

DASHBOARD

California State Biosolids Statistics

Data Quality & Methods	2018	explanations & sources
<p>Quality & Confidence in this state's data:</p> <p>Data sources & methods:</p> <p>State biosolids included in 2018 EPA ECHO data</p>	<p>HIGH</p> <p><i>U. S. EPA biosolids coordinator has long tracked & overseen land application closely & compiles data annually in database. Data were confirmed by NBDP survey of WRRFs and reports by state organizations. Data & summary report reviewed by additional experts in the state.</i></p> <p>93% % 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:</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>Average population served per WRRF:</p> <p>Average wastewater flow statewide (MGD, NBDP):</p> <p>avg.wastewater flow statewide (MGD, Seiple):</p> <p>Number of WRRFs that treat >75% of state flow:</p> <p>% of population served by on-site (septic) systems:</p> <p>Biosolids used or disposed / person in 2018 (lbs):</p>	<p>39,557,045</p> <p>99,698,560</p> <p>254</p> <p>237</p> <p>497</p> <p>207</p> <p>150,217</p> <p>2,480</p> <p>3,381</p> <p>50</p> <p>10% estimated; septage data not available</p> <p>34</p>	<p>U. S. Census estimate for July 1, 2018 https://www.census.gov/newsroom/releases/kits/2018/08-08-estimates-national-state.html</p> <p>calculated survey response by state expert Seiple et al., 2020 https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</p> <p>calculated survey response by state expert</p> <p>Seiple et al., 2020 https://doi.org/10.1016/j.jenman.2020.110852</p> <p>Seiple et al., 2020 https://doi.org/10.1016/j.jenman.2020.110853</p> <p>survey response by state expert calculated</p>
<p>Biosolids Application</p> <p>Agricultural land cropland (acres):</p> <p>% of state area in cropland:</p> <p>Number of farms with that cropland:</p> <p>% cropland to which biosolids were applied:</p> <p>Application rate if all state biosolids were applied to cropland (dry U.S. tons/ac.):</p> <p>% cropland needed if all state biosolids were applied at typical rate (~3 dt/ac):</p>	<p>9,597,439</p> <p>10%</p> <p>52,860</p> <p>no data</p> <p>0.07</p> <p>2.3%</p>	<p>https://quickstats.nass.usda.gov/results/0C8BAD84-6032-3776-AF8B-624DB8825822</p> <p>calculated</p> <p>https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30FE-9774-2B1CC0640FC</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):</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>If all state's biosolids applied, what % of state's applied N would come from biosolids?</p> <p>Phosphorus (P) in this state's biosolids (metric tonnes, 2018):</p>	<p>32,400</p> <p>327,287</p> <p>672,302</p> <p>3%</p> <p>13,500</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-purchased</p> <p>calculated</p> <p>calculated assuming avg. 2% biosolids P</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>If all state's biosolids applied, what % of state's applied P would come from biosolids?</p>	<p>75,388</p> <p>75,407</p> <p>8%</p>	<p>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-purchased</p> <p>calculated</p>
<p>State Regulatory Involvement</p> <p>Biosolids oversight agency / division:</p> <p>Permitting.... of biosolids programs:</p> <p>...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:</p> <p>Voluntary additional protections by land appliers known & reported by state coordinator:</p>	<p>Environment agency - water / wastewater program</p> <p>thru general & specific NPDES permits, thru landfill permits, & thru air permits from the local air quality management district.</p> <p>general and/or site-specific permit required for Class B & some other biosolids management</p> <p>no data</p> <p>-</p> <p>1 reported to EPA, involving 12 WRRFs</p> <p>0</p> <p>Moderate</p> <p>Low</p> <p>Moderate</p> <p>Moderately High</p> <p>Low</p>	<p>Environment agency - water / wastewater program</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>no data</p> <p>Moderate</p> <p>Moderate</p> <p>Moderate</p> <p>Several counties only allow Class A biosolids, or have additional monitoring requirements. An ordinance in Kern County to prohibit all biosolids application on non-city lands was overturned in court.</p> <p>Yes</p> <p>Don't know</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>(40,500)</p> <p>1%</p> <p>-6%</p> <p>0%</p> <p>-14%</p> <p>-3%</p> <p>17%</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>