

# DASHBOARD

## Alabama State Biosolids Statistics

Data Quality & Methods	2018	explanations & sources
<p><b>Quality &amp; Confidence</b> in this state's data:</p> <p>Data sources &amp; methods:</p> <p>State biosolids included in 2018 EPA ECHO data</p>	<p><b>Moderately High</b></p> <p>Data are from U.S. EPA ECHO for 2018, as well as a NBDP survey response from the largest utility. Additional information kindly provided by the state biosolids coordinator.</p> <p>82% % 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><a href="https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual">https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</a></p>
<p><b>Demographics &amp; Wastewater</b></p> <p>State population:</p> <p>Total land area in state (acres):</p> <p>Population density (persons/square mile):</p> <p>Total number of WRRFs reported in state survey:</p> <p>total number of WRRFs permitted/reported elsewhere:</p> <p>number of WRRFs in EPA ECHO reports for 2018:</p> <p><b>Average population served per WRRF:</b></p> <p><b>Average wastewater flow statewide (MGD, NBDP):</b></p> <p>avg.wastewater flow statewide (MGD, Seiple):</p> <p><b>Number of WRRFs that treat &gt;75% of state flow:</b></p> <p><b>% of population served by on-site (septic) systems:</b></p> <p><b>Biosolids used or disposed / person in 2018 (lbs):</b></p>	<p>4,887,871</p> <p>32,412,800</p> <p>96.5</p> <p>69</p> <p>284</p> <p>54</p> <p><b>9,840</b></p> <p><b>339</b></p> <p>413</p> <p><b>51</b></p> <p><b>43%</b></p> <p><b>15</b></p>	<p>U.S. Census estimate for July 1, 2018 <a href="https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html">https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html</a></p> <p>calculated</p> <p>NBDP compilation</p> <p>Seiple et al., 2020; state experts, etc. <a href="https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual">https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</a></p> <p>calculated</p> <p>survey response by state expert</p> <p>Seiple et al., 2020 <a href="https://doi.org/10.1016/j.jenvman.2020.110852">https://doi.org/10.1016/j.jenvman.2020.110852</a></p> <p>Seiple et al., 2020 <a href="https://doi.org/10.1016/j.jenvman.2020.110853">https://doi.org/10.1016/j.jenvman.2020.110853</a></p> <p><a href="https://www.montgomeryadvertiser.com/story/news/local/alabama/2018/07/06/story-first-series-ways-communities-addressing-rise-poverty-related-tropical-diseases-poor-sewage/754311002/">https://www.montgomeryadvertiser.com/story/news/local/alabama/2018/07/06/story-first-series-ways-communities-addressing-rise-poverty-related-tropical-diseases-poor-sewage/754311002/</a></p> <p>calculated</p>
<p><b>Biosolids Application</b></p> <p>Agricultural land cropland (acres):</p> <p><b>% of state area in cropland:</b></p> <p>Number of farms with that cropland:</p> <p><b>% cropland to which biosolids were applied:</b></p> <p><b>Application rate</b> if all state biosolids were applied to cropland (dry U.S. tons/ac.):</p> <p><b>% cropland needed</b> if all state biosolids were applied at typical rate (~3 dt/ac):</p>	<p>2,818,783</p> <p><b>9%</b></p> <p>24,665</p> <p><b>no data</b></p> <p><b>0.01</b></p> <p><b>0.4%</b></p>	<p><a href="https://quickstats.nass.usda.gov/results/0C8BAD84-6032-3776-AB8-624D8A2582?">https://quickstats.nass.usda.gov/results/0C8BAD84-6032-3776-AB8-624D8A2582?</a></p> <p>calculated</p> <p><a href="https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30FE-9774-2F91CC0640EC">https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30FE-9774-2F91CC0640EC</a></p> <p>calculated</p> <p>calculated</p> <p>calculated</p>
<p><b>Nutrient Sources - Comparison</b></p> <p>Nitrogen (N) in all this state's biosolids (metric tonnes, 2018):</p> <p>N in this state's animal manures (metric tonnes):</p> <p>N in this state's purchased fertilizer (metric tonnes, 2011):</p>	<p>1,766</p> <p>133,956</p> <p>68,225</p>	<p>calculated assuming avg. 4.8% biosolids N</p> <p><a href="https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure">https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure</a></p> <p><a href="https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased">https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased</a></p>

<p><b>If all state's biosolids applied, what % of state's applied N would come from biosolids?</b> Phosphorus (P) in this state's biosolids (metric tonnes, 2018):</p> <p>P in this state's animal manures (metric tonnes):</p> <p>P in this state's purchased fertilizer (metric tonnes, 2011):</p> <p><b>If all state's biosolids applied, what % of state's applied P would come from biosolids?</b></p>	<p><b>0.9%</b> 736</p> <p>41,438</p> <p>17,439</p> <p><b>1.2%</b></p>	<p>calculated calculated assuming avg. 2% biosolids P <a href="https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure">https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure</a> <a href="https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased">https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased</a></p> <p>calculated</p>
<p><b>State Regulatory Involvement</b></p> <p><b>Biosolids oversight agency / division:</b> Permitting.... of biosolids programs:</p> <p>...of land application sites: FTEs: state biosolids regulatory program:</p> <p><b>Biosolids program FTEs per million population:</b></p> <p><b>Enforcement: Inspections of biosolids facilities &amp; field sites in 2018:</b></p> <p><b>Formal violations issued:</b></p> <p><b>Amount of state regulations beyond Part 503:</b></p> <p><b>Amount of state regulation of nutrient management &amp; phosphorus:</b></p> <p><b>Accessibility of biosolids data to public:</b></p> <p><b>State encouragement of biosolids recycling to soils:</b> Voluntary additional protections by land applicers known &amp; reported by state coordinator:</p>	<p><b>Environment Agency</b> thru WWTP's NPDES permit in 2018, mostly followed Part 503; new state rules created in 2020, with update in 2022</p> <p><b>0.61</b></p> <p><b>no data</b> <b>no data</b> <b>Moderate</b> <b>Moderately Low</b> <b>Low</b> <b>Moderately High</b></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><b>Trends</b></p> <p><b>New land application activity, 2018 - new permits &amp; acreage, acres applied:</b> acres applied in 2018:</p> <p><b>Local regulations &amp; their impacts?:</b> details...</p> <p><b>Legislative &amp; state regulatory actions in 2018 &amp; their impacts?:</b> details...</p> <p><b>Biosolids beneficial use increasing... ..in 2018?:</b> <b>....in 2020?:</b> details...</p>	<p><b>Moderate</b> no data <b>None</b> expand beneficial use <b>Some</b></p> <p><b>Don't know</b> <b>Yes</b> New state regulations effective in April 2020 are intended to reduce complaints &amp; support land application.</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><b>Changes in Biosolids Use &amp; Disposal, 2004 - 2018</b></p> <p><b>Change* in solids reported used or disposed (in units used by state):</b></p> <p><b>Beneficial Use - percentage point increase or decrease (-):</b></p> <p><b>Landfill &amp; surface disposal - % point increase or decrease (-):</b></p> <p><b>Incineration - percentage point increase or decrease (-):</b></p> <p><b>Class A - percentage point increase or decrease (-):</b></p> <p><b>Class B - percentage point increase or decrease (-):</b></p> <p><b>No class or not known - percentage point increase or decrease (-):</b></p>	<p>(24,453) dry metric tons</p> <p>1%</p> <p>-2%</p> <p>1%</p> <p>6%</p> <p>13%</p> <p>-18%</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>