

DASHBOARD

West Virginia State Biosolids Statistics

| Data Quality & Methods | 2018 | explanations & sources |
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| <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>Low</p> <p>Data from the U.S. EPA ECHO database, augmented by NBDP estimates based on typical solids production per MGD flow in the state of WV.</p> <p>58% % 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>1,805,832</p> <p>15,384,320</p> <p>75.1</p> <p>40</p> <p>258</p> <p>19</p> <p>2,800</p> <p>165</p> <p>165</p> <p>41</p> <p>60%</p> <p>20</p> | <p>U.S. Census estimate for July 1, 2018</p> <p>https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-state.html</p> <p>calculated</p> <p>survey response by state expert</p> <p>Seiple et al., 2020; state experts, etc.</p> <p>https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</p> <p>calculated</p> <p>Seiple et al., 2020 https://doi.org/10.11852/https://doi.org/10.1016/j.jenvman.2020.110852</p> <p>Seiple et al., 2020 https://doi.org/10.1016/j.jenvman.2020.110852</p> <p>NBDP estimate based on online info</p> <p>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>947,710</p> <p>6%</p> <p>19,545</p> <p>no data</p> <p>0.02</p> <p>0.6%</p> | <p>https://quickstats.nass.usda.gov/results/DFB8A84-f632-3776-AF8B-674DB8825822</p> <p>calculated</p> <p>https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30EF-9274-2F91C06640EC</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>P in this state's animal manures (metric tonnes):</p> | <p>861</p> <p>27,580</p> <p>5,778</p> <p>2.5%</p> <p>359</p> <p>8,304</p> | <p>calculated assuming avg. 4.8% biosolids N</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>calculated assuming avg. 2% biosolids P</p> <p>https://www.epa.gov/nutrient-policy-data/estimated-animal-agriculture-nitrogen-and-phosphorus-manure</p> |

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| <p>P in this state's purchased fertilizer (metric tonnes, 2011): If all state's biosolids applied, what % of state's applied P would come from biosolids?</p> | <p>1,801 3.4%</p> | <p>https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased calculated</p> |
| <p>State Regulatory Involvement Biosolids oversight agency / division:</p> <p>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>Department of Environmental Protection thru WWTP's NPDES permit & thru landfill regulations method of disposal required in NPDES permit no data no data no data no data Low Low None None None</p> | <p>calculated calculated 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>Low no data None None Staying the same 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) NBDP estimate NBDP estimate</p> |
| <p>Changes in Biosolids Use & Disposal, 2004 - 2018</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>(7,752) dry metric tons -24% 33% -9% -8% 5% 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. calculated comparing these 2018 data to 2004 data compiled by the same survey team (NEBRA, 2007)</p> |