

DASHBOARD

Pacific Islands & Navajo Nation Biosolids Statistics

Data Quality & Methods	2018	explanations & sources
<p>Quality & Confidence in these territories' data:</p> <p>Data sources & methods:</p> <p>Territory & Navajo Nation biosolids included in 2018 EPA ECHO data</p> <hr/> <p>Demographics & Wastewater</p> <p>Guam, NMI, American Samoa population combined: Navajo Nation population</p> <p>Total land area in Guam, Am. Samoa, & NMI (acres):</p> <p>Navajo Nation land area (acres)</p> <p>Pacific islands population density (persons/square mile): Navajo Nation population density (persons/square mile):</p> <p>Total number of WRRFs reported in territory survey: 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 territory/nation -wide (MGD, NBDP):</p> <p>avg.wastewater flow territorywide (MGD, Seiple):</p> <p>Number of WRRFs that treat >75% of territory flow:</p> <p>% of population served by on-site (septic) systems:</p> <p>Biosolids used or disposed / person in 2018 - Pacific islands (lbs):</p> <p>Biosolids used or disposed / person in 2018 - Navajo Nation (lbs):</p>	<p>Low</p> <p>Data from U.S. EPA ECHO for 6 Navajo Nation WRRFs and 4 Pacific Islands WRRFs, supplemented with information from online sources & NBDP estimates.</p> <p>96% % in ECHO vs. the total presented here</p> <p>284,000 173,000</p> <p>229,031</p> <p>17,545,000 794 6.3 0 N/A 10</p> <p>no data no data</p> <p>no data</p> <p>no data</p> <p>50% 21 34</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>U.S. Census estimate for July 1, 2018 U.S. Census estimate for July 1, 2018 https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-territory.html https://www.census.gov/newsroom/press-kits/2018/pop-estimates-national-territory.html</p> <p>calculated calculated U.S. EPA ECHO data & NBDP estimates</p> <p>https://echo.epa.gov/facilities/facility-search?mediaSelected=bioAnnual</p> <p>calculated combined flow of WRRFs in NBDP data set 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</p> <p>NBDP estimate calculated calculated</p>
<p>Biosolids Application - Pacific Island Territories</p> <p>Agricultural land cropland (acres):</p> <p>% of territory 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 territory biosolids were applied to cropland (dry U.S. tons/ac.):</p> <p>% cropland needed if all territory biosolids were applied at typical rate (~3 dt/ac):</p>	<p>18,360 8% 6,846 0% 0.16 5.4%</p>	<p>https://quickstats.nass.usda.gov/results/0C8AD84-6032-3276-AF8B-624DB8825822 calculated https://quickstats.nass.usda.gov/results/F56563D1-C9CD-30EF-9274-7F91C0840EC calculated calculated calculated</p>
<p>Nutrient Sources - Comparison</p> <p>Nitrogen (N) in these territories' & Navajo Nation's biosolids (metric tonnes, 2018):</p> <p>N in these territories' & Navajo Nation's animal manures (metric tonnes):</p>	<p>142 no data</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>N in this these territories' & Navajo Nation's purchased fertilizer (metric tonnes, 2011): If all these territories' & Navajo Nation's biosolids applied, what % of territory's applied N would come from biosolids? Phosphorus (P) in this these territories' & Navajo Nation's biosolids (metric tonnes, 2018):</p> <p>P in this these territories' & Navajo Nation's animal manures (metric tonnes):</p> <p>P in this these territories' & Navajo Nation's purchased fertilizer (metric tonnes, 2011): If all these territories' & Navajo Nation's biosolids applied, what % of territory's applied P would come from biosolids?</p>	<p>no data</p> <p>no data</p> <p>59</p> <p>no data</p> <p>no data</p> <p>no data</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> <p>https://www.epa.gov/nutrient-policy-data/commercial-fertilizer-purchased</p> <p>calculated</p>
<p>Territories & Navajo Nation Regulatory Involvement</p> <p>Biosolids oversight agency / division: Permitting... of biosolids programs: ...of land application sites: FTEs: territory 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 territory & Navajo Nation regulations beyond Part 503:</p> <p>Amount of territory & Navajo Nation regulation of nutrient management & phosphorus:</p> <p>Accessibility of biosolids data to public:</p> <p>Territory & Navajo Nation encouragement of biosolids recycling to soils: Voluntary additional protections by land appliers known & reported by territory coordinator:</p>	<p>Low</p> <p>None (Part 503 requirements only)</p> <p>Low</p> <p>Low</p> <p>None</p>	<p>survey response by territory expert</p> <p>calculated</p> <p>survey response by territory expert</p> <p>survey response by territory 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 & territory regulatory actions in 2018 & their impacts?: details...</p> <p>Biosolids beneficial use increasing... ..in 2018?: ...in 2020?:</p> <p>details...</p>	<p>Some</p> <p>no data</p> <p>None</p> <p>None</p> <p>No</p> <p>Some</p> <p>Guam is testing composting, and American Samoa is treating solids for landfill cover.</p>	<p>rankings by survey team based on information provided in survey (options: Extreme, Challenging, Some, None)... With quotes of survey responses by territory expert(s)</p> <p>NBDP research</p> <p>NBDP research</p>
<p>Changes in Biosolids Use & Disposal, 2004 - 2018</p> <p>Change* in solids reported used or disposed (in units used by territory):</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>NO 2004 DATA COMPILED BY NBDP</p>	<p>*2004 data were incomplete, and 2018 include a large estimate for landfill disposal. Comparison is unreliable.</p> <p>calculated comparing these 2018 data to 2004 data compiled by the same survey team (NEBRA, 2007)</p>