



**YEAR-END WRAP-UP**

**23 REASONS**

**TO CELEBRATE**

**WASTE & RECYCLING IN 2023**

[www.Routeware.com](http://www.Routeware.com)



The US EPA released long-awaited [recycling and infrastructure grants](#), and applications are open now.



We learned that for every dollar spent on printing and paper products, you'd have to spend \$7.14 on data processing and internet publishing to emit the same amount of greenhouse gas, per EPA industry data. [Digital tools for recycling communication and education can help.](#)



A [deep dive into the data](#) from a 2022 Greenpeace report critical of recycling revealed some fundamental flaws in calculations.



Routeware's Lisa Coelho teamed up with Alan Ha, Administrative Analyst II for the City of Milpitas, and Izchel Pulido, the sustainability specialist for the City of San Ramon, for, ["SB 1383 Compliance Data as Fuel for Behavior Change."](#)



Efficiencies created by technology helped cities launch new collection programs. The [Municipality of Anchorage](#) was able to launch and scale a new organics program with tech.



A new restaurant called [Shuggie's Trash Pie](#) opened in San Francisco, saving would-be food waste and serving it up as a delicacy in such dishes as bruised-fruit slushies and buffalo chicken gizzards.



We learned that the [history of climate science](#) dates back to 1827, when the first scientist discussed the importance of maintaining the temperature of the earth's surface.



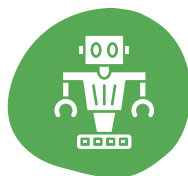
Researchers found that a typical single-stream recycling program reduces overall emissions by almost 40% when compared with landfilling the material, according to a [lifecycle assessment of various collection models](#) conducted by the Environmental Research & Education Foundation (EREF).



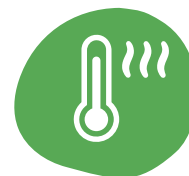
Researchers from the University of Cambridge identified [bacteria growing in European lakes that can break down plastic bags](#) faster and more efficiently than they do leaves and twigs.



On America Recycles Day, we celebrated sending [one billion notifications](#) to end users of our digital tools for recycling communication, powered by ReCollect.



Artificial intelligence, technology, and safety were key features of a new [five-year strategic plan released by SWANA](#), seeking to make the waste industry an employer of choice.



Two new [ESG reports from Republic Services](#) said chronic climate risks including extreme heat and weather events could interrupt business, diminish productivity, risk worker safety, and damage facilities.



SWANA advised haulers to [use a wait-and-see approach to electric vehicles](#), citing high upfront capital costs associated with EV investments, and recommended that members wait to transition fleets until more data could be collected and analyzed.



The [US EPA began reevaluating two long standing tools](#) for materials management policy: the waste management hierarchy and the waste reduction model.



We learned that a fleet of 25 waste and recycling trucks operating six days a week for a year — each saving five minutes a day — will [recoup \\$117,000 in a year with smart truck technology](#).





Researchers from UC Berkeley unpacked the lessons of China's National Sword program, concluding that plastics recycling can be fixed with infrastructure, elimination of certain plastics, and by repairing and rebuilding to support a circular economy.



We learned that answering solid waste and recycling questions by phone costs municipalities and haulers about \$5.05 per call — or about \$75,750 per year if they're serving just 20,000 households. Digital communication tools not only eliminate these costs, but they make for happier customers, too.



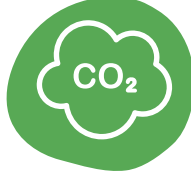
Campus sustainability initiatives made a pandemic comeback and relied on green tech to help them reach their goals, meet student expectations, and garner important designations from organizations such as the Association for the Advancement of Sustainability in Higher Education (AASHE).



The City of Waterloo (Iowa) recouped over \$11,000 in solid waste fees each month and saved \$2,600 in landfill tipping fees per month with smart truck technology on 12 fleet vehicles serving a community of about 68,000 people. In October the City received the statewide Community Award for its efforts from the Iowa Recycling Association.



The generational gap in recycling was reported in a study by DS Smith, which concluded that while GenZ is often considered to be the most environmentally conscious, they have the least confidence among all age groups in knowing how to recycle — and older people more than any other generation hold themselves accountable for recycling responsibly.



Casella Waste Systems, Inc. (NASDAQ: CWST), headquartered in Rutland, Vermont, reduced miles by 21%, cut fuel use by 5,000 gallons a year, and prevented 52 metric tons of emissions per year when they used route optimization technology from Routeware to integrate a recent acquisition.



In November, EPA released its Model Recycling Program Toolkit to help public and private entities effectively design and implement recycling, composting, anaerobic digestion, reuse, repair and waste reduction programs.



Digital tools helped The City of Durham, NC ease staffing concerns, communicate service changes, capture valuable data, and scale bulky collection.

Learn more.

Want to learn how smart technology can help take your operations to the next level in 2024? Let's talk!