

DASHBOARD

Ohio State Biosolids Statistics

Data Quality & Methods	2018	explanations & sources
<p>Quality & Confidence in this state's data:</p> <p>Data sources & methods: State biosolids included in 2018 EPA ECHO data</p>	<p>HIGH</p> <p>State biosolids coordinator tracks land application closely and provided extensive attention to detail for this survey.</p> <p>4% % in ECHO vs. the total presented here</p>	<p>ranking by survey team based on information provided in survey (options: High, Moderate, Low, None)</p> <p>https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</p>
<p>Demographics & Wastewater</p> <p>State population: 11,689,442</p> <p>Total land area in state (acres): 26,151,040</p> <p>Population density (persons/square mile): 286</p> <p>Total number of WRRFs reported in state survey: 1,290</p> <p>total number of WRRFs permitted/reported elsewhere: 803</p> <p>number of WRRFs in EPA ECHO reports for 2018 (OH is delegated for Part 503; reporting to EPA is not required): 6</p> <p>Average population served per WRRF: 7,249</p> <p>Average wastewater flow statewide (MGD, NBDP): no data</p> <p>avg.wastewater flow statewide (MGD, Seiple): 1,877</p> <p>Number of WRRFs that treat >75% of state flow: 53</p> <p>% of population served by on-site (septic) systems: 20%</p> <p>Biosolids used or disposed / person in 2018 (lbs): 48</p>		<p>U. S. Census estimate for July 1, 2018 https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html</p> <p>calculated</p> <p>survey response by state expert Seiple et al., 2020; state experts, etc.</p> <p>https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</p> <p>calculated</p> <p>survey response by state expert Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110852</p> <p>Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110853</p> <p>survey response by state expert</p> <p>calculated</p>
<p>Biosolids Application</p> <p>Agricultural land cropland (acres): 10,960,704</p> <p>% of state area in cropland: 42%</p> <p>Number of farms with that cropland: 66,292</p> <p>% cropland to which biosolids were applied: 0.30%</p> <p>Application rate if all state biosolids were applied to cropland (dry U.S. tons/ac.): 0.03</p> <p>% cropland needed if all state biosolids were applied at typical rate (~3 dt/ac): 0.9%</p>		<p>https://quickstats.nass.usda.gov/results/0CB84D84-6032-3776-A98B-624b98875822</p> <p>calculated</p> <p>https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30EE-9724-2991CC0640EC</p> <p>calculated</p> <p>calculated</p> <p>calculated</p>
<p>Nutrient Sources - Comparison</p> <p>Nitrogen (N) in all this state's biosolids (metric tonnes, 2018): 12,326</p> <p>N in this state's animal manures (metric tonnes): 108,025</p> <p>N in this state's purchased fertilizer (metric tonnes, 2011): 306,996</p> <p>If all state's biosolids applied, what % of state's applied N would come from biosolids? 3%</p> <p>Phosphorus (P) in this state's biosolids (metric tonnes, 2018): 5,136</p> <p>P in this state's animal manures (metric tonnes): 32,516</p>		<p>calculated assuming avg. 4.8% biosolids N https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure</p> <p>https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchases</p> <p>calculated</p> <p>calculated assuming avg. 2% biosolids P https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure</p>

<p>P in this state's purchased fertilizer (metric tonnes, 2011):</p> <p>If all state's biosolids applied, what % of state's applied P would come from biosolids?</p>	<p>42,888</p> <p>6%</p>	<p>https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchases</p> <p>calculated</p>
<p>State Regulatory Involvement</p> <p>Biosolids oversight agency / division: Permitting.... of biosolids programs: ...of land application sites: FTEs: state biosolids regulatory program:</p> <p>Biosolids program FTEs per million population:</p> <p>Enforcement: Inspections of biosolids facilities & field sites in 2018:</p> <p>Formal violations issued:</p> <p>Amount of state regulations beyond Part 503:</p> <p>Amount of state regulation of nutrient management & phosphorus:</p> <p>Accessibility of biosolids data to public:</p> <p>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>specific NPDES type permits specific site permits for Class B land app sites only</p> <p>3</p> <p>0.26</p> <p>41</p> <p>0</p> <p>High</p> <p>High</p> <p>Low</p> <p>Moderate</p> <p>None</p>	<p>survey response by state expert calculated survey response by state expert 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</p> <p>New land application activity, 2018 - new permits & acreage, acres applied: acres applied in 2018:</p> <p>Local regulations & their impacts?: details...</p> <p>Legislative & state regulatory actions in 2018 & their impacts?: details...</p> <p>Biosolids beneficial use increasing... ..in 2018?: in 2020?: details...</p>	<p>32,570</p> <p>High</p> <p>None</p> <p>None</p> <p>It's staying the same.</p> <p>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 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):</p> <p>Beneficial Use - percentage point increase or decrease (-):</p> <p>Landfill & surface disposal - % point increase or decrease (-):</p> <p>Incineration - percentage point increase or decrease (-):</p> <p>Class A - percentage point increase or decrease (-):</p> <p>Class B - percentage point increase or decrease (-):</p> <p>No class or not known - percentage point increase or decrease (-):</p>	<p>(75,024) dry U.S. tons</p> <p>-8%</p> <p>18%</p> <p>7%</p> <p>-9%</p> <p>-4%</p> <p>12%</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>