point increase or decrease (-): Landfill & surface disposal - % point increase or decrease (-): Incineration - percentage point increase or decrease (-): Class A - percentage point increase or decrease (-): Class B - percentage point increase or decrease (-): No class or not known - percentage point increase or decrease (-):</p>	<p>1,030 dry metric tons</p> <p>-4%</p> <p>0%</p> <p>-5%</p> <p>2%</p> <p>1%</p> <p>-3%</p>	<p>*Change may be due to population increase/decrease, change in treatment at a large WWTP, and/or different systems of data tracking and reporting.</p> <p>calculated comparing these 2018 data to 2004 data compiled by the same survey team (NEBRA, 2007)</p>