



TO: Jeff Bell, Solano County Department of Resource Management
Anthony Endow, Solano County Department of Resource Management

FROM: Mary Cousins, Bay Area Clean Water Agencies (BACWA)

DATE: December 9, 2024

SUBJECT: Memorandum on Land Application of Biosolids in Solano County in 2024

BACWA is pleased to present its annual summary of land application of biosolids in Solano County.

Solano County Code, Sec. 25-402¹ requires that “Biosolids applied to land shall meet the following requirements: (a) ... (9) Annually, after the close of the application season, there shall be a report prepared for the Board of Supervisors on the results of the past application season. The report shall include an update on the generator’s progress toward utilizing alternate technologies or methods for the reuse of biosolids other than land application or landfilling of Class B biosolids. Generators shall submit their progress report to the Administrative Authority by December 15th.”

There was no land application of Class B biosolids in Solano County in 2024, as indicated below in **Figure 1**. Therefore, the provisions of Solano County Code Sec. 25-402 requiring an annual report do not apply. Nonetheless, BACWA is providing this brief memorandum to the Solano County Board of Supervisors as a professional courtesy.

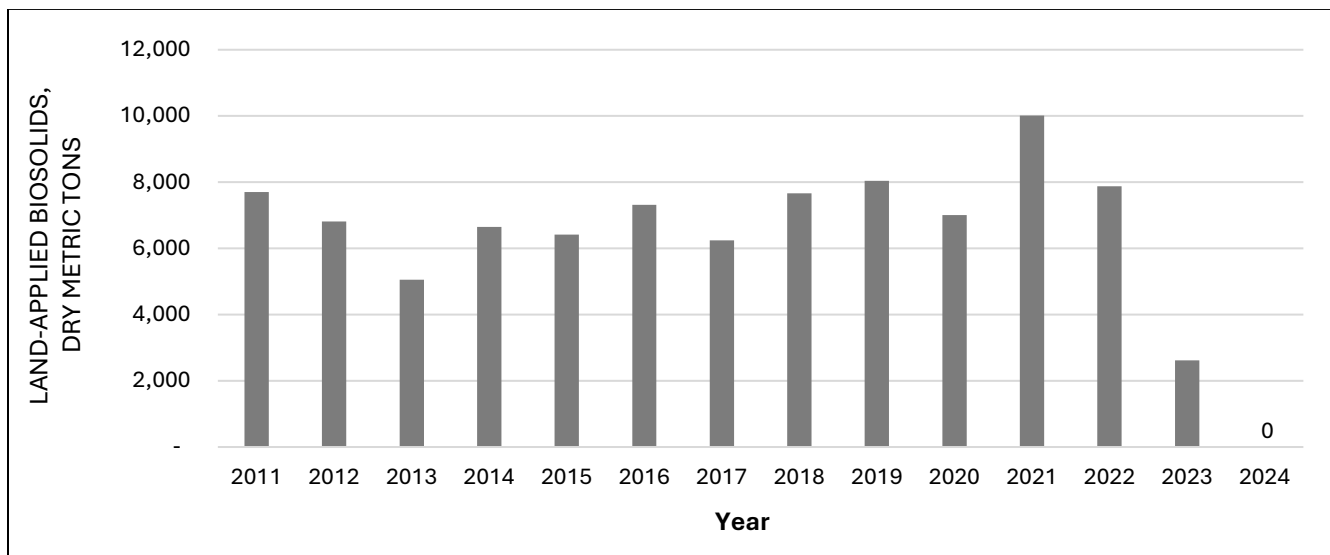


Figure 1. Total Annual Biosolids (Dry Tons) Land Applied in Solano County, 2011-2024

Data provided by Synagro

Source: Solano County Code. Available online at <https://www.codepublishing.com/CA/SolanoCounty/#!/SolanoCounty2500.html#25-402>. Accessed November 26, 2024.

TRENDS IN BIOSOLIDS USAGE IN CALIFORNIA

The use of biosolids in California for calendar years 2009 through 2023 is summarized below in **Figure 2**. Statewide data for 2024 are not yet available. The number one use statewide continues to be land application for agriculture in the form of compost, Class A biosolids, and Class B biosolids, which together accounted for 60% of biosolids uses in 2023. Biosolids have proven to be a safe, reliable, and nutrient-rich soil amendment that offers a cost-effective alternative to chemical fertilizers.

In 2023, there was a significant uptick in the volume of biosolids used for compost (from 24% to 30% of all biosolids end uses) and a decrease in Class B land application (from 24% to 21% of all biosolids end uses). Class A biosolids land application decreased slightly from 11% to 9% of all biosolids end uses. Class A land application in **Figure 2** includes use of the commercial fertilizer LysteGro from the Lystek Organic Materials Recovery Center in Fairfield.

Landfill disposal and the beneficial use of biosolids at landfills – primarily for use as alternative daily cover (ADC) or final cover – continue to be the second-most common management practices for biosolids in California. Landfill disposal and landfill beneficial use together accounted for 31% of statewide biosolids uses. In 2023 there was a decrease in the amount of biosolids sent to landfill beneficial uses (e.g., ADC), from 26% to 18% of all biosolids end uses. Conversely, the amount of biosolids sent to landfill disposal increased from 7% to 12% of all biosolids. This trend towards landfill disposal rather than ADC may partially reflect changes in state law; regulations implementing SB 1383 are expected to reduce landfills' acceptance of biosolids for ADC, because it is now considered disposal instead of beneficial reuse.

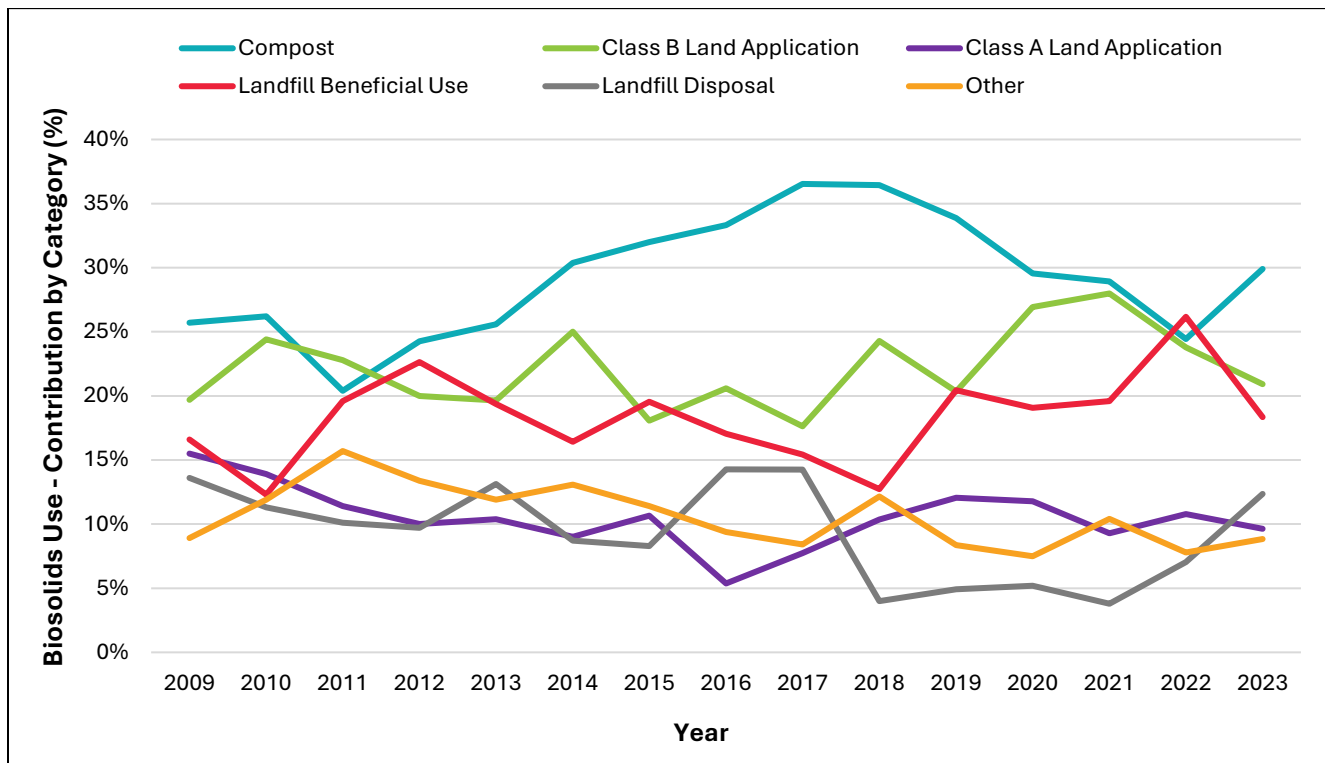


Figure 2. California Trends in Biosolids Uses, 2009-2023

Data provided by USEPA Region 9

BAY AREA REGIONAL EFFORTS

In 2024, BACWA prepared an updated Biosolids Trends Survey Report² summarizing biosolids treatment, disposal, and reuse activities for 32 surveyed facilities representing 31 public agencies for the time period 2021-2023. The report also compares results to previous surveys conducted in 2016, 2018, and 2021. Some of the key trends noted in the report included:

- **Rapid cost increases.** Biosolids reuse and disposal costs have increased by more than 50% from 2020 to 2023 due to changes in disposal practices (e.g., sending biosolids to compost in lieu of landfill ADC) and significant unit prices increase (e.g., increased unit cost for land application). Biosolids were hauled longer distances, which may have also contributed to the cost increases.
- **Change in End Uses.** The volume of biosolids sent offsite for additional treatment (e.g., compost or thermal hydrolysis) has significantly increased in recent years. For example, as of 2023, 14 of the 32 surveyed facilities were sending biosolids to the Lystek Organic Materials Recovery Center (OMRC) located in Fairfield (see **Figure 3**, below). Meanwhile, the number of agencies reliant on landfill ADC has decreased. 10 of the 31 surveyed agencies stopped sending biosolids to landfill ADC between 2020 and 2023, with 4 of the 31 switching from landfill ADC to landfill disposal.
- **Technological change.** Agencies are upgrading treatment technology to facilitate a transition from landfill disposal and landfill ADC towards beneficial uses involving compost or other Class A material.

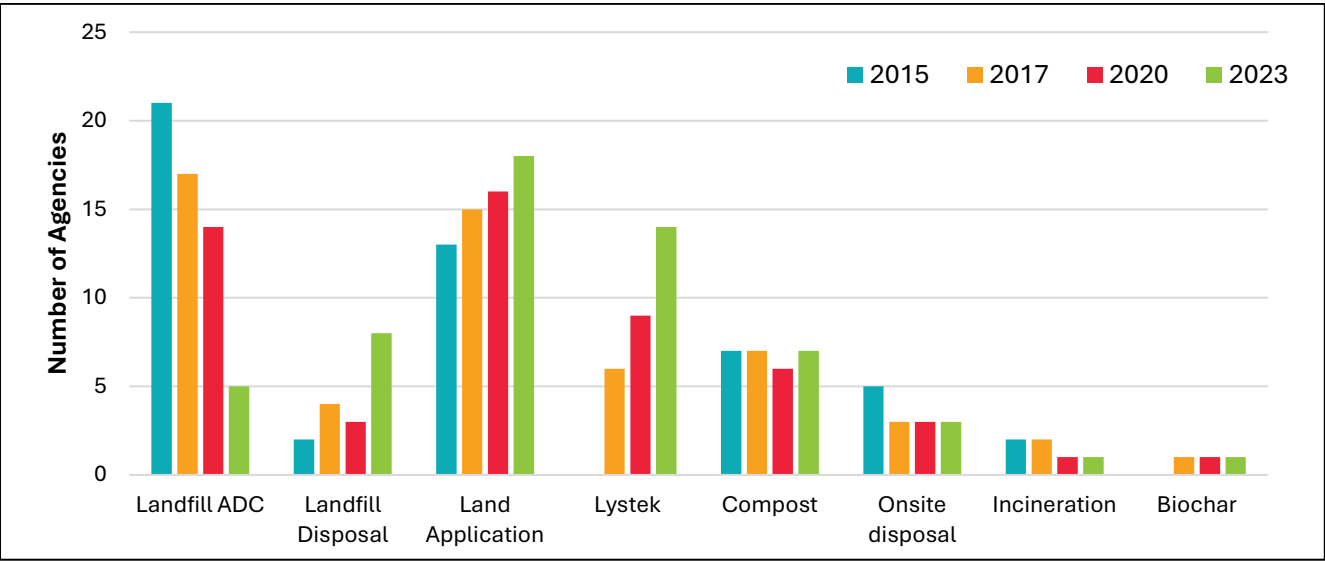


Figure 3. Biosolids management practices for 32 survey facilities, 2015 to 2023
Source: Figure 7, 2024 Biosolids Trends Survey Report.

For more information, including summary charts, summary tables, and agency-specific details, please refer to the Biosolids Trends Survey Report.

² Bay Area Clean Water Agencies. 2024 Biosolids Trends Survey Report. September 10, 2024. Available online at <https://bacwa.org/document/2024-bacwa-biosolids-trends-survey-report/>

Bay Area wastewater agencies continue to work together through the [Bay Area Biosolids Coalition](#) to communicate the value of biosolids, advance scientific research, support the expansion of biosolids land application, and support the development of biosolids management options for the Bay Area.

The Coalition was originally formed in 2004, and the current members include the following public agencies: Central Marin Sanitation Agency, City of Millbrae, City of Petaluma, City of San José, City of Santa Rosa, Delta Diablo, Dublin San Ramon Services District, East Bay Municipal Utility District, Ironhouse Sanitary District, North San Mateo County Sanitation District, San Francisco Public Utilities Commission, Vallejo Flood & Wastewater District, and West County Wastewater District. BACWA serves as the contract administrator for the Coalition.

The BACWA Biosolids Committee has been on hiatus since 2019 due to member agencies' active engagement in the Coalition. BACWA continues to maintain an email distribution list for biosolids-related information, and the Coalition invites all BACWA Biosolids Committee members to participate in periodic information-sharing sessions.