2020 SUSTAINABILITY REPORT

BUILDING VALUE TOGETHER

WM
WASTE MANAGEMENT®

BUILDING VALUE TOGETHER

The end-of-life for materials can often be the start of something new. That's why we work not only to manage waste responsibly, but also to collaborate with our stakeholders to find ways to create new value—**together**.

About This Report

Waste Management is committed to consistent public disclosure and discussion of our progress through the publication of our Sustainability Report. In the past, we have published a comprehensive report every two years and an update of key data in between. Our last comprehensive report was published in 2018, with available data and key discussion items updated in 2019. Going forward, we are taking a new approach to reporting by publishing content in two different formats to further enhance reporting transparency:

- Our annual Sustainability Report details the progress on our most material issues over the past year and is now available as an interactive **website** and PDF.
- Complementing our report is a new **Environmental, Social and Governance (ESG) Resource Hub** that houses easily accessible, detailed information and data related to many aspects of our ESG performance, policies and initiatives. The Hub also houses GRI and SASB Indexes and an archive of past reports.

This report generally covers ESG performance for 2019 and early 2020 and, unless otherwise noted in the report, the report boundary is Waste Management's wholly owned operations, which are in the United States, Canada and India. All data is for the year ended December 31, 2019, except where noted. Notes on the scope of the data, including changes to methodology from the prior reporting period, are included either with charts or in footnotes.

CEO Message

The past year has been a time of awakening to the many challenges we face as a society. From the COVID-19 pandemic, to growing calls for racial justice, to the continued urgency of the climate crisis, it's clearer than ever that our lives are interconnected—and that understanding and collaboration are the right way forward.

When Waste Management faces difficult times, we respond and work to recover and become stronger than before. As the coronavirus crisis began to unfold, we reacted swiftly, taking care of employees with strong safety protocols and financial assurance. We took care of customers by continuing our waste and recycling collection services without interruption, supplying an essential feedstock for markets that use recycled material to produce the products and packages that we rely on each day.

Likewise, in the aftermath of the death of George Floyd in Minneapolis, Waste Management's Inclusion and Diversity staff activated a series of dialogues and programs to further inclusivity among all employees, and to facilitate constructive discussions in our workplaces. We will continue to establish new cultural norms and to ensure consistent practices around education and equity, with goals established to guide this effort. I've always been proud of Waste Management's People First culture, and that's never been more true than in recent months.

Amidst all of these crises, we haven't lost sight of our essential role in protecting the environment and contributing to a circular economy. As of the fall of 2020, we are processing a growing volume of residential recyclables, we continue to reduce our fleet emissions, and we are creating value from waste at our landfills to generate clean, renewable energy. Record investments in our recycling infrastructure and fleet will help us continue on this path.

As you read our 2020 Sustainability Report, I hope you see a thoughtful, mature yet progressive company with a balanced approach to our social and environmental commitments—one with management systems in place, a track record of environmental investment and processes, and a commitment to our people. Close partnerships among our employees, customers, suppliers, community partners and others have made it possible.

In spite of trying times, our Commitments & Values have not changed. We are the same company with the same dedication, always working for a sustainable tomorrow. As we continue to build value, I'm optimistic about what the future holds.

Jim Fish
President and
Chief Executive Officer

In spite of trying times, our Commitments & Values have not changed. We are the same company with the same dedication, **always working for a sustainable tomorrow.** As we continue to build value, I'm optimistic about what the future holds.

Watch Jim Fish's interview with Fortune Magazine.

Building Value Together in 2019

Our 2020 Sustainability Report proves our commitment to continuous improvement. Throughout this report, you'll find stories that describe how Waste Management and our stakeholders are Building Value Together. In addition to these stories, we're proud to share the following highlights from the past year.

People First Highlights

Our **Commitments & Values** are the foundation by which we are elevating our dedication to a People First organization. Putting our people first means achieving success with integrity. These guiding principles ensure that we'll never lose sight of the things we value most: our people, our customers, our environment, our dedication to safety and our continuous goal to create great places to work for all.

National Recognition

We're proud to have been recognized for our efforts to create a rewarding workplace and operate a sustainable business. Below are a few awards and recognitions we received in 2019 and 2020.

2019 Corporate Leadership Award—Employee Engagement, Wildlife Habitat Council

2019 Climate Change A-List, CDP

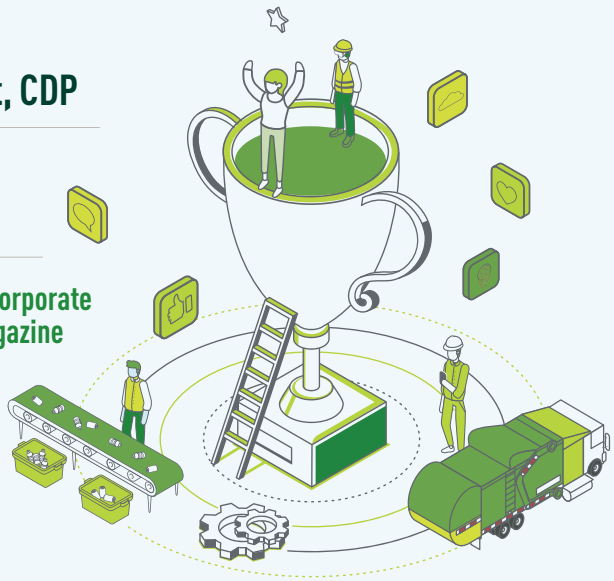
2020 Sustainability Yearbook, Gold Class, S&P Global

2020 World's Most Ethical Companies, Ethisphere Institute

2019 Sector Leader, Dow Jones Sustainability Index

2020 World's Most Admired Companies, Fortune Magazine

2020 100 Best Corporate Citizens, CR Magazine



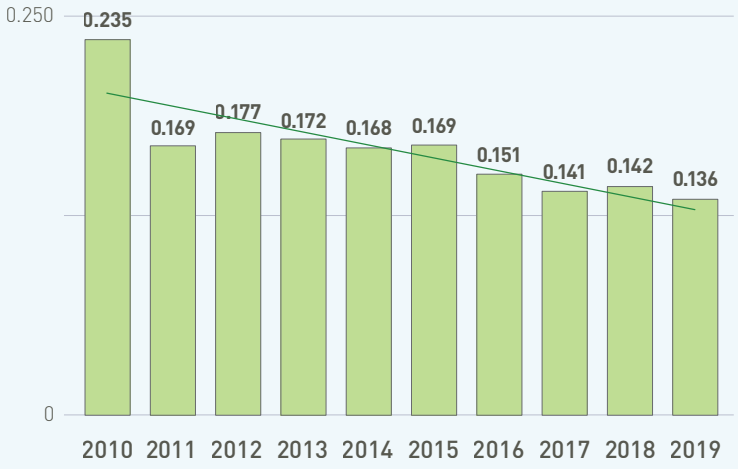
A full list of awards can be found on our ESG Resources Hub.

Environmental Highlights

Emissions Intensity Reduction

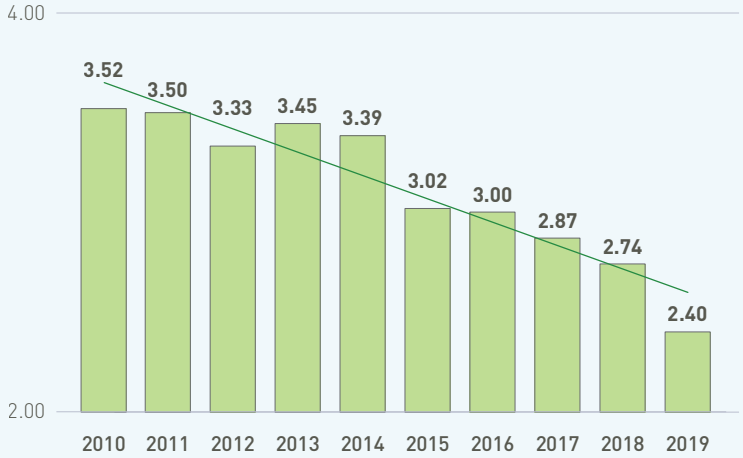
Over the past decade, we have consistently decreased the intensity of our emissions. Even as we are managing more waste today than we were 10 years ago, our emissions per ton of waste disposed have continued to decline. We are investing in the latest fleet technology to produce and use renewable energy, and we are exploring ways to better measure landfill emissions in order to develop more precise approaches to managing these emissions.

Metric Tons of Carbon Dioxide per Ton of Waste Disposed



Total Collection & Support Fleet

Metric Tons of GHGs per 1,000 Miles Driven



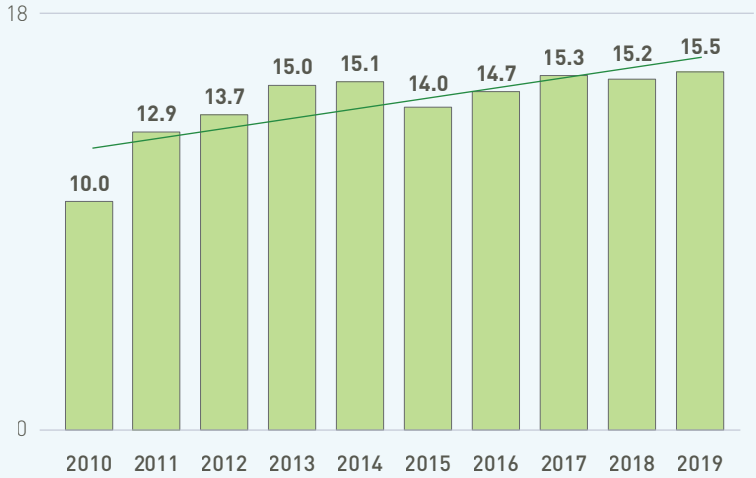
Fleet Leadership

We are also consistently reducing our **GHG emissions** per mile driven. By the end of 2019, for every 1,000 miles driven, we had reduced our GHG emissions by 32%, and total GHG emissions by 36% for our collection and support fleet. We've achieved these reductions through logistical efficiencies, transitioning to natural gas vehicles, and by increasing our use of renewable fuel.

Recycling Growth and Investment

Over the past decade, Waste Management has become an industry leader in our commitment to invest in recycling infrastructure with long-term sustainability in mind. We invested more than $100 million in recycling infrastructure in both 2018 and 2019, and set a new record in 2019, with over 15.5 million tons of material processed for beneficial use.

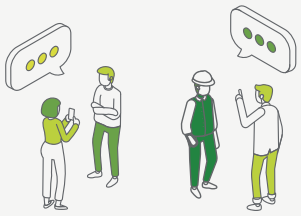
Million Tons of Recyclables Managed



Waste Management At-A-Glance

(as of and for the year ended December 31, 2019)

Waste Management, Inc. (NYSE: WM), based in Houston, Texas, is the leading provider of comprehensive waste management environmental services in North America.



People

44.9K
employees

Energy

8,924
alternative fuel vehicles

145
natural gas fueling stations

97
landfill gas-to-electricity facilities

27
landfill gas-to-fuel facilities

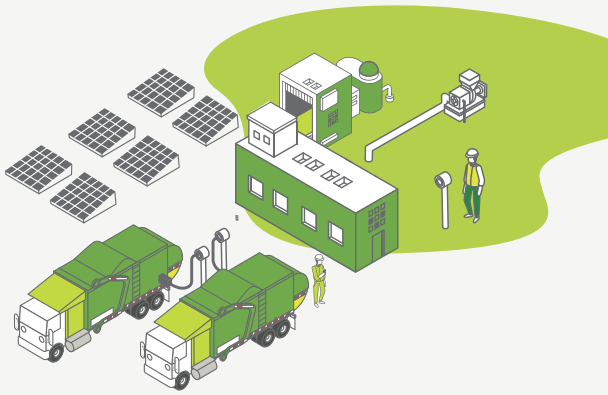
Operations

Landfills and Transfer Facilities

5
active hazardous waste landfills

244
active solid waste landfills

302
transfer facilities



Recycling Facilities

2
dual stream recycling facilities

11
construction and demolition recycling facilities

36
composting/chipping/grinding facilities

4
CORe® organics processing facilities

30
commercial/paper only recycling facilities

46
single-stream recycling facilities

14
bale/transfer/buy-back/dedicated customer processing facilities

Impact

Financial

$15.5B
total revenue

$3.9B
cash from operations

$1.8B
capital expenditures

$1.1B
returned to shareholders

Community Vitality

$14.8M
donated in charitable giving

$1.6M
in-kind services donated

3,496
community events hosted and/or participated in by Waste Management

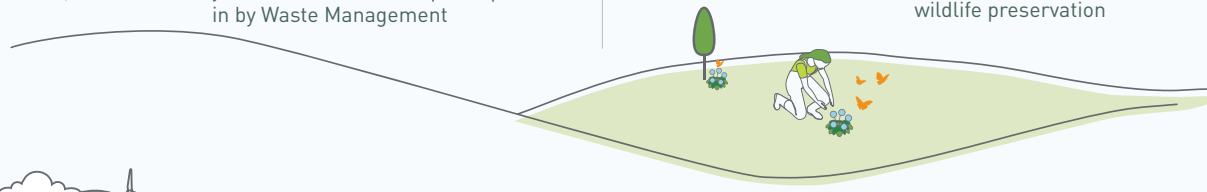
Environmental Conservation

79
certified wildlife habitat programs

217
active habitat, species and education certified projects

63
pollinator programs

17,917
acres actively managed for wildlife preservation



Environmental Education

393,478
people, including K-12 youth and college students, participated in Waste Management-hosted education and community betterment activities

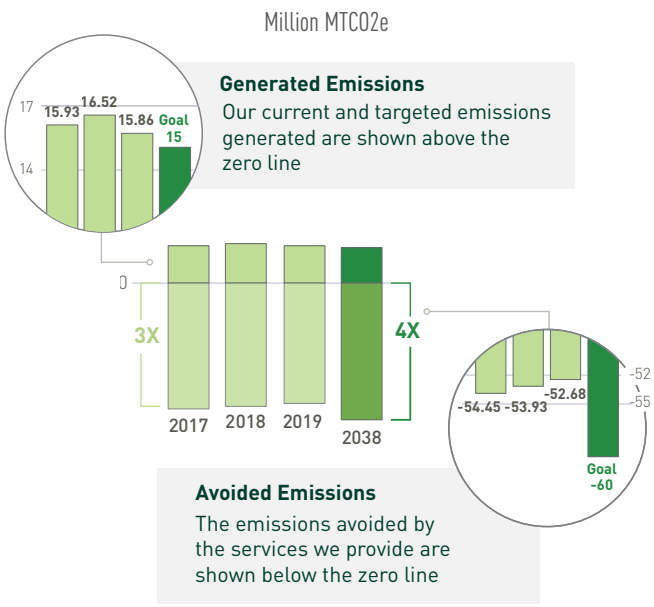
Note: Waste Management, Inc. is a holding company, and all operations are conducted by its subsidiaries. References to "Waste Management," "the Company" or "WM" refer to Waste Management, Inc. and its consolidated subsidiaries, unless context provides otherwise.

Goals & Progress

Environmental Goal

Our overarching environmental goal is to reduce GHG emissions while protecting the environment. Currently, the services we provide avoid three times (3X) more GHG emissions than we generate in our operations. Our 2038 goal calls for reducing even more GHG emissions—four times (4X) the GHG emissions we generate through our operations. All of our environmental goals contribute to this overarching goal of emitting less and reducing, avoiding and offsetting more. To achieve this goal, our strategy is to reduce emissions from our landfills, fleet and electricity use, while increasing the emissions-avoidance services that we provide to our customers. Between now and 2038, the bar above the zero line will decrease as we reduce operational emissions, while the bar below the zero line will increase.

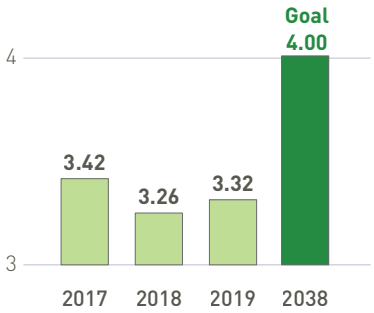
How We Measure Our 4X Goal

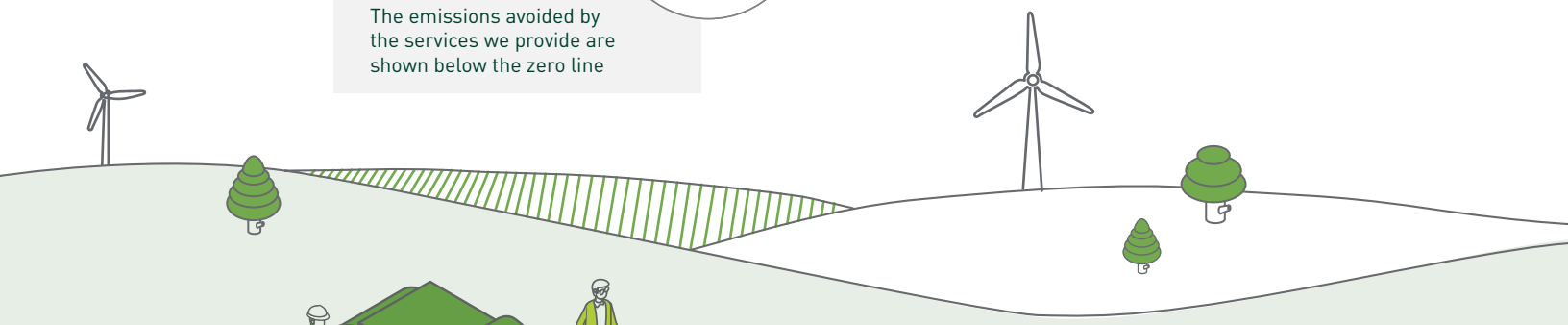


Generated Emissions
Our current and targeted emissions generated are shown above the zero line

Avoided Emissions
The emissions avoided by the services we provide are shown below the zero line

Progress to Achieving Our 4X Goal

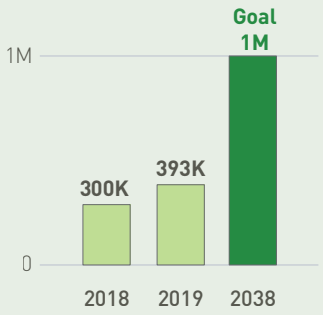




Community Goal

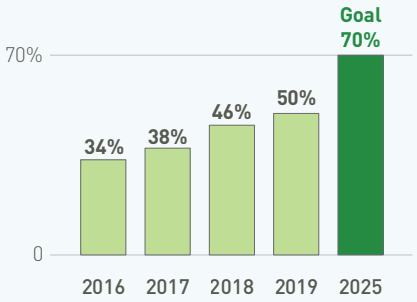
Waste Management aspires to make the communities where we live and work safe, resilient and sustainable. We are investing in a quieter, cleaner fleet; supporting programs that preserve biodiversity and conservation; continuing our programs that prioritize community safety; and organizing environmental education programs and activities, including facility tours, community events and social media engagement campaigns.

Participants in WM Supported/Hosted Education Events and Programs

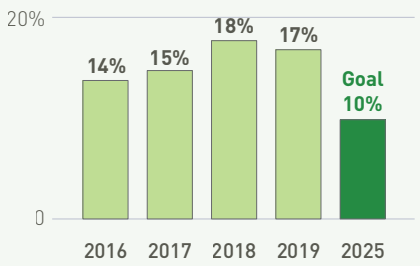


In 2019, Waste Management Committed to Six 2025 Goals:

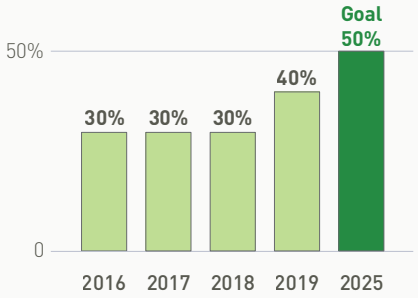
70%
of collection fleet to be alternative fuel vehicles



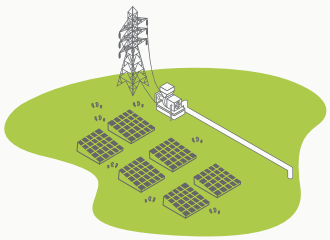
10%
inbound recycling contamination at our MRFs



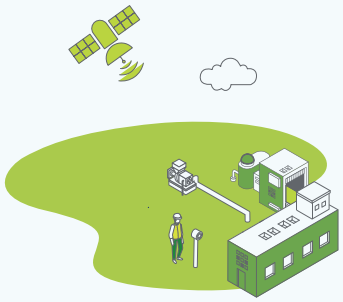
50%
of alternative fuel vehicles to run on renewable natural gas



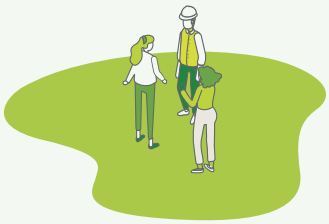
100%
renewable energy at WM controlled sites



Develop
fugitive emissions measurement systems



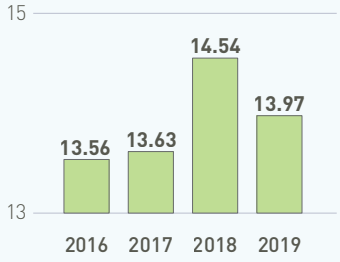
100%
of WM employees paid a Living Wage



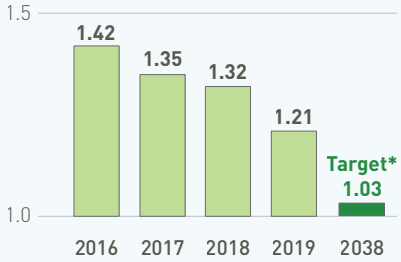
Key Performance Indicators—Environment

GHG Emissions From Operations (MMTCO2e)[1]

Landfill[2]

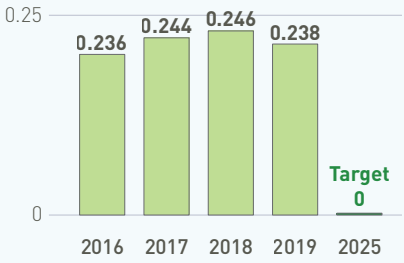


Collection Fleet[3]

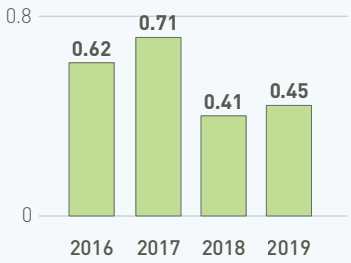


*This is a 45% reduction in fleet emissions from the base year, 2010.

Electricity[4]

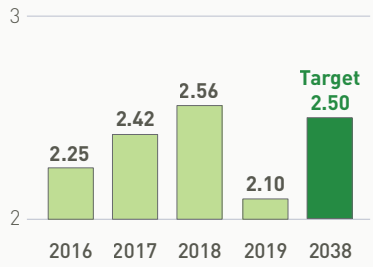


Other Energy Use[5]

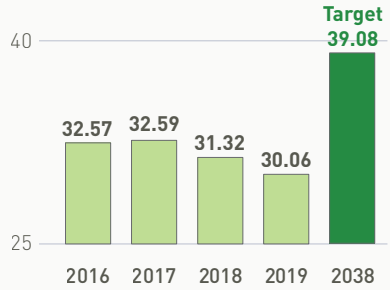


GHG Emissions Avoided (MMTCO2e)[6]

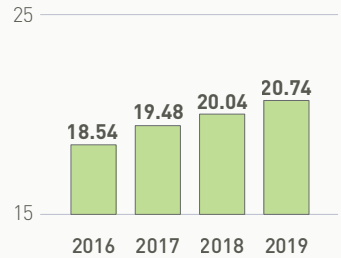
Renewable Energy Generation[7]



Recycling of Materials[8]



Carbon Permanently Sequestered



Supply Chain

Diverse Supplier Spend

In Millions

Target: 10% year-over-year growth in annual spend with diverse suppliers

Sustainable Supplier Spend

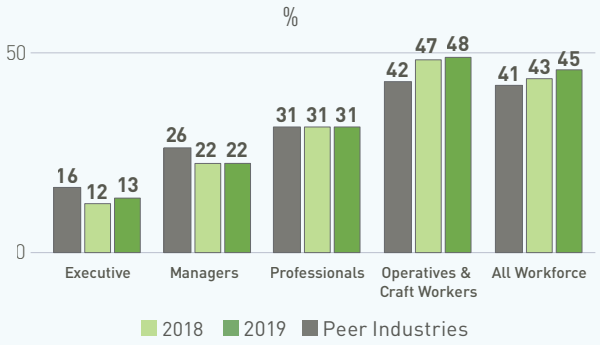
In Millions

Target: 10% increase in annual spend on sustainability-related products and services

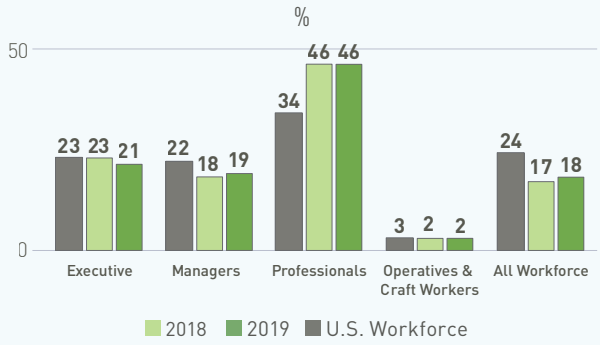
Key Performance Indicators—Community

Inclusion & Diversity

Ethnic Diversity[9]

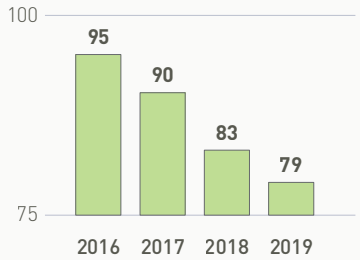


Female Representation[10]



Social Impact

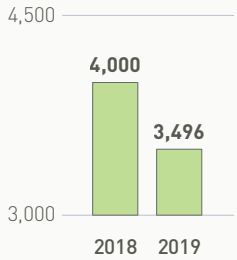
Number of Wildlife Habitat Programs



Charitable Giving[11]

In Millions

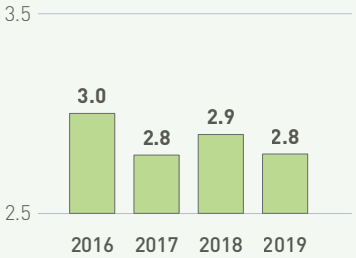
Community Events Supported/Hosted



Safety Performance

Total Recordable Incident Rate

Incidents per 100 Full-Time Employees per Year



Vehicle Accident Recordable Rate[12]

Driver Hours Without a Vehicle-on-Vehicle Accident, in Thousands

Key Performance Indicator Footnotes

1. These four graphs represent 100% of Waste Management's Scope 1 and 2 greenhouse gas inventory, which is **third-party verified** and reported to **CDP**. These emissions make up the numerator portion of our environmental goal to reduce, avoid or offset four times the emissions we generate in our operations, represented in the part of the 2019 bar chart that is above the 0 line of the **How We Measure Our 4X Goal infographic**. For a discussion of the protocols that govern these calculations, please visit our ESG Resource Hub, **Carbon Footprint Calculation Methodology**.

   We use the modified 100-year global warming potentials (GWPs) promulgated by the U.S. EPA. Pertinent to our carbon footprint, our Scope 1, 2 and 3 emissions calculations use the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (FAR) GWP. However, prior to 2019 our Scope 2 emissions from purchased electricity used the IPCC Second Assessment Report (SAR) GWP.

2. Our landfill emissions are from both active and closed facilities. The amount of landfill gas that is collected can be measured; the amount of landfill gas generated and the amount emitted to the atmosphere as fugitive emissions must be estimated using prescribed calculation methodologies. The applicable methodologies are the Solid Waste Industry for Climate Solutions (SWICS) Protocol and the U.S. EPA Greenhouse Gas Reporting Program (GHGRP) rules.

3. The methodology for calculating fleet emissions conforms to U.S. EPA's SmartWay Truck Tool. SmartWay calculations use records compiled for tax credit and fee purposes. The tax documentation reflects fuel purchased in a year, including some insignificant amounts of fuel stored rather than used in a given year. The graph excludes biogenic emissions, as per The Greenhouse Protocol. Biogenic emissions are reported separately.

   Note that in previous reports, this graph was named "Transportation" and emissions included those from both our collection fleet and our non-collection "yellow iron" (i.e., off-road equipment such as forklifts and excavators) used on site. These emissions have been moved to "Other Energy Use" to more clearly track progress on our collection fleet goals.

4. Emissions in this graph were previously reported in a graph named "Energy Use," which included all non-transportation energy use. We have separated electricity emissions (Scope 2) from other energy use (Scope 1) because they are different scopes and to more clearly show progress toward our goal to purchase 100% renewable electricity by 2025.

5. This graph includes emissions from our "yellow iron" (i.e., off-road equipment such as forklifts and excavators), heating fuel, jet fuel, propane and a small amount of other fuels. Emissions in this graph were previously reported in a graph named "Energy Use," which included all non-transportation energy use. We have separated electricity emissions (Scope 2) from other energy use (Scope 1).

6. These emissions make up the denominator portion of our environmental goal to reduce, avoid or offset four times the emissions we generate in our operations, represented in the part of the 2019 bar chart that is below the 0 line of the **How We Measure Our 4X Goal infographic**. For a discussion of the protocols that govern these calculations, please visit our ESG Resource Hub, **Carbon Footprint Calculation Methodology**.

   We are reporting this data to inform our customers and the public about the potential GHG reduction benefits associated with carbon storage in landfills, our renewable energy production and the value of the recyclable materials we collect and process. We are not presuming to characterize how emerging regulatory programs will allocate credit for these avoided emissions, so we do not claim these GHG reduction benefits as our own nor attempt to deduct these reductions from our carbon footprint.

7. At 124 of our landfills, Waste Management captures the methane for beneficial use, recognized by the U.S. EPA as a **renewable energy resource**.

8. The U.S. EPA's Waste Reduction Model (WARM) is used to calculate the life cycle GHG emission benefits from recycling. Note that instead of using the WARM "national average landfill" defaults, WM uses company-specific settings to account for our own landfill gas-to-energy capacity. Additionally, the increase in emissions reductions realized by recycling does not correspond arithmetically to the increase in total tons recycled. That is because, for example, paper recycling (80% of all recyclables) achieves very high emissions reductions, while the emissions reduction potential associated with glass recycling (20% of recyclables) is nominal on a per ton basis.

9. Waste Management aims to achieve ethnic diversity in each segment of our workforce, with emphasis on leadership, that is greater to or equal to that of the U.S. workforce standards. U.S. workforce averages are from the most recent data available, based on 2018 Equal Employment Opportunity Commission reports data.

10. Waste Management aims to lead the industry in female representation at all levels with a special emphasis on frontline employees and women in leadership. Industry averages are from the most recent data available, based on 2018 Equal Employment Opportunity Commission reports.

11. Due to the extraordinary devastation caused by hurricanes in the fall of 2017, Waste Management donated $3 million to Hurricane Harvey aid relief and $1 million to Hurricane Irma recovery efforts.

12. We have adjusted all years after 2016 to exclude "Other Vehicle Initiated Impact" incidents.

Big Ideas for a Better World

We take our role as an industry leader seriously. Although our operations are based in North America, the implications of our industry on critical issues, such as climate change, are far-reaching.

Waste Management's vision for Big Ideas and Bold Action for a Better World extends beyond our own company and industry, touching on issues impacting our entire value chain. Not only are we engaged in dialogue about transformative solutions to protect our planet, at our annual Sustainability Forum we are bringing others into the conversation and driving change where we can make the greatest impact.

Highlights of Waste Management's thought leadership activities over the past year include:

Sports for Climate Action

Using **sports as a unifying tool to drive climate awareness**, the Waste Management Phoenix Open committed to the United Nations Framework Convention on Climate Change (UNFCCC) Sports for Climate Action (S4CA) in 2019. The S4CA positions sports organizations and their communities on the path to the low-carbon economy envisioned by the Paris Agreement.

We Are Still In

To show our support for emissions reductions aligned with the Paris Agreement and climate science, in 2019 Waste Management signed the "We Are Still In" commitment to the Paris climate agreement. More than 3,700 U.S. organizations—and growing—have expressed their continued commitment to reduce emissions to levels dictated by science. Organizations that join "We Are Still In" commit to supporting climate action to hold warming to well below two degrees Celsius and to accelerate the transition to a clean energy economy. Waste Management has made this commitment as part of our CDP submission for the past three years and has aligned it with our 2038 sustainability goals.

Recycling Demand Economics

As global recycling markets continue to constrict, Waste Management has elevated the dialogue around the need for domestic end-market demand. From the stage at the U.S. EPA's America Recycles Day event in Washington, D.C., to our own Circular Economy Showcase at the Waste Management Sustainability Forum, we have been a leading voice promoting the need for manufacturers to use post-consumer content in their products and for governments, industries and individuals to buy products made with post-consumer content. As an example, Waste Management has committed to **purchasing collection carts made with post-consumer plastic** from residential collection programs.

Waste Management Sustainability Forum

For a decade, the Waste Management Sustainability Forum has served to educate and inspire business leaders. Recognizing our individual and collective role in the social, environmental and economic realities of sustainability, Waste Management hosts this annual knowledge-sharing event that allows us to be better informed about collective actions that impact our planet.

Watch Jim Fish's opening statements

In 2019, as the problem of plastic waste in the environment became a global concern, we invited **National Geographic** and leading global companies to take the stage to talk about this issue.

We continued to elevate the global environmental discussion in 2020 by inviting former Secretary of State John Kerry, former Executive Secretary of the UN Framework Convention on Climate Change Christiana Figueres, and geopolitical strategist Peter Zeihan to engage in a dynamic morning of dialogue. Haley Romer, editor of The Atlantic Magazine, moderated a **panel** of CEOs, including our own Jim Fish, Dow Chemical's Jim Fitterling and Salesforce's Marc Benioff. (Read about one attendee's **lessons learned** during the Forum.)

Watch Christiana Figueres video

In addition, Waste Management Vice President of Recycling Brent Bell moderated a panel discussion on recycling, which included panelists from Procter and Gamble, Pratt Recycling and Cascade Cart Solutions. The group discussed how they are increasing recycled content in their products and working across industries to drive change.

The agenda also included breakout sessions dedicated to three of the fastest-growing materials in America's waste stream—packaging, food and textiles. These moderated sessions allowed attendees to hear from subject matter experts before rolling up their sleeves to brainstorm solutions. You can read a **full report** dedicated to these breakout sessions.

The state of the recycling industry is a regular part of the Forum agenda. In 2020, Waste Management created a Circular Economy Showcase to show attendees how various materials are recycled into new products. Highlighting 15 Waste Management partners, the Showcase illustrated how recycled water bottles are processed into plastic chips before being melted and made into yarn, shoes and swimwear, and how used paper and cardboard become new paper and event boxes. Attendees watched videos, touched raw materials made from recycled products, and saw the new, high-quality finished products. Participating companies included Advanced Drainage Solutions, Cascade Cart Solutions, Continuus Materials, Essity/Tork, Fiberon, KW Plastics, Mohawk Industries, National Gypsum, Novelis, Novolex, P&G, Pratt, Repreve, Rplanet and Strategic Materials.

Watch recycling panel video

Watch Peter Zeihan video

Waste Management knows that the voices of young people are important when considering meaningful questions about the future. The opening video for the 2020 Forum featured students who framed up the event as a **call to action**. We also invited students from Arizona State University's School of Sustainability to participate in the Forum, attend networking sessions and share their perspectives after the event. This post-Forum engagement served as the first phase on our endeavor to continuously find ways to address all voices in the sustainability conversation.

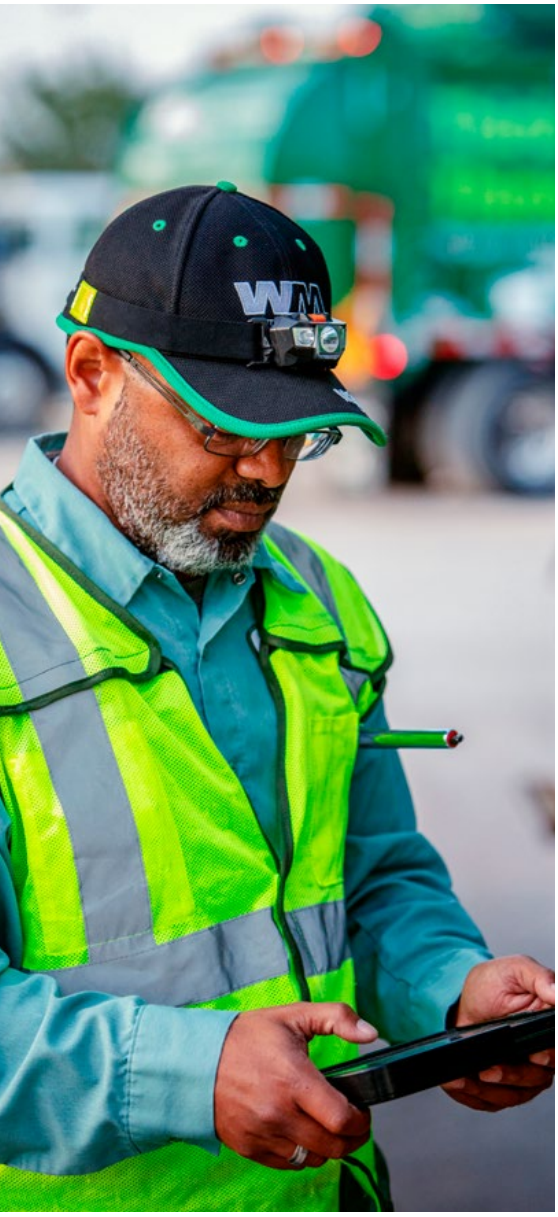
How We Support the UN Sustainable Development Goals

The United Nations introduced 17 Sustainable Development Goals (SDGs) in 2015 to provide targets and indicators for broad global sustainability achievements. Waste Management has been contributing to each of these goals since, and in 2020 we refined our approach by aligning our 2025 and 2038 goals with eight SDGs targeted. WM is committed to action that provides the greatest contributions locally to affect positive change globally.

To explore our commitment to the UN SDG's and how we use targets and indicators to refine and measure our approach, please visit our ESG Resource Hub.

Reporting & Materiality

This report has been prepared in accordance with Global Reporting Initiative (GRI) Standards: Core Option as well as in alignment with the guidelines of the Sustainable Accounting Standards Board (SASB) for the infrastructure sector.



We find that data requests from customers and the investment community are increasing in type and scope. To balance the level of detail requested with public interest in reporting on our business strategy and its key impacts, we are making more targeted use of our **GRI Content Index** and **SASB Index** for specialized audiences. In addition, we have aligned our goals to the **United Nations Sustainable Development Goals (SDGs)**.

To continually improve Environmental, Social and Governance (ESG) disclosure, we review questions posed by NGOs, customer supply chain sustainability surveys and rating agencies such as the S&P Global Dow Jones Sustainability Index (DJSI) and Sustainalytics. We also respond to customers' requests for supply chain information through CDP Supply Chain response and EcoVadis, and we have discussions with investors who are interested in evaluating our carbon footprint and the market opportunities for our low-carbon products and services. Many institutional investors also inquire about impacts from various forms of regulation and legislation addressing GHG emissions to understand potential impacts to earnings.

We have participated in CDP since 2004, which includes responding to the CDP Climate Change questionnaire, aligned with the Task Force on Climate-related Financial Disclosures (TCFD). As a result of our commitment to robust and transparent reporting, we have been named a Commercial Services & Supplies Sector Leader by DJSI and appeared on the CDP Climate Disclosure Leadership Index and A-List for the last 15 years.

Assurance

We currently do not seek external assurance for all elements of this report. Our 2019 GHG emissions inventory has been assured by Aster Global Environmental Solutions, Inc. The inventory includes direct (Scope 1 and 2) emissions and indirect (Scope 3) GHG emissions from the following sources:

- Purchased goods and services
- Capital goods
- Investments
- Business travel
- Employee commuting
- Downstream leased assets
- Upstream leased assets

Our complete assurance statement is available on our **ESG Resource Hub**.

Materiality Assessment

The content of this report has been compiled and organized based upon insights from a materiality assessment conducted by an internal team. This team is charged with ongoing stakeholder engagement, including participation in key business and **multistakeholder organizations**, media relations, disclosure of sustainability information for sales and marketing purposes and completion of sustainability survey requests.

In 2019, we performed a reassessment of issues, risks and opportunities that are material to our sustainability strategy in a changing global climate. This assessment helped us identify topics that are strategically important to our company and stakeholders while guiding decision-making across our value chain.

The assessment was conducted in four stages:

- **Identification—**Through a detailed analysis of Waste Management's value chain and review of GRI's definition and guidelines for materiality, we developed the overarching themes of Governance, Community, Environment and Supply Chain. These themes contain a total of 24 material topics.
- **Surveys—**We constructed a comprehensive survey of our identified issues, which included follow-up questions and qualitative response options to allow for in-depth understanding of the reasoning behind survey results. Both internal and external stakeholders were surveyed.
- **Interviews—**We selected external stakeholders that represent key partners from our supply chain, valued customers with established relationships and municipal partnerships, as well as nonprofit and industry association contributors. Internally, Waste Management interviewed employees who represent key pillars of our business at a senior level.
- **Additional Input—**We incorporated a variety of external media scans and reputation-based data sets to expand and complement our understanding of internal and external stakeholder perspectives.

116
surveys
from a variety of perspectives, including WM leaders and key external stakeholders

28
interviews
including key customers, suppliers, nonprofits, WM senior leadership and associations

hundreds
of data points related to media mentions and key terminology

Materiality Matrix

Environment

- Climate Impact
- Energy Efficiency
- Internal Waste Generated
- Local Environment
- Recycling Reporting
- Sustainable Procurement
- Water Use

Social

- Community Engagement
- Community Investment
- Customer Relationships
- Employee Training
- Health & Safety
- Human Rights & Diversity
- Sustainable Development Goals
- Vendor Screening
- Vendor Training

Governance

- Business Ethics
- Climate Strategy
- Environmental Management System
- Environmental Penalties
- Leadership Accountability
- Stakeholder Engagement
- Supply Chain Policy
- Technology Innovations

Key Material Issues

External Stakeholders

- Recycling Reporting
- Leadership Accountability
- Health & Safety

Internal Stakeholders

- Business Ethics
- Health & Safety
- Leadership Accountability

Analysis

Our materiality assessment confirmed a significant degree of alignment between internal and external stakeholders. We noted the rise of forward-thinking environmental topics such as climate impact and the UN SDGs as having increased importance compared with our previous materiality assessment. Climate Impact was selected by 39% of our external stakeholders during our interview process as being material to their business, demonstrating the increased attention being given to our impact on the planet. Additional analyses on this new assessment will provide further insight for strategic planning.

Among internal stakeholders, including WM's senior leaders, we heard that topics such as Health & Safety and Business Ethics were considered to be necessary prerequisites. Therefore, many of these stakeholders focused their assessments on forward-thinking topics, such as Technology Innovation and the UN SDGs. Based on this insight, we learned that our leadership is focused on the Waste Management of the future with Health & Safety, Leadership Accountability and other People First topics ingrained into what we do every day.

Interconnectivity of Material Issues

External stakeholder interviews provided insight into the interconnectivity between our material issues. For example, one stakeholder selected Technology Innovations as material, justifying their choice by saying that, while topics such as Energy Efficiency and Climate Impact were key to their strategy, they felt that technology was the enabler to those goals. Multiple stakeholders shared that they selected a material topic that they believed closely related to others on the list.

Solving Waste Together

Related Content:

Solving Waste Together

As the leading environmental service and solutions company in North America, Waste Management provides comprehensive waste solutions to a varied customer base, including residential customers, small businesses, large corporations, manufacturing companies, universities and large public venues.

Over the past 30 years, our customers have asked us for disposal alternatives for the material we manage for them. We've taken this charge seriously and have created an array of service solutions—from consulting to residential and commercial recycling, to investments in new technologies that handle industrial material, to other beneficial uses such as composting and energy generation. Some ways we aim to meet our customers' needs include:

Public-Sector Solutions. Our team of over 200 public-sector professionals are dedicated to working with municipalities across the country. With over 4,000 municipal contracts, Waste Management provides a comprehensive suite of environmental solutions that are woven into the fabric of the local communities we serve.

Direct Support of our Commercial Customers. Our commercial customers have differing service and sustainability needs, depending on state and local requirements and their customers' expectations. Commercial customers range from restaurants and grocery stores to office buildings, retailers and event venues.

Industrial Customers and Sustainability Services. Waste Management serves the needs of all types of industrial customers by leveraging our expertise through over 400 trained consultants and service professionals who evaluate reduction and recycling service options and manage customers' programs on site.

Our service solutions include:

- Residential waste and recycling services
- Temporary dumpster rental
- Business waste and recycling services
- Business waste compactors
- Specialized waste streams
- Sustainability consulting
- Electronics recycling
- Materials marketing

How We Manage Waste

While many individuals and businesses are making strides to reduce waste, it remains an inevitable byproduct of everyday life. Waste Management's role is to help customers dispose of the waste they generate in the most environmentally responsible and valuable ways possible. Most of the waste that is not reduced or reused is recycled, composted or sent to a landfill.

Waste Reduction

Generating less waste in the first place is the most effective way to reduce environmental impact. Everyone can be a part of this waste solution. Waste Management works to encourage customers and consumers to be mindful of the amount of material they use and the subsequent waste produced.

Recycling

Recycling allows materials like paper, metal, glass and some plastics to be transformed into new goods. Advanced sorting and monitoring technology at 103 recycling facilities helps us do this with high levels of efficiency.

Organics

Organic materials such as food and yard waste can be beneficially reused as fertilizer and as a renewable source of energy. Waste Management has 40 facilities designed to handle this waste stream.

Landfills

Landfills receive waste that is not recycled or composted. As materials break down in the landfill, they produce gas that can be processed into a renewable energy source. Closed landfills can also be used for a variety of beneficial purposes such as solar farms or recreation space.

Hard-to-Handle Materials

The exception to these three major waste streams is hard-to-handle materials that cannot be processed through traditional solid waste streams, due largely to their chemical composition. Waste Management has developed several programs to help residential and business customers dispose of these materials properly. **Learn more here**.

Where We Create Value, Together

Creating a circular economy—one where we get the most possible value out of every type of material—takes everyone's help and happens in places you might not expect. See a few of the many ways Waste Management works with our stakeholders to create value out of waste:

1 At a Championship Golf Tournament

At the Waste Management Phoenix Open, one of the largest zero waste events in the world, we divert waste from landfills and educate attendees on how they can do the same.

2 In the Compost Cart

Composting provides a sustainable alternative to landfills for the billions of pounds of food that are thrown away each year. The resulting organic matter is a valuable input for agriculture, landscaping and more.

3 In the Recycling Cart

We are dedicated to educating customers about the importance of recycling right—ensuring that everything that goes in the bin is fit for recycling. Encouraging good recycling practices allows us to operate more efficiently, which lowers the cost of recycling for everyone.

4 On the Front Lines of a Pandemic

Throughout the COVID-19 crisis, Waste Management continued residential collection without interruption—providing an essential service to customers while supplying critically needed recycled goods for manufacturing industries.

5 On Top of a Closed Landfill

It's possible that you've visited a closed landfill without even knowing it. We closely monitor landfills after closure and support their conversion into golf courses, parks, wildlife habitat and more.

6 At Our Customers' Businesses

Customers are looking for ways to operate more sustainably and reduce the waste they generate. Waste Management Sustainability Services (WMSS), our advisory services business, allows us to partner with customers to reduce their environmental impact.

7 Underneath a Landfill

At more than half of our landfills, Waste Management converts landfill gas into energy, which can be captured and beneficially used as an alternative to fossil fuel. In some cases, this fuel is used to power Waste Management's own fleet.

8 At Our Landfill

Several of WM's landfills host solar and wind farms, which generate renewable energy that is placed into the electricity grid reducing the use of fossil fuel.

BUILDING VALUE TOGETHER

Waste Management Division Delivers Industry-Changing Solutions Through Collaboration

What ideas will most transform the waste industry? New markets for recycled materials? New technologies to capture landfill gas? New ways to keep workers safe?

While we have witnessed significant technological advances in recent years, it's very likely that the most disruptive waste solutions are yet to be invented. Waste Management is continuing to accelerate the pace of change. We've done so for many years by investing externally in early-stage companies focused on developing new technologies and solutions. We are also driving change within our own walls by identifying and scaling game-changing solutions quickly and effectively.

Corporate Development & Innovation (CD&I) uses a disciplined and strategic approach to focus on investments connected to our core business. CD&I makes targeted direct investments and shepherds concepts from ideation through development and licensing to help our business grow and expand its beneficial impact on customers and the environment.

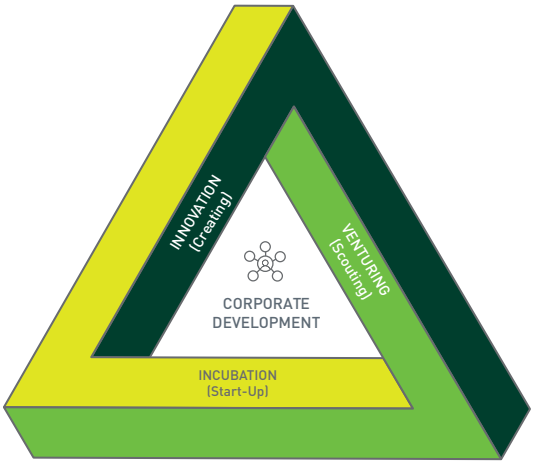
Innovating Through Customer Feedback

CD&I spurs innovation through our internal Technology, Innovation and Strategic Alliances (TISA) group, which works with Waste Management's largest customers to gather their voices and better anticipate and meet their needs. For the past three years, TISA has led the **Waste Management Innovation Lab**, an interactive event that gives a select group of customers the opportunity to collaborate to solve their biggest challenges. During the multiday, facilitated collaboration, Waste Management shares intelligence on current trends and technologies impacting our industry, steering the group toward productive conversations and action-oriented outcomes.

Between 2018 and 2020, 55 individuals from over 40 different companies have participated, representing a wide array of industries, including major retailers, food and beverage distributors, hoteliers and resort operators, manufacturing facilities, transportation and commercial real estate companies.

Three distinct "development tools" define CD&I's approach:

Innovation, venturing and incubation are complementary, and all depend on partnership.



BUILDING VALUE TOGETHER

Waste Management Division Delivers Industry-Changing Solutions Through Collaboration (continued)

Innovation

Waste Management will stay at the forefront of emerging technology and innovative processes by promoting innovation among employees, customers and community members. A new Business Accelerator Lab will be a "maker space" where employees can discuss and pilot new ideas, such as improved ways to maintain our trucks or address safety issues.

Our Innovation work is also producing results through collaboration with other businesses. **For example, alongside equipment manufacturer Caterpillar, we are piloting the use of remote-operated bulldozers and compactors at Waste Management's Denver Arapahoe Disposal Site Landfill in Colorado.** The machines are controlled from a command station located close to the landfill, and we may eventually use this station to operate equipment at a second landfill 85 miles away. Removing the operator from the cab of these machines has multiple benefits, including increased efficiency, employee safety and lower costs. It also allows us to expand our potential labor pool to include mobility-impaired candidates who would not otherwise be able to operate heavy equipment.

Venturing

Beyond exploring possible solutions within our company, we are scouting out disruptive ideas in other businesses and even other industries. Waste Management has committed a total of $16 million to four externally managed venture funds that give us exposure to potentially disruptive technologies that we might not discover on our own. These funds are focused on clean energy, water efficiency, industrial technology and process innovation. In addition, we have made 12 direct investments in solutions that span collection, recycling, product manufacturing, gasification and landfill gas.

CD&I also conducts informal reviews of hundreds of companies to identify potential breakthrough technologies and processes. One example of an area of opportunity for Waste Management is the creation of solutions for post-consumer **textile waste**.

Incubation

There is a universe of opportunity for Waste Management to help start up new companies, with the goal of eventually licensing the technology that is created. We are currently focused on markets that solve customer problems and have the potential to grow quickly, such as wastewater, biosolid management, plastics and packaging solutions.

One ambitious new investment is Continuus Materials, which developed Everboard, a roof covering made from hard to recycle paper and plastics. Continuus is finalizing the development of its first commercial manufacturing plant, which may be co-located at Waste Management's Fairless Landfill in Philadelphia. When fully operational, the plant will divert approximately 320 tons of materials per day from landfills to convert them into new building products.

Waste Reduction

The best way to avoid waste and its associated environmental impacts is to reduce the production of materials that become waste in the first place.

Recycling and composting play an important role in how we manage material, but generating less waste offers the greatest environmental benefit of all. While waste reduction is a function of consumer and business behavior, and largely out of Waste Management's control, we regularly work with customers and communities to help them find ways to reduce waste at the source.

Helping Customers Reduce Waste

For example, **Waste Management Sustainability Services (WMSS)**, our advisory services business, enables us to work with customers to analyze supply chain choices, like the way procurement strategy impacts the way waste is managed, and make recommendations to improve environmental impact and reduce waste generated. WMSS's offerings include remote and on-site support and data solutions to help customers make sense of their waste streams. Working with a wide range of sectors—automotive, chemical, manufacturing and the petrochemical industry—WMSS has helped our industrial customers save millions of dollars through a variety of waste reduction and recycling efforts, strategic material sourcing and optimized logistics.

Food Waste

Another way we help reduce waste generation is by focusing on food. Preventing food waste upstream benefits the environment in terms of emissions reduction and helps communities in need by providing nutrition that would otherwise go unused. The U.S. EPA, states, local governments and the environmental service sector have increasingly focused on how to avoid food waste. We are working with stakeholders on new ways to avoid emissions by **reducing the amount of food discarded**.

Reducing Waste in Our Own Business

While Waste Management's primary responsibility is to handle waste generated by our customers, we also work to **reduce the waste that is generated within our operations** and **supply chain**. One example of these efforts is our procurement of retread tires. When the tire tread on a Waste Management vehicle wears down, it is sent to a certified tire retreading dealer. The tire is carefully cleaned and repaired, then chemically cured with a fresh tread, built to Waste Management's specifications, that allows it to function like new. Retread tires contain about 75% post-consumer content, which avoids the resource extraction, water consumption, air pollution and CO2 emissions associated with manufacturing new tires. Waste Management tires are retreaded twice on average, and we purchased more than 145,000 retread tires in 2019 alone.

How WMSS Makes a Difference

Because every WMSS customer is different, success is measured in many ways. Here are some recent examples of solutions we delivered for customers:

- Conversion of **2.7 million old uniforms into fiber** for use in new products
- Reducing a customer's environmental impact through a **customized**, on-site material recovery plan for a hard-to-recycle product
- Access to real-time data on waste inventories from multiple remote locations, allowing for accurate business decisions
- Remediation of hazardous material at a work site
- Collaboration with a fashion brand, a major sports tournament, a third-party processor and a textiles manufacturer to **recycle 12,000+ plastic containers into clothing**

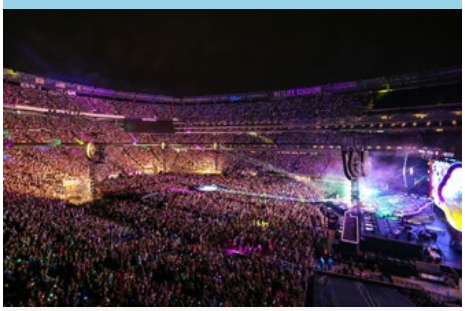
Sustainable Sports and Entertainment

The Sustainable Sports and Entertainment division of WMSS offers a nationwide network of environmental professionals to help advance teams, venues and organizations along the path toward sustainability. Stadiums, events and conferences are complex systems that require comprehensive management to bring new life to discarded materials and reduce environmental impacts. Environmental stewardship offers venues and events the opportunity to affect social change, develop meaningful ways to engage local communities, grow brand affinity and ultimately advance the purpose of sport.

While the pinnacle of our sustainable event work is the **Waste Management Phoenix Open**, we have invested in supporting numerous clients with sustainable event management advisory services for over a decade. Working with stadiums, tournaments and meetings of all sizes, we create positive impacts that last long after an event ends.

Across multiple events in 2019, our Sustainable Sports and Entertainment Team helped:

- Divert almost 2,500 tons of waste from landfills, including 516 tons of organic materials and 1,468 tons of recyclable material
- Divert 16 tons of food and almost 34 tons of other material through donations
- Avoid 4,582 MtCO2e through waste diversion programs
- Initiate comprehensive environmental impact baselines for sporting events with over 6.3 million attendees
- Achieve zero waste at eight events, three of which received zero waste validations



MetLife Stadium

Our relationship with MetLife Stadium includes material management and sustainability initiatives. Waste Management developed operational adjustments and engaged employees through videos and in-person training sessions that significantly increased baled recyclables and diversion of food waste. To expand on the materials management focus, we are helping with additional environmental impact tracking, game-day educational activations and building out public reporting about the stadium's sustainability programs.

New York Road Runners

This is a model for sports and entertainment organizations with complicated footprints. Waste Management provided a comprehensive baseline analysis, data collection and management, a third-party certification review, product life cycle analyses and the development of a long-term sustainability plan. This project involved benchmarking NYRR's environmental impacts at their three facilities and weekly races, including the 2019 TCS New York City Marathon.

Zero Waste Conferences

Waste Management and GreenBiz have coordinated on zero waste events since 2015, including three major events in 2019. Over the years, Waste Management has developed attendee engagement **videos**, supported material requirements for venues and vendors, and led behind-the-scenes zero waste tours to pull back the curtain on how to implement thoughtful materials management programs.

BUILDING VALUE TOGETHER

10 Years of the Greenest Show on Grass

For the past decade, Waste Management has been title sponsor of the Waste Management Phoenix Open, the most attended PGA TOUR tournament and largest third-party-certified zero waste event in the world. We have consistently used this spotlight to engage with stakeholders on environmental issues, to shift business and consumer behaviors toward thoughtful product design and materials management, and to raise the bar for sustainable sports globally. In advance of the 2020 tournament, we were pleased to join the United Nations Sports for Climate Action initiative, which is helping to mobilize the sports community in achieving the goals of the Paris Agreement. WMPO will embrace and advance the principles established by the Sports for Climate Action Framework, including promoting environmental responsibility, reducing climate impact, educating participants around climate action, promoting sustainable and responsible consumption, and advocating for climate action.

A growing number of people and brands are eager to be part of this purpose-driven platform. In 2020, Waste Management engaged with fans, sustainability experts, brands, online and social audiences and others to work together toward a sustainable tomorrow.

4
years
carbon neutral

8
years
zero waste

25+
food vendors and exhibitors
committed to sustainability standards

320M
gallons
of water restored over six years

Zero waste certification for eight months of pre-event construction and a weeklong event that attracted

800,000+
fans

BUILDING VALUE TOGETHER

10 Years of the Greenest Show on Grass (continued)

Fans

In 2020, we focused on the importance of recycling right for hundreds of thousands of people on the course and millions of viewers at home. Our messaging was simple and focused on contamination reduction: keep liquid, food waste and plastic bags out of recycling.

- The #BinThereDoneThat contest encouraged fans at home to get involved by submitting **videos of their proper recycling "trick shots"**—showing that while recycling can be fun, it has to be done right.
- For fans on the course, the Green Scene area featured redesigned bins for recycling and compost, and games that required participants to recycle right to win.

Brands

All participating brands, vendors and sponsors agree to sustainability requirements that guarantee we remain a zero waste event. Beyond ensuring that waste is not generated at the event, we prioritize brands that use **post-consumer recycled content**. For example:

- Sportswear company Loudmouth's 2020 WMPO Party Pants included 50% REPREVE recycled fibers made from plastic bottles.
- Packaging provider Pratt Industries made recycling and compost bins from recycled cardboard that had previously been used during the tournament.
- Refresh Glass, an Arizona-based glassware company, collected wine bottles and turned them into custom-engraved glasses.

Results

The Waste Management Phoenix Open takes a broad view of waste, seeking to reduce material consumption, water and greenhouse gas emissions. The carbon-neutral event purchases 100% renewable electricity from Arizona Public Service and seeks third-party certification for our zero waste initiatives. See our **Waste Management Phoenix Open Sustainability Report** for details, and watch our **Behind-the-Scenes Sustainability Tour** to see our initiatives in action.

Recycling

Waste Management manages more post-consumer recyclables than any other company in North America.

This role poses challenges and opportunities that continued to unfold in 2019. Despite ongoing changes related to China's restrictions on imports of recyclables, Waste Management made record investments in recycling facility upgrades and in the construction of new facilities. We continue to recognize—and communicate—that recycling happens not when a consumer places an item in a curbside bin, nor when materials are sorted and processed by Waste Management. In fact, the cycle is only completed when a material is converted into a new product. Closing this loop requires robust end-markets for recycled materials, which Waste Management remains committed to helping develop and promote.

The importance of recycling garnered significant attention in early 2020 when the coronavirus outbreak began. Many products such as tissue, toweling and packaging boxes for grocery and medical supplies are made from recycled materials, and therefore depend on reliable feedstocks. As such, Waste Management was deemed an essential business and worked closely with mill customers to supply clean, recyclable materials to manufacturers who were delivering these key products.

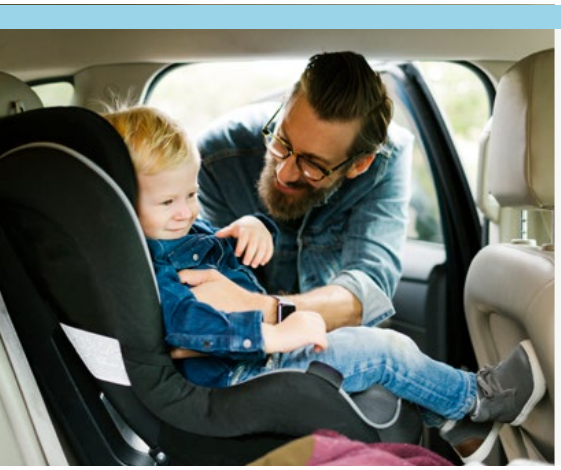
Understanding the Recycling Market

After playing an important role in the global recycling market for over two decades, China implemented changes to its import policies announced in 2017 that have adversely affected market conditions for recycling. At that time, China notified the World Trade Organization of its intent to ban the import of 24 materials, including mixed paper and mixed plastics, resulting in 13.2 million tons of material that needed alternative markets across the globe.

Then, in early 2018, the Chinese government implemented a 0.5% contamination limit and banned all imports of recyclables by 2021. By banning materials, reducing import quotas and increasing quality specifications for all imports of recyclables, China's policies created a ripple effect, impacting global supply and demand for recyclables while increasing materials recovery facility (MRF) operating costs. As the global recycling community has adjusted to this new reality, the result has been a redistribution of global market demand.

Commodity value impacts have been significant. Without China as an end-market, global supply has exceeded demand. By the end of 2019, commodity values were the lowest in over a decade, with the average commodity price for all recyclables sold from all our MRFs totaling roughly 70% less than the average two years prior. This resulted in increases to the cost of recycling for our customers, creating financial hardship for many municipalities.

There are, however, bright spots amid this period of shifting markets. For example, paper plays an important role in the health of our curbside recycling programs because cardboard and mixed paper make up almost 60% of the material processed at our single-stream MRFs. In 2019, there were several announcements of new domestic paper mills, and capacity began to come online by the end of the



Giving Car Seats New Life

Target, a Waste Management customer, operates a **car seat trade-in program** through which customers can return expired or unwanted car seats to Target stores in exchange for discounts on new baby gear. We support the retailer in helping to **turn the components of the seats into new products.** The car seats are taken to a facility and manually separated into five different commodities: plastic shell, seat belts, cloth cover, foam backing and metal buckles and clips. The plastic is ground into flakes, washed and used in several industrial products, such as plastic pallets, crates and plastic railroad ties. During two events in 2019, **we recycled 7 million pounds of car seat materials.**

year. These mills are anticipated to have a stabilizing impact on paper markets in the U.S. Despite a downward trend in the value of recycled plastics due to low virgin resin prices, we saw the value of recycled high-density polyethylene (HDPE) plastic spike for several months in 2019, buoyed by goals that producers and brands have established for plastics. This was a reminder of the important role that corporate commitments to using post-consumer resin can play in ensuring sustainable recycling markets.

Long-Term Partnership in the City of Brotherly Love

For more than 25 years, Waste Management has worked closely with the City of Philadelphia to develop alternative solutions for the city's waste. Over this quarter century, we have adapted to the service needs of the city, its Streets Department and its **1.6 million residents**. This relationship led us to develop our Sustainability Campus which includes a MRF and equipment to process residual waste into roofing materials. In 2018, as a result of China's restrictions on recycling imports, Philadelphia's recycling needs shifted, and Waste Management was ready to meet them. To optimize recycling in the city, we worked closely with local officials on a **comprehensive program** to maximize capabilities at the Sustainability Campus. Communication and continuous improvement are key to this ongoing partnership—and we are confident that they will be the recipe for **success for another 25 years** of working together.

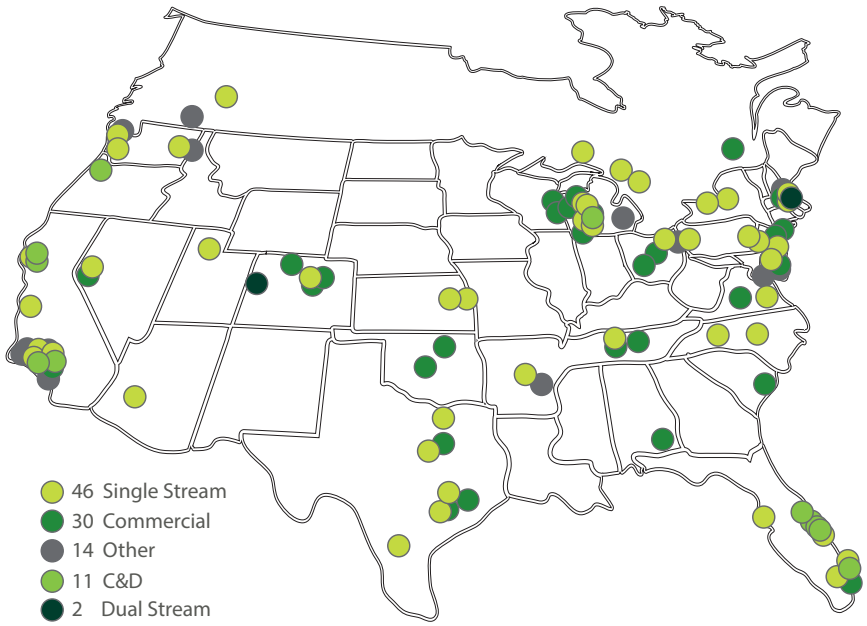
2019 Recycling Performance

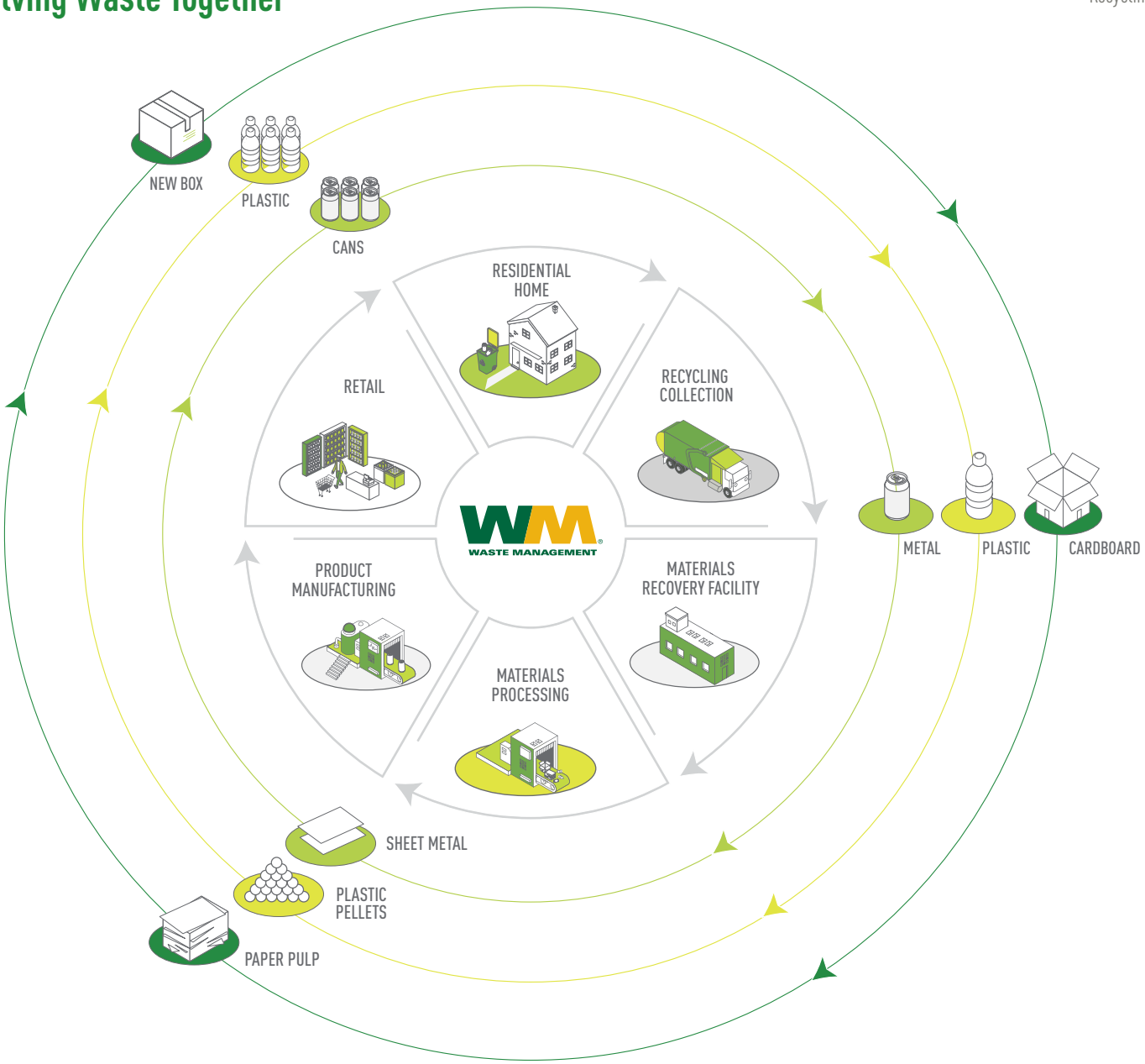
What We Recycled

In Tons

8,079,346 paper	**3,577,122** mixed organics	**1,149,000** fly ash	**666,838** glass	**476,645** metal
403,484 plastic	**1,109,558** C&D/wood	**39,594** wood pallets	**9,110** e-waste/lamps	**15,510,697** total materials recycled

Materials Recovery Facilities





The Circularity of Recycling

Recycling gives materials new life—even enabling them to be used more than once by the same household. For this process to remain circular, every step matters. Not only must goods be recycled properly, there must be markets for recycled materials that allow them to reenter the value chain.

Residential Home

Customers separate clean recyclables such as bottles, cans, paper and cardboard boxes before placing them in their recycling bins.

Recycling Collection

Where single-stream recycling is available, a Waste Management collection truck picks up all these items in a single pass.

Materials Recovery Facility

At one of our MRFs, we use advanced technology, as well as manual sorting, to organize recyclables by type before packaging them into bales.

Materials Processing

Depending on material type, baled recyclables are processed into new forms, such as pulp, pellets or sheets, that prepare them to be made into new products.

Product Manufacturing

New goods are created with these materials, such as boxes made from post-consumer paper or carpets with fibers made from recycled plastics.

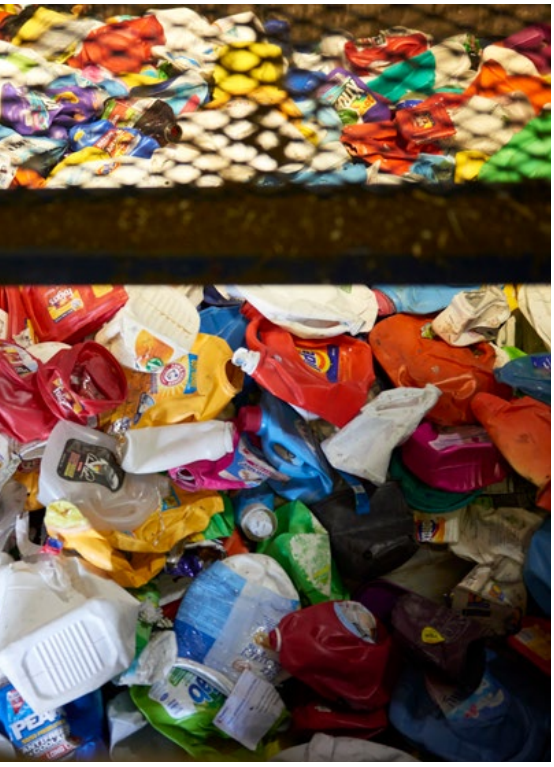
Retail

Consumers purchase products with packaging or other components that are made to be recycled.

Plastics in the Spotlight

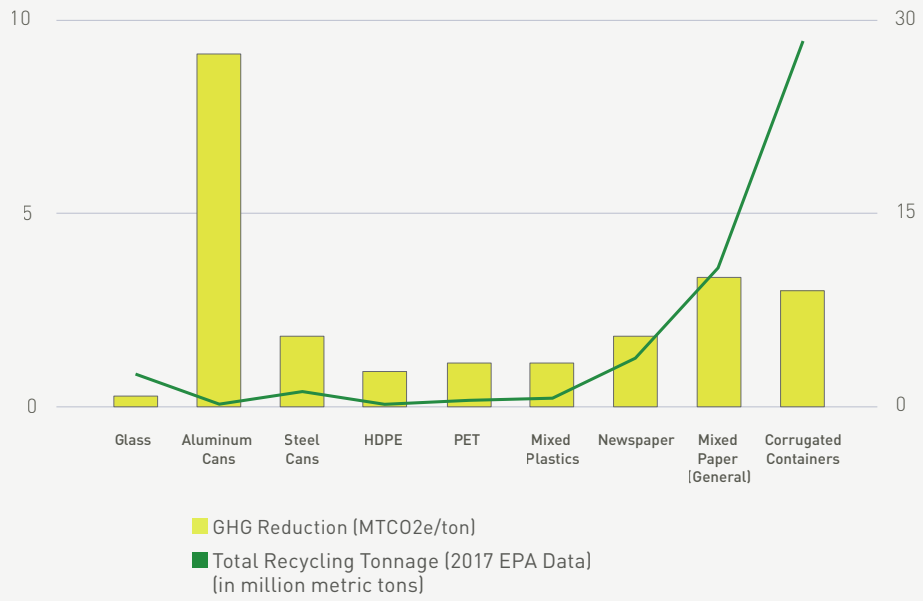
Plastics have become a ubiquitous feature of modern life, offering durability, versatility and lightweight options that make them well-suited for a range of products and packaging materials. But the same features that make plastic convenient also make it problematic to manage at end of life. Although it is lightweight, it can be expensive to process and transport. And the varied resin types that make plastic so versatile often confuse consumers because they cannot always be recycled. Plus, residual food or other products become contamination in the recycling process. In fact, only a small fraction of the plastic ever made has been recycled. And because it degrades so slowly, plastic that has not been recycled, or burned for energy, is still in the environment or in a landfill.

Businesses and the public are becoming increasingly concerned with this growing problem. In 2018, National Geographic published a cover story about marine plastic debris, which helped draw global attention to the problem of plastics in the environment. The story ignited a conversation that led to **changing consumer behavior** and increased pressure on plastic producers and brands that rely on plastic.



Total GHG Reduction From Recycling

Driven by Specific Commodity Tonnages X GHG Reduction per Ton

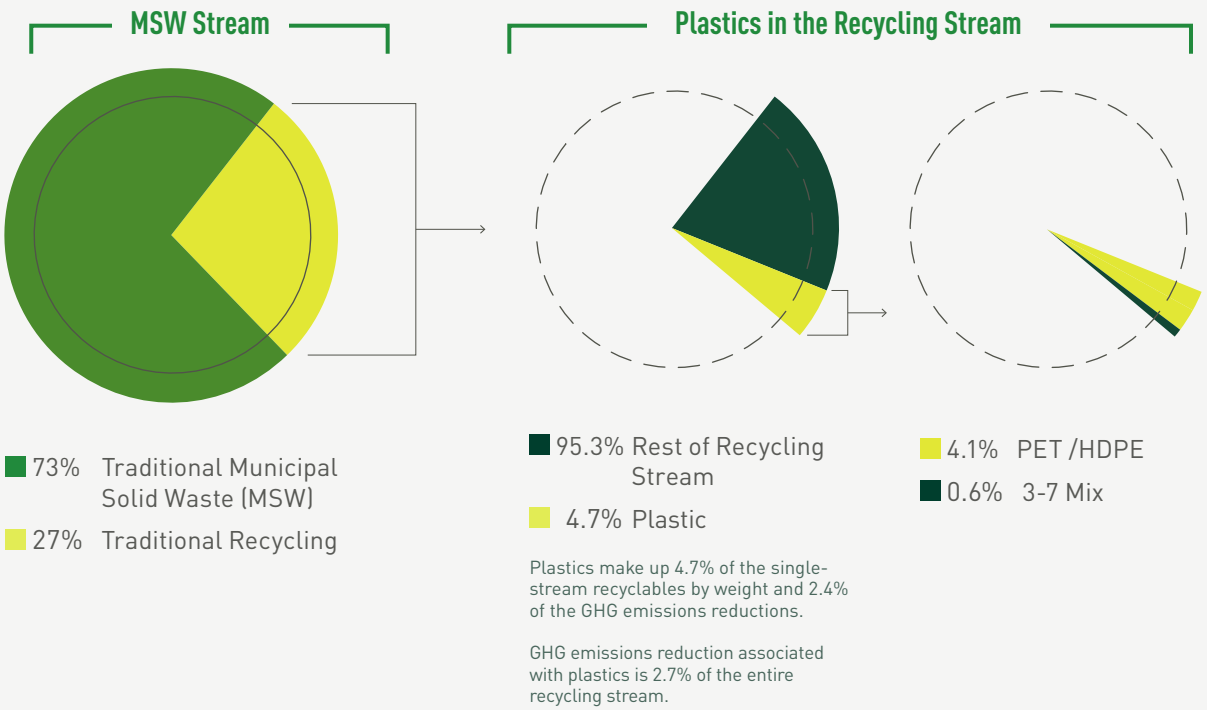


Recycling aluminum cans offers the greatest tradeoff in terms of GHG reduction benefits per ton of material, while recycling HPDE, PET and mixed plastics makes less of an impact.

As the leading environmental services provider in North America, Waste Management has spent decades managing plastic for recycling markets and for disposal. Pressure to recycle more plastic, and more kinds of plastic, combined with constricting global markets, has placed our industry and company in the middle of the complex discussion of plastic waste and recycling. As we've embarked on our journey to better understand the many issues around plastic, we've developed our own knowledge base and perspectives, and have taken an active role in working with stakeholders along the supply chain to develop solutions for the complex challenges involved in managing plastic in a circular economy.

For example, we have examined the types and amount of plastic in the waste and recycling stream. The charts on page 33 are based on the most recent data available from the U.S. EPA. They break out durable plastic (e.g., carpeting or furniture made from plastics), non-durable plastic (e.g., medical devices) and plastic packaging (e.g., beverage bottles).

Curbside recycling programs in the U.S. recycle primarily plastic packaging. In 2017, 1.89 million tons of plastic packaging was recycled. Almost 90% of that was two types of plastic: #1 polyethylene terephthalate (PET), which is used to make water and soda bottles, and #2 high-density polyethylene (HDPE), used in milk and juice jugs. The recycling rate for PET was 29% in 2017, and 31% for HDPE. There was very little recycling of other types of plastic packaging, for an overall plastic packaging recycling average of 13%. As part of this exercise, we also looked at the amount of recyclables we manage.



A very small percentage of today's solid waste stream is made up of recyclable plastic. We are supporting the growth of end-markets for more plastic types and investing in technology that will allow us to recycle more materials—and thereby, avoid more GHG emissions.

The pie charts above start with the entire waste stream. About 27% of the total waste stream is made up of **traditional recyclables**.

As the charts illustrate, recyclable plastic makes up 4.7% of all the recyclables processed at our single stream MRFs. Of the plastic that we recycle, the majority is #1 PET and #2 HDPE plastic, both of which have stable end-markets. Although #5 polypropylene (PP) bottles, tubs and lids are still a very small portion of the overall recycling stream, they are growing in use and end-market demand. To support these markets, Waste Management invested in technology to maximize efficient recycling of these materials.

Waste Management also compared plastic to other materials in the waste stream to understand their relative environmental impacts. **Learn more**.

This research, combined with current global market dynamics, suggests that our greatest opportunity lies in properly managing plastic to keep it out of the natural environment. When China banned imports, plastic from across the globe began to move to a variety of countries that are poorly equipped to handle the material, furthering the likelihood of more plastics entering rivers, waterways and oceans. That's why Waste Management focuses our efforts on recycling materials with responsible end-markets while educating consumers on what types of plastic can and cannot be recycled. All our residential plastic is recycled in **North America**.

Waste Management does not weigh in on the value of using any specific packaging material; instead, we focus on the most responsible way to manage materials when our customers are finished with them. There is no doubt that nongovernmental organizations and shareholder advocates will continue to push for further corporate action around plastics. Late in 2019, shareholder advocates requested that Waste Management complete a report on plastic recycling, which is **available here**. We will continue to focus on responsible management of plastics and other materials, including supporting the circular economy and development of new technologies that meet the needs of our customers while maximizing environmental benefits.

BUILDING VALUE TOGETHER

Partnering to Solve the Problems With Plastic

Waste Management has worked to raise awareness of the challenges and opportunities related to plastic waste. In 2019, National Geographic published a cover story about marine debris. The article and photos captured the attention of people and organizations around the world. In 2019, we focused the Waste Management Sustainability Forum on plastic debris, giving National Geographic center stage.

VALERIE CRAIG, INTERIM CHIEF SCIENCE & INNOVATION OFFICER, NATIONAL GEOGRAPHIC SOCIETY, GAVE A KEYNOTE ADDRESS.

She shared some alarming statistics:

9M tons
of plastic
enter the oceans every year

60%
of ocean plastic waste
comes from countries without sufficient infrastructure to manage it

40%
of plastic
is used only once before being discarded

Her presentation set the stage for a moderated panel, where she was joined by:

NICHOLAS MALLOS
DIRECTOR OF TRASH FREE SEAS, OCEAN CONSERVANCY

STEVE SIKRA
MATERIALS & TECHNOLOGY MANAGER, P&G

JASON HALE
COMMUNICATIONS & RECYCLING PROFESSIONAL, SYSTEMIQ

Their dynamic dialogue provided specifics on the investments and efforts being made to tackle the problem of marine debris in Southeast Asia, where most plastic leakage originates.

During the Forum, Waste Management announced a

$100,000
donation
to help National Geographic create educational materials on the plastics crisis

And was a lead sponsor at

National Geographic's Circular Economy Forum

where Waste Management CEO Jim Fish participated in a fireside chat about the role businesses can play in building a circular economy.

Driving End-Market Demand

Waste Management has been a leading voice in the call to focus on creating domestic market demand for products made with post-consumer recycled content. From home delivery and pizza boxes, to soda cans and water bottles, to fleece clothing and carpeting, manufacturers across the globe rely on recyclables from our MRFs as material inputs for their products. But significant opportunity remains to expand these markets further, and Waste Management is looking for new ways to generate demand among customers and within our business.

Demand From Our Customers

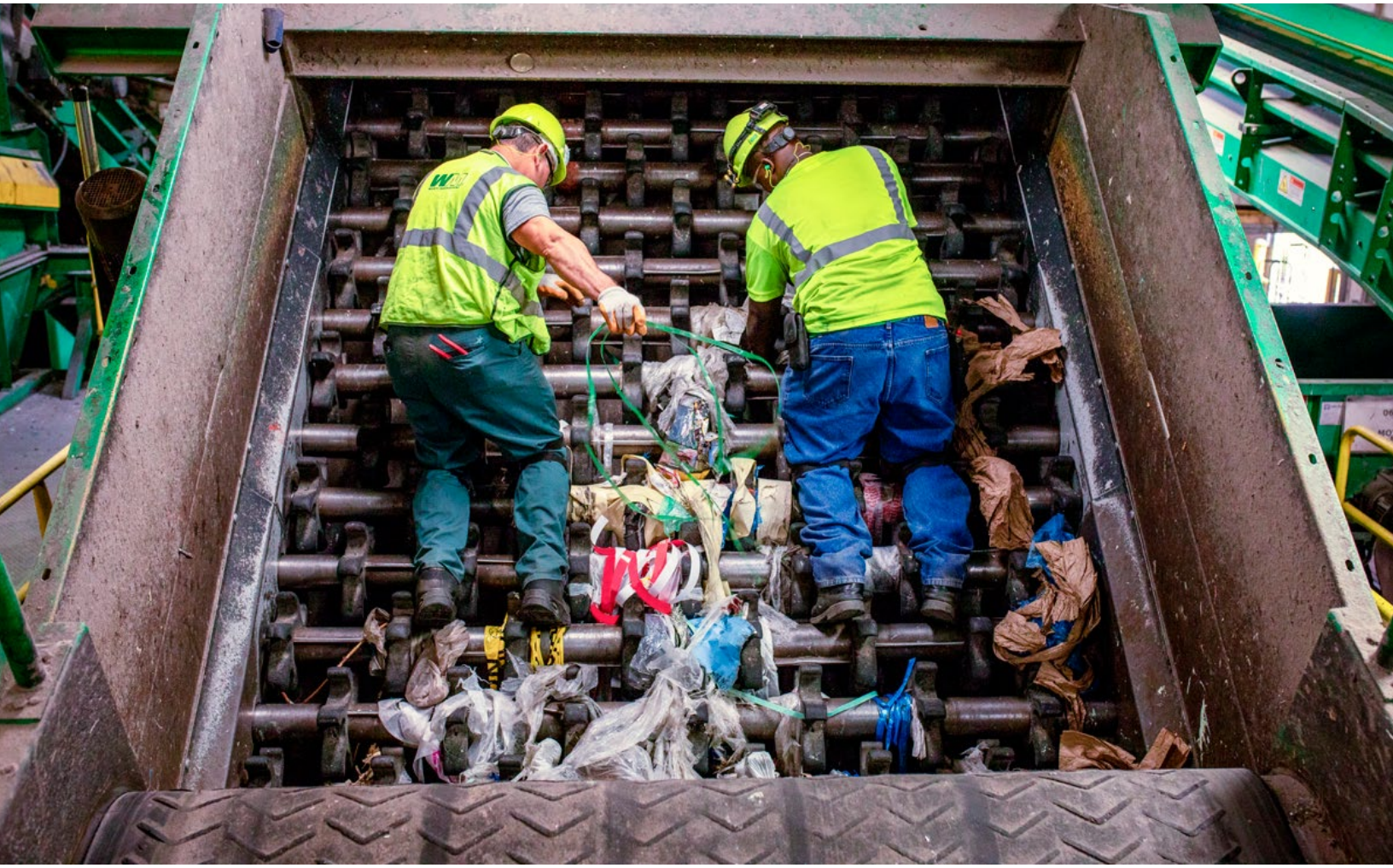
In 2018, plastics recycler KW Plastics asked us to consider adding polypropylene (PP) to our recycling programs. Polypropylene plastic is used in products like yogurt cups and its use is growing, creating a demand for post-consumer PP resin. After auditing our available recyclables, we agreed and began to separate PP from other materials for recycling, even adding optical sorters at several of our facilities to efficiently sort this material. KW Plastics now has a reliable stream of PP that can be recycled into products such as paint cans. With our new capacity to sort PP, other markets for the material have the chance to develop as well. **Watch video.**

Demand From Our Collection Business

Waste Management purchases hundreds of thousands of residential curbside carts each year, which contain post-industrial recycled plastic. In 2019, we signed on to the Association of Plastics Recyclers (APR) Demand Champion Program and pledged to increase the use of post-consumer resin (PCR) in products we purchase, starting with our residential carts. Waste Management teams from our supply chain, operations, marketing/branding and other functions collaborated with Cascade Cart Solutions to test the use of PCR in our residential carts, and purchase the resulting carts made with 10% PCR. Cascade's Ecocarts are a first in our industry.

Demand From Major Events

The **Waste Management Phoenix Open (WMPO)** and concurrent Sustainability Forum are great opportunities for us to showcase recycling's potential. During the 2020 golf tournament, fans could purchase apparel made from Unifi's Repreve recycled fibers produced from plastic bottles. One popular style was Loudmouth Golf's "WMPO Party Pants," made from Repreve fabric with 50% recycled content. The importance of end-markets for recycled goods was also a focus of 2019 and 2020 Forum presentations. During the 2020 Forum, we organized a Circular Economy Showcase where we highlighted 15 companies using post-consumer recycled content to produce new products.



Improving Recycling Quality

To satisfy growing end-markets for recycled materials, we must ensure that the commodity products Waste Management offers are high in quality—clean and dry. This is no small task. While individual and business behaviors have largely shifted to embrace recycling, many misconceptions remain around which materials can and cannot be recycled. Consumer misunderstandings, combined with the shift to cart-based, single-stream recycling, have led to high levels of contamination, or unacceptable items being mixed with recyclables.

For example, a major source of contamination is plastic grocery bags and bagged recyclables, which cannot be recycled when collected in curbside recycling programs, but are often placed in recycling bins. These bags become tangled in recycling equipment. When this happens—up to six times a day on average—operators are forced to stop processing lines to extract bags and other forms of contamination from MRF equipment. Clearing contamination material can result in significant lost time every day. The irony in consumers placing items like plastic bags in their bins, hoping they can be recycled, is that less recycling ends up taking place. We call this practice "wishcycling"—and it's not just bags. Waste Management facilities report a **staggering variety** of contaminants brought into MRFs, from holiday lights and garden hoses to tires and clothing.

Contamination is an ongoing challenge, but we are making steady progress to reduce and address it. Consumer education efforts have helped reduce contamination levels at our single stream facilities by 20% between 2018 and 2019. Learn more about how we educate consumers on the right way to recycle through our **Recycle Right program**. In addition to educating customers about the principles of correct recycling, we are making investments in multiple forms of technology and training within our collection and processing operations.

Smart Truck

Waste Management's Smart Truck technology drives our on-the-street contamination reduction program. As we collect recyclables along a route, we inevitably pick up nonrecyclable items that have been incorrectly placed in bins. To ensure that customers are better informed in the future about what can be recycled, external cameras mounted on a truck take photos of contamination in commercial bins. Photos are then reviewed by a Smart Truck team, and customers are directly notified of any issues. These instances are recorded on the truck's onboard computer so that Waste Management can track contamination patterns. In 2019, when a fleet of commercial trucks in Northern California was outfitted with Smart Truck technology, contamination among customers served by those trucks decreased 89% within three months. We educate our residential customers using cart tags, photos and other outreach methods to let customers know when they have placed a contaminant material in a bin. This information is used to encourage behavior change.

As an additional enforcement for some of our customers, we find that charging for contamination serves as a strong deterrent. Using this "tough love" tactic, we take a two-pronged approach to contract enforcement: we review contracts and seek cost recovery or price adjustments, as allowed, for contamination.

Driver Recycling Education

Waste Management collection truck drivers are critical players in helping us solve the contamination problem. We educate drivers and introduce them to the basic rules of *Recycle Right* a *Guide to Contamination* and a *Recycling FAQ*. The FAQ is designed to help drivers identify problem materials and to accurately answer any customer questions.

On a regular basis, we conduct surveys to assess drivers' recycling knowledge, uncover common contaminants on routes, identify Waste Management's tagging practices and help drivers better understand barriers that prevent tagging. A Facilitator Guide helps site leaders administer the survey, including talking points to introduce the contamination issue and explain the driver's role in prevention. Evaluating results of the driver surveys helps us target campaign materials around a problem contaminant or address barriers that prevent drivers from identifying and tagging contamination.

Before we roll out a new tagging and enforcement campaign, we use training videos—posted on our intranet—to ensure that drivers know how to correctly identify and report contamination. These videos, in English and Spanish, are also available on **Waste Management's YouTube channel**.

Contamination Snapshot

In 2019, the following materials—as well as many others—were incorrectly placed in Waste Management recycling bins:

5,500
bowling balls

50,000
propane and helium tanks

10,000
car batteries

30,000
pounds of batteries per month

Innovation in Our MRFs

Beyond reducing contamination at the source, we can enhance recycled material quality by improving sortation technology within our MRFs. In 2019, for the second year in a row, Waste Management invested over $100 million in recycling infrastructure. Those investments have gone toward technologies such as cameras that identify contamination as soon as materials leave a truck and land on an MRF's tipping floor; optical sorters that use air and cameras to sort up to 600 items per minute; robotics; and ballistic sorters that separate material by weight.

These investments also helped us build a state-of-the-art recycling facility in Chicago, referred to as the "MRF of the Future." Whereas a typical MRF has two optical sorters, the Chicago facility has 16. These sorters interact with conveyor motors and other equipment within the facility to help improve material quality and eliminate downtime. The MRF began operating in October 2019, and when it reaches full capacity, will process 1,000 tons of material per day. Its intelligent sorting capabilities will serve as a blueprint for future investments at other Waste Management facilities.

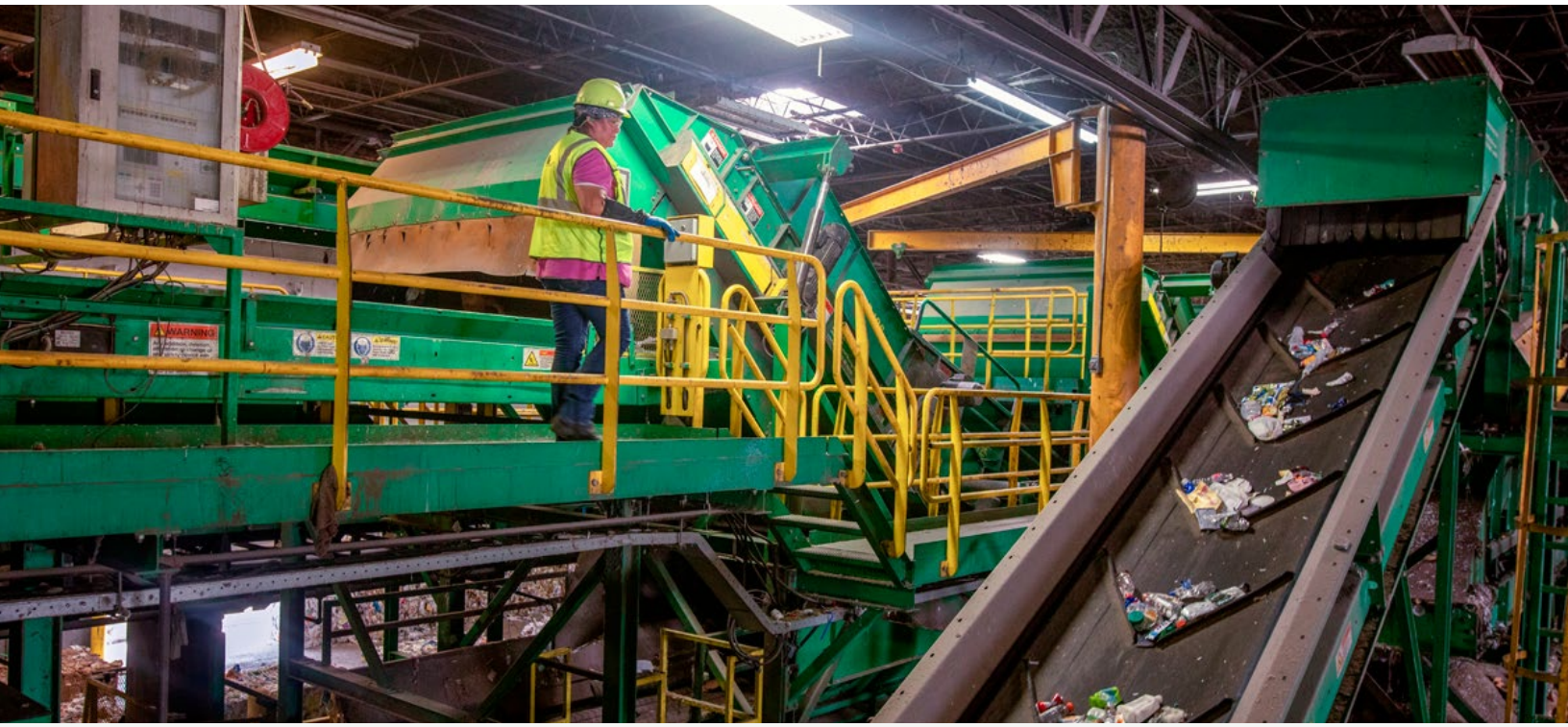
Recycling Partnerships

The types of materials we manage for recycling is broad, and the system varied. Recyclables are brought to our facilities in various ways: in our trucks, from city collection crews, from the public and our competitors. Because of the complexity of this network, and the relationships among commodity markets, policies and regulations, it makes sense to work with partners across the industry rather than trying to identify and solve business challenges alone.

Waste Management has several key partnerships, including industry associations that include the Institute of Scrap Recycling Industries (ISRI), the National Waste & Recycling Association (NWRA) and the Solid Waste Association of North America (SWANA). We are also actively engaged with the American Institute for Packaging and the Environment (AMERIPEN), a trade organization for the packaging industry. Partnerships with regional organizations such as the Northeast Recycling Council (NERC) and the Southeast Recycling Development Council (SERDC) support efforts in broad areas of the U.S. Other key partners include The Recycling Partnership, a nonprofit organization that works closely with cities, counties and states to implement recycling programs; and Keep America Beautiful, which works with local communities to teach the fundamentals of recycling to a broad consumer base. **Read more about these and other local partnerships**.

In 2019, Waste Management participated in the U.S. EPA's America Recycles Day effort, a multiyear collaboration among government, businesses and nonprofit organizations seeking to develop long-term solutions to recycling challenges. On this day, we reminded our federal leaders that greater adoption of recycled materials by the federal government would make a major difference in driving demand for post-consumer recyclables. We continue to work with EPA's America Recycles team to encourage requirements for post-consumer content purchasing requirements at all levels of government.

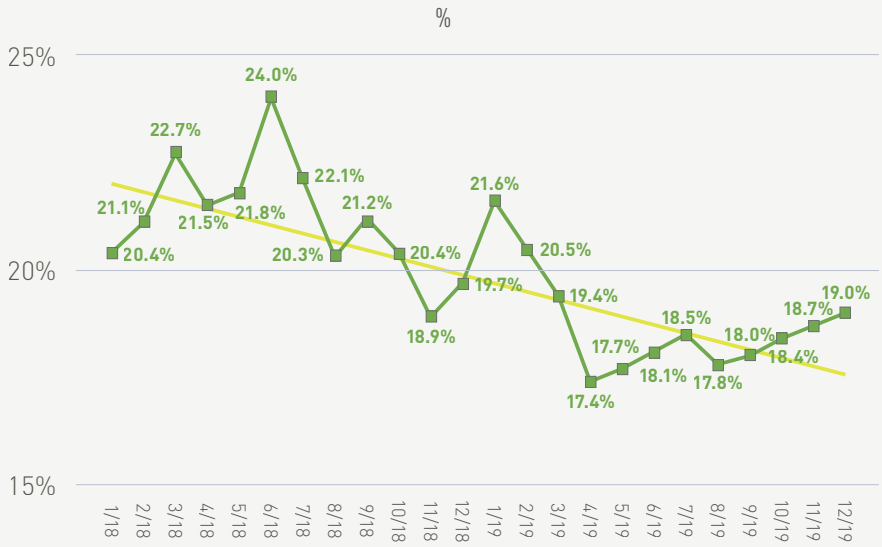
Our national partnerships on recycling are important means to educating legislators, regulators and the public about ways public policy can maximize the environmental benefits latent in recycling or impede progress in this area. They are also important means to advancing the sustainability of recycling over time by serving as resources on recycling technology, end-markets and life cycle analyses.



How Our Efforts Add Up

Reducing inbound contamination takes everyone's help. Thanks to **ongoing customer engagement by our drivers and customer service agents**, innovative technology and various partnerships, we reduced inbound contamination at our 46 single stream recycling facilities from a high of 24% in August of 2018 to 19% at the end of 2019. This contributes significantly to our new goal of reducing inbound contamination across all of our MRFs (excluding construction & demolition) to no more than 10% by 2025. To make progress toward this goal, we will continue to educate, inform and engage our customers on how to Recycle Right.

Inbound Recycling Contamination



Since August of 2018, we have decreased levels of inbound contamination at our single-stream recycling, and plan to further decrease contamination over the next five years.

BUILDING VALUE TOGETHER

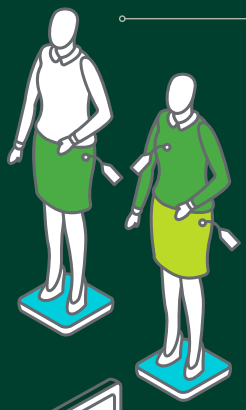
Creating a Circular Textile Supply Chain

Trends in global manufacturing and consumer behavior have made textiles, mostly clothing, one of the fastest-growing segments of the U.S. waste stream. Few options exist for consumers to donate or recycle clothing, so it is often sent to landfills. As the largest post-consumer recycler in North America, it makes sense for Waste Management to engage in initiatives to create a more circular supply chain for post-consumer textiles. Much like recycling of other materials, this depends on a high-quality recycled product and viable end-markets for recycled materials.

Waste Management forms partnerships with a variety of organizations to leverage existing approaches to managing textile waste, while also creating new strategies based on advanced processing and recycling technologies and emerging supply chain collaborations. Below are a few examples of our objectives—and how we're taking action:

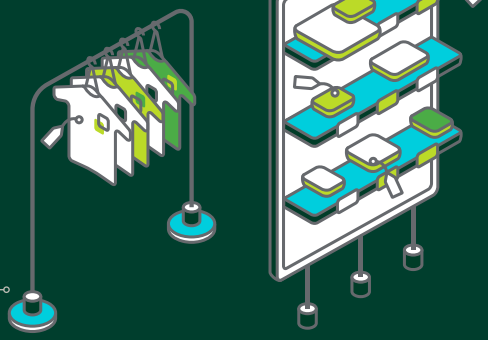
GOAL: Understand new approaches to sorting and processing textiles

WHAT WE'RE DOING: Joined **EON's CircularID Initiative** which will enable better sorting and grading of textiles, and partnering with others developing new processes for recycling post-consumer fibers



GOAL: Create consumer awareness about the environmental challenges the fashion industry is facing

WHAT WE'RE DOING: Working with Slow Factory, a nonprofit that educates fashion designers on the need to consider clothing end-of-use



GOAL: Gain critical insights into logistics, economics, consumer behavior and participation challenges

WHAT WE'RE DOING: Held a dedicated session on textiles at our annual Sustainability Forum to map the emerging circular life cycle of textiles

GOAL: Identify third-party processors specializing in certain processes for managing textile waste

WHAT WE'RE DOING: Working with a national retailer and a third-party supplier to repurpose 1 million retired uniforms into textile fiber that will be diverted into new products

Fast Fashion's Growing Problem

10
the number of times
fast fashion garments
are designed to be worn

↑78%
textile waste
in U.S. (2000–2017)

7X
faster growth
than municipal solid waste

15%
textiles
donated or recycled

Organics

Food and yard debris make up over a third of the material, by weight, that we manage for our customers, and wasted food is a major economic and environmental problem across the globe.

In the U.S. alone, more than 75 billion pounds of food is wasted each year, and displaced food carries a price tag of well over $161 billion. The U.S. EPA estimates that more food reaches landfills and incinerators than any other single material in our everyday trash, making up 15% of the disposed waste stream. And when factoring in the energy used to grow, process and ship food, as well as the emissions released when it decomposes, food waste adds billions of tons of greenhouse gas emissions to the atmosphere.

Given the enormous environmental, social and economic impacts associated with wasted food, it makes sense that Waste Management would play a growing role in managing this material. Even when food is no longer safe for human consumption, it still has tremendous value as a source of compost and energy.

While the concept of a circular economy is most often applied to manufactured goods, it also applies to organics, including food. The benefits of developing solutions for managing food and yard debris at end of life are significant, and Waste Management continues to invest in new organics processing facilities and programs across North America to meet our customers' needs.

Where possible, we help prevent food from being wasted and instead allow for its redistribution. For other organic material, we continue to invest in new or expanded programs to handle at end of life via composting, grinding and mulching, and our proprietary organics recycling process known as CORe®. **Watch video**.

Waste Management facilitated a dedicated session on food waste at our annual Sustainability Forum—**read more here.**

The Environmental and Social Benefits of Managing Organic Waste

DONATION

- When possible, we work with companies and municipalities to **donate unused food to food banks before it gets thrown away.**

ENERGY

- Our CORe® recycling process converts food waste from restaurants, schools, food processing plants and grocery stores into EBS®, an organic slurry product used to **generate green energy.**
- CORe® facilities enable municipal customers to **produce heat and power from local residential, commercial and industrial food waste.**

SOIL AMENDMENT

- Our portfolio includes **40 facilities that produce compost and mulch products,** used to improve soil structure and quality, providing value for landscapers and home gardeners.
- Compost also provides valuable nutrients to soil used to produce food and boost crop production, **closing the organics loop.**

Composting

Composting and mulching are proven, low-cost solutions for managing large volumes of organic materials. Waste Management has 40 facilities that produce compost and mulch products, as well as new composting solutions developed in collaboration with customers. In 2019, Waste Management purchased three new compost facilities—two in the Central Valley of California and one outside of Calgary, Alberta.

We also began selling finished compost out of our new Altamont facility and started commissioning our new Davis Street Organics MRF in Northern California. By the end of the year, we were processing residual trash through this one-of-a-kind recycling facility, extracting recyclables and preparing to move separated organics to beneficial use projects from the facility. Between acquisitions and facility construction, we added almost 500,000 tons of new composting capacity in 2019. The compost produced by these facilities serves several important agricultural and landscaping end-markets.

Waste Management also continues to collect food and organic material generated at the Waste Management Phoenix Open to prevent it from being wasted. Working with our local partners, 14 tons of food were donated to local food banks for distribution, and 123 tons of organics were composted locally in 2019.

CORe® Organics Processing

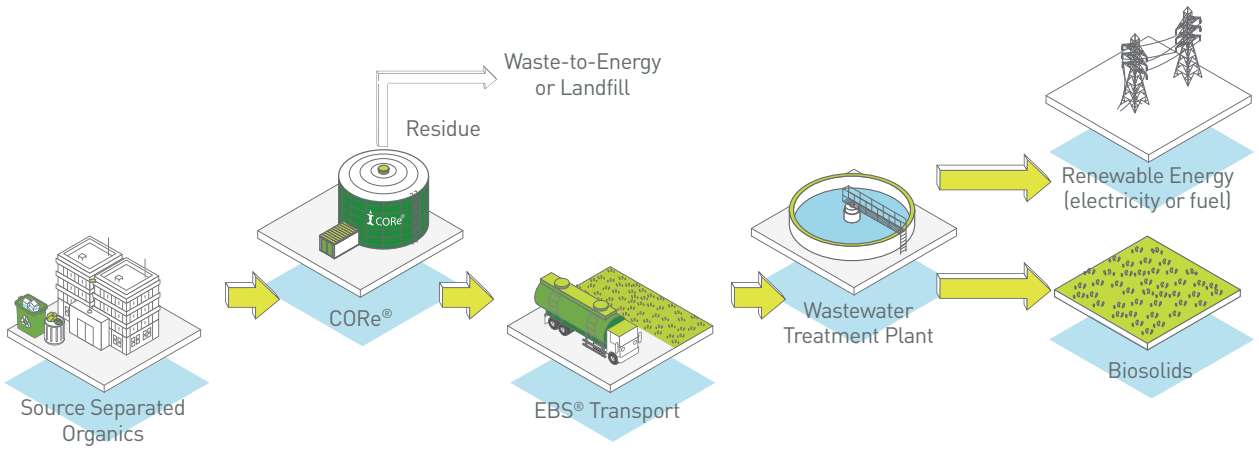
CORe® is Waste Management's proprietary organics recycling process that converts food waste into EBS®, an organic slurry product used to generate green energy.

Through CORe®, we collect commercial food waste from restaurants, schools, food processing plants and grocery stores, screen it to remove contaminants such as plastic, packaging and bones, and blend the waste into an engineered slurry. The slurry is injected into treatment facility digesters in existing wastewater treatment infrastructure. This process increases the biogas produced by the digester by as much as 90% without notably increasing its residual digestate. This gas can then be used as a renewable power source.

Adding to our growing inventory of CORe® units, our Elizabeth, New Jersey, facility came online in 2018 to serve the needs of a large base of industrial food manufacturers and grocery distributors. It was so successful that the facility soon added a municipal customer base and now accepts both industrial waste and food waste from the community.

Waste Management CORe® Process

Adding additional organic material in the form of engineered slurry to a water treatment plant's anaerobic digesters typically increases energy output from 50% to 100% or more. **Watch a video on our CORe process**.



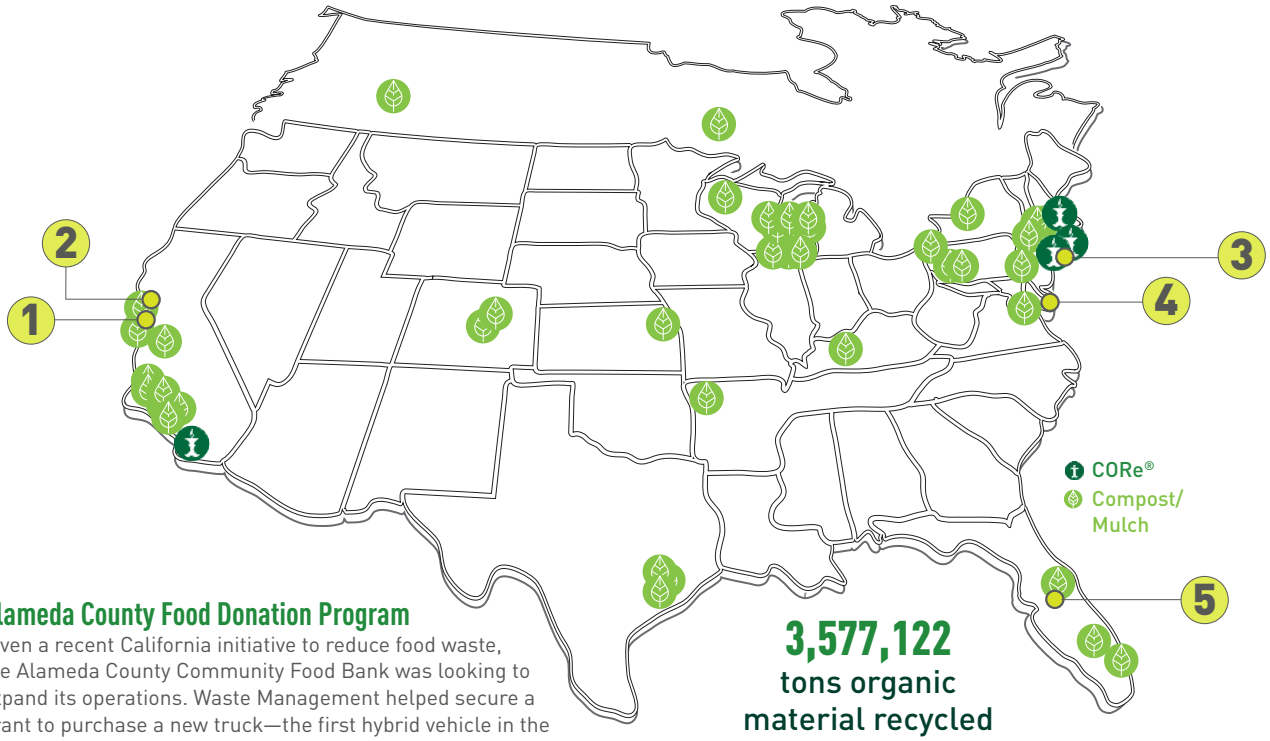
Waste Management's **CORe®** process is a **local, urban solution** that converts food material into our **EBS® product** through our proprietary process.

EBS® is a high quality consistent product, removing more than 99% of the physical contaminants found in urban waste.

The **EBS®** product is used to create **renewable, sustainable energy** in partnership with **long-term** local partnerships, helping them approach **zero waste**.

Waste Management Organics Processing Sites

Waste Management is continually growing our capacity for processing organic material and making compost products available to local customers who can put them to good use. By partnering with stakeholders across the communities where our processing sites are located, we're all helping to maximize the value of organics.



3,577,122
tons organic material recycled

1 Alameda County Food Donation Program

Given a recent California initiative to reduce food waste, the Alameda County Community Food Bank was looking to expand its operations. Waste Management helped secure a grant to purchase a new truck—the first hybrid vehicle in the Food Bank's fleet—which will allow the Food Bank to expand its collection capacity by 1 million pounds annually. This new hybrid truck will also decrease GHG emissions, equivalent to removing 1,000 cars from the road for a year.

2 Redwood Compost Facility

Our Redwood facility uses aerated static pile composting, an approach that has allowed us to increase processing capacity while reducing air emissions. Yard waste and residential food scraps from the nearby community truly stay local when they are turned into compost used by organic wine growers in Sonoma and Napa, ranchers in Marin County, landscapers and home gardeners alike.

3 Boston CORe® Facility

To help the state of Massachusetts meet its organics recycling goals, the Greater Lawrence Sanitary District entered a partnership with Waste Management to process additional organic material at our CORe® facility. The resulting agreement increased the district's production of renewable energy. Since 2017, we have tripled GLSD's biogas production to approximately 1 million cubic feet per day, and the district is well on its way to being a net energy exporter to the local grid.

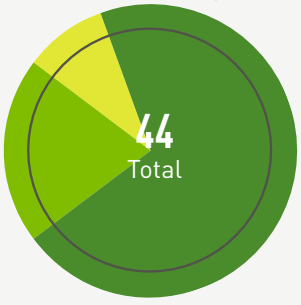
4 New Jersey CORe® Facility

The CORe® process is a great solution for residential and municipal organic programs located near a facility. For example, Woodbridge Township now collects food waste from schools with a special organics collection vehicle, which is delivered to CORe® every day of the week. The nearby Westfield Township provides its residents with a food waste drop-off program. The centralized location of this CORe® facility allowed for a cost-effective solution requiring minimal transportation.

5 Okeechobee Compost Facility

In Okeechobee, Florida, high-quality compost is in demand from the region's citrus groves. Compost from Waste Management's facility there, which opened in 2012, is used exclusively in agricultural production, turf and other applications. The compost's high-organic matter helps boost crop production and reduces the impact of citrus greening disease. The facility can produce up to 10,000 cubic yards of mature compost each year.

Organics Processing Facilities



- 31 Compost
- 9 Grinding/Beneficial Reuse
- 4 CORe®

Landfills

The material we manage—across our recycling facilities, organics processing operations and landfills—is a function of what, and how much, people and businesses throw away.

We have observed significant changes in municipal solid waste (MSW) streams over the years, including some encouraging findings. For example, between 1990 and 2017, the amount of MSW to landfills has decreased even as the U.S. population has grown. Nevertheless, large volumes of material that could be recycled or composted are still being sent to landfills. And even as we are managing more waste today than we were 10 years ago, our emissions per ton have declined.

As North America's leading environmental services provider, Waste Management is committed to ensuring that all discarded material is handled in the most environmentally beneficial way, which comes down to changing the behavior of industries and individuals alike. We are making progress by working across our supply chain to help develop new technologies and markets for post-consumer materials and educating consumers on how best to dispose of all forms of waste.

Given currently available technology, there remain many waste streams that cannot be successfully or profitably processed into new materials. To ensure that these forms of waste do not enter natural land areas or waterways, where they can cause harm as they degrade, we manage them safely and sustainably through our network of 244 active MSW landfill sites across the U.S. and Canada. Combined, these sites process over 100 million tons of waste annually.

The Making of a Modern Landfill

The scene you might picture when you hear the word "landfill" is a thing of the past. Today's landfills are sophisticated, engineered structures that contribute to environmental safety and sustainability. Beyond being safe places to store waste, they are often sources of renewable energy and frequently serve new purposes after closure. Landfills are filled over many decades and are monitored for decades after closure. Therefore, Waste Management takes a long-term view of these sites, ensuring that we mitigate potential impacts and keep communities safe and secure for generations to come.

Thousands of pumps, valves, blowers and flares are required for the safe management of modern landfills. Ongoing collection of data from these assets, often collected by checking meters positioned throughout landfill sites, is essential for landfills' safe operation.

A new system known as Connected Landfills simplifies this work, equipping landfill assets with internet-connected devices and sensors. Technicians are able to review data remotely via dashboards on mobile devices, allowing them to monitor changes, make decisions and even directly interact with equipment with the push of a button. With less time spent in transit, landfill employees will be able to spend more time managing landfills' productivity and health. Based on its success, we plan to expand our use of this technology to other sites. Learn more about how **Waste Management operates landfills safely and sustainably** and helps grow our industry's base of knowledge on this topic.

Renewable Energy Generation: Capturing the Value of Waste

At 124 of our landfills, Waste Management creates economic and environmental value from waste by turning landfill gas into energy. As organic material decomposes in an anaerobic environment, it naturally produces landfill gas, which is roughly half carbon dioxide and half methane. We capture this methane and use it beneficially as an alternative to fossil fuel. This landfill gas, or biogas, is recognized by the U.S. EPA as a renewable energy resource.

In 2019, approximately 55% of biogas collected at Waste Management-owned and -operated facilities went to beneficial use projects. Waste Management is the largest developer and operator in North America.

We are continually looking for opportunities to develop new beneficial use projects. Proximity and accessibility to energy infrastructure makes projects more cost effective. While larger landfills tend to have greater potential, smaller landfills can also support beneficial use projects.

Renewable Electricity

Today, our most frequent application for biogas is to generate electricity that is sold to public utilities, municipal utilities and power cooperatives.

In this arrangement, the amount of renewable electricity delivered into the grid by one user must equal the amount of renewable electricity taken off the same grid by another user. This process has been used to offset traditional electricity with renewable energy for decades.

Renewable Fuel

Beyond electricity generation, we are also a leader in converting landfill gas into natural gas fuels that are distributed for use in residences, businesses and commercial vehicles, including our own. Renewable natural gas (RNG) produced from processed landfill gas now fuels over 40% of our natural gas trucks. **Learn more about how we focus on sustainability within our fleet**.

Waste Management is both a producer and end-user of renewable natural gas. With cleanup to remove water, carbon dioxide (CO_2) and other trace elements, the landfill gas can be converted into RNG, a pipeline-quality gas that is fully interchangeable with conventional natural gas. As with electricity, the gas input and outflow must be on the same gas pipeline system, so it is carefully recorded for accuracy.

Our newest and most advanced RNG facility is located at our Skyline Landfill in Ferris, Texas. It began injecting pipeline-quality gas into the Atmos Energy system in early 2020.

Waste Management Landfill Gas Beneficial Use Projects

Type of Project	Projects	MW
Renewable Electricity		
Power	92	538
Off-Site Power	5	49
Renewable Fuel		
Medium BTU Fuel	7	20
Liquid Waste Disposal	5	4
Renewable Natural Gas	15	66
Total Projects	124	677

Totals and Conversions	
Total LFG Utilized (MMBtu)	58,060,000
Equivalent Megawatt-Hours/Year	4,360,000
Equivalent No. of Households	440,000
Equivalent Tons of Coal/Year	2,520,000
Indirect CO_2e Offset (tons/year)	2,100,000

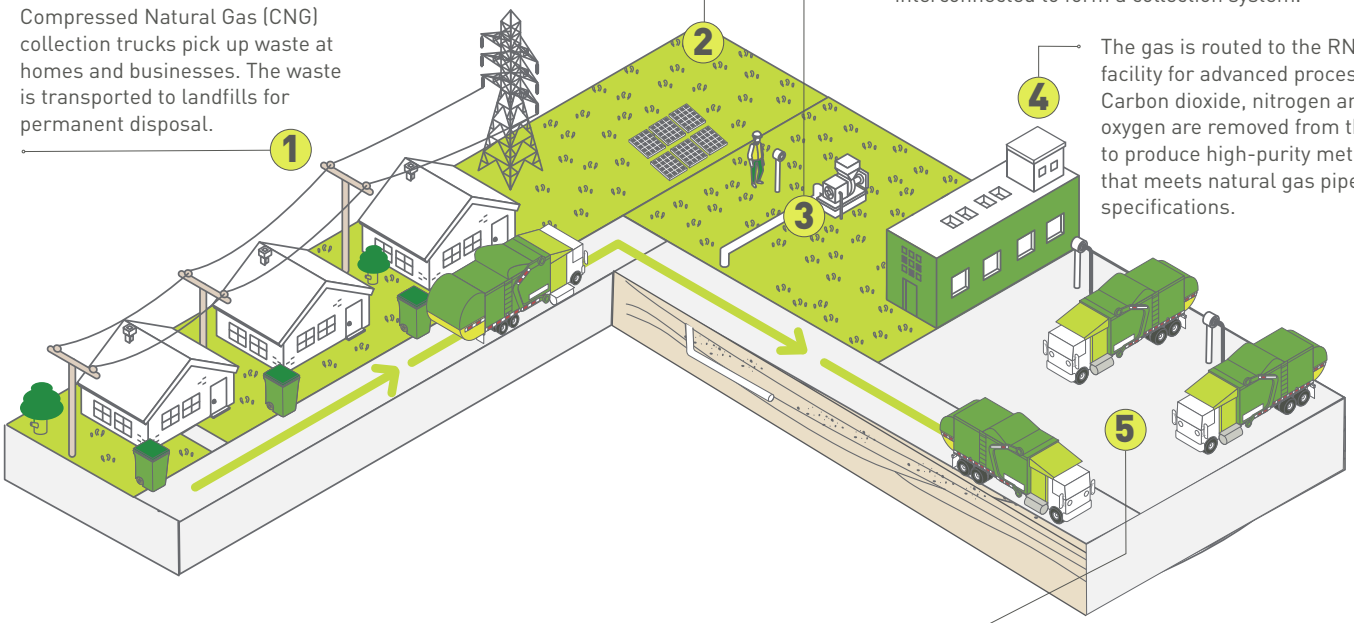
Innovation That Closes the Loop

Much of landfill waste is organic, including food and paper. Bacteria digest this material, producing methane and carbon dioxide as natural byproducts.

Methane is recovered by a series of wells drilled into the landfill. The wells are interconnected to form a collection system.

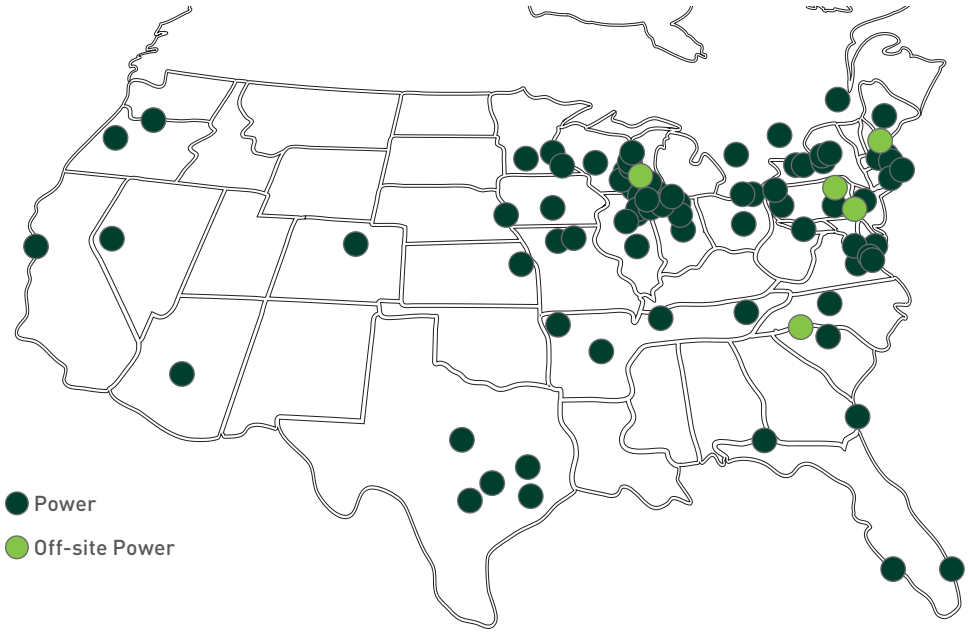
Compressed Natural Gas (CNG) collection trucks pick up waste at homes and businesses. The waste is transported to landfills for permanent disposal.

The gas is routed to the RNG facility for advanced processing. Carbon dioxide, nitrogen and oxygen are removed from the gas to produce high-purity methane that meets natural gas pipeline specifications.



RNG facilities fuel Waste Management CNG collection trucks, reducing GHG emissions by more than 80% compared to those powered by diesel.

Waste Management Landfill Gas-to-Electricity Projects



Providing Long-Term Value

Sooner or later, all landfills reach capacity. But that doesn't mean they have reached the end of their useful life. After closure, monitoring continues, according to strict standards to ensure their long-term safety. Waste Management can convert land surrounding closed disposal sites into beneficial community assets. We currently lease eight closed landfills for solar energy development, which collectively generate 60 megawatts of power. Our newest installation opened in 2019 at the Cinnaminson Landfill in New Jersey, as part of the U.S. EPA's Superfund Redevelopment Initiative. **Read more** about Waste Management's solar energy applications at closed landfills.

Beyond providing valuable land for renewable energy projects, closed landfills are often converted into recreational spaces such as parks, golf courses and athletic fields, as well as nature preserves and habitat for wildlife. For example, the **El Sobrante Landfill** in Southern California is being converted to wildlife habitat as portions of the landfill are closed. It is one of 79 Waste Management landfills that host Wildlife Habitat Council (WHC)-certified habitat sites, which together encompass nearly 18,000 acres of land. The restored El Sobrante Landfill and wildlife preserve will eventually span over 1,300 acres of open space for the protection of 31 sensitive plant and animal species. El Sobrante is also located in an important migratory path for birds and other wildlife. Its permanent protected status means it will play a vital role in the local ecosystem well into the future. Read more about **Waste Management's work with WHC** and the social and environmental benefits of Waste Management's **nature preserves and wildlife habitat** at closed landfills.

Fatoumata-Binta Ba, intern, Francis Allard, President and Xavier Lachapelle-T., Research and Development Manager at Raméa Phytotechnologies.

BUILDING VALUE TOGETHER

A Collaborative Solution for Leachate Treatment

In the natural world, the outputs of one process are often valuable inputs for another. Guided by this principle, Waste Management Québec and a group of scientific partners (Raméa Phytotechnologies, the Montreal Botanical Garden's Institut de recherche en biologie végétale and Polytechnique Montréal) are exploring possibilities for leachate water from landfills to be treated by the naturally occurring processing systems found in plants.

Leachate, which is produced when rainwater percolates through decomposing waste, is composed mainly of organic matter. This matter includes nitrogen and minerals that have nutrient value for plants. At Waste Management's Sainte-Sophie landfill, this water is captured using a collection system and is used to irrigate nearly 160,000 willows that have been planted on closed sections of the site. As willows absorb nutrients, they reduce the volume of leachate that must be treated or discharged, and the nutrients stored in leachate water can increase willow growth as much as twofold. Leachate not absorbed by the willows is captured and collected. Partners are testing eight varieties of willows to determine which types grow best under these conditions.

This growth is important, because the willows themselves are being used as a sustainable building material for walls, anti-noise barriers and chipped wood mulch. Researchers continue to work to better understand the mechanisms by which willows remove contaminants from soil and water. The resulting insights could be applied to the management of leachate at other Waste Management landfills—and create more opportunities for truly circular solutions.

160,000
willows irrigated

Up to 2X
willow growth

Willow products:
walls, anti-noise barriers and chipped wood mulch

Aerial view of the Waste Management technical site in Sainte-Sophie, in the Lower Laurentians

Mitigating Climate Change

Related Content:

Mitigating Climate Change

Materials management solutions play an important role in mitigating emissions that contribute to climate change. Our actions to decrease emissions reduce our contribution to climate change, while ensuring that we remain resilient to climate impacts. These efforts encompass a broad and ongoing focus for our company.

Our efforts to reduce emissions are multidimensional, including recycling, which leads to a conservation of energy and decrease in emissions associated with mining and processing of virgin materials; production of renewable energy at our organics facilities and landfills; use of renewable energy in our fleet and operations to displace the use of fossil fuel; and the hosting of solar energy facilities at closed landfills.

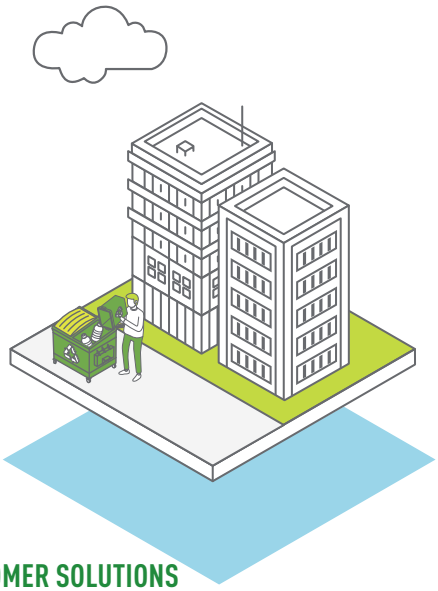
To make progress in each of these areas, Waste Management continues to commit resources to develop new technologies, deploy technology solutions and programs to reduce emissions from our operations, engage in policy discussions at the federal and state level, support strategies to reduce emissions associated with our industry, take action to mitigate risk, actively engage in education and outreach efforts and manage material responsibly to protect our environment and our communities.

"Waste Management is committed to taking bold steps to do our part to solve man-made environmental problems—and we've developed attainable goals to help us achieve them."

-Jim Fish, CEO

How Waste Management Is Addressing Climate Change

Waste Management has the opportunity to do our part to tackle climate change through reductions in greenhouse gas (GHG) emissions from our landfills, fleet and facilities, through the recycling services we provide our customers and the renewable natural gas generated at our landfills. We continue to develop and implement solutions to reduce our own and our customers' carbon footprints, including:

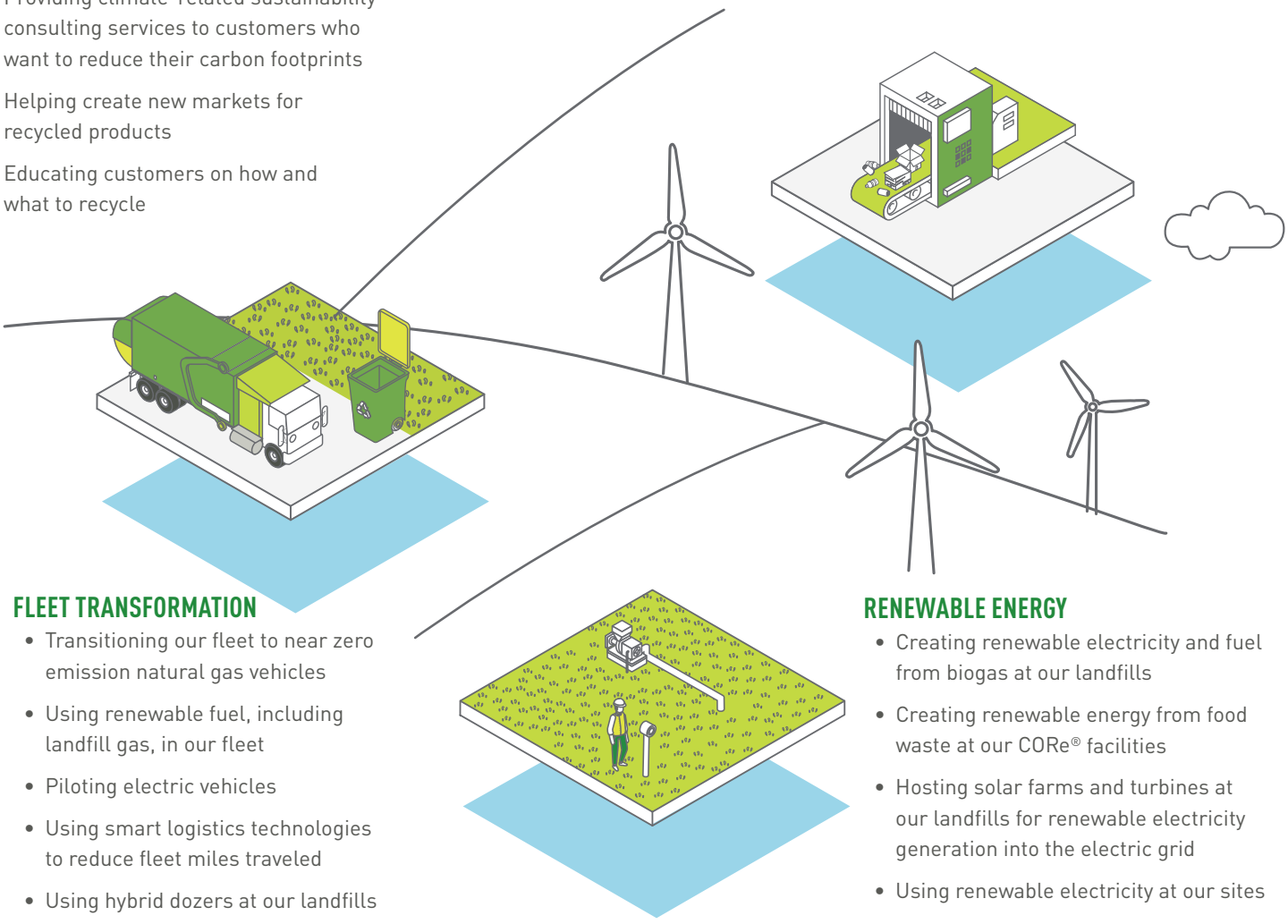


CUSTOMER SOLUTIONS

- Providing climate-related sustainability consulting services to customers who want to reduce their carbon footprints
- Helping create new markets for recycled products
- Educating customers on how and what to recycle

RECYCLING SERVICES

- Investing in technology to improve the quality of recycled material that we sell
- Focusing on recycling materials that provide the greatest GHG reduction benefits
- Turning food waste into energy or compost
- Purchasing products made with recycled content

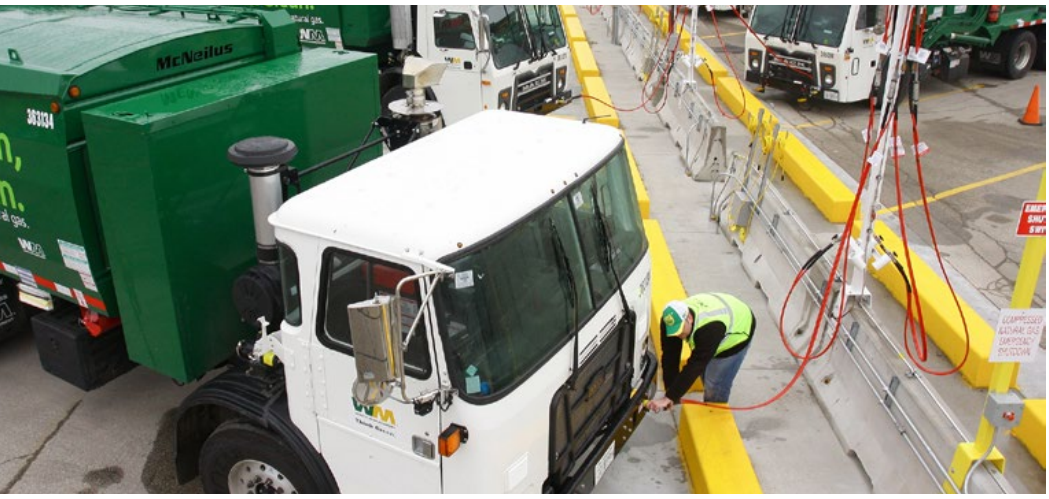


FLEET TRANSFORMATION

- Transitioning our fleet to near zero emission natural gas vehicles
- Using renewable fuel, including landfill gas, in our fleet
- Piloting electric vehicles
- Using smart logistics technologies to reduce fleet miles traveled
- Using hybrid dozers at our landfills

RENEWABLE ENERGY

- Creating renewable electricity and fuel from biogas at our landfills
- Creating renewable energy from food waste at our CORe® facilities
- Hosting solar farms and turbines at our landfills for renewable electricity generation into the electric grid
- Using renewable electricity at our sites



Climate Management

Climate change impacts Waste Management's business in terms of both risks and opportunities. These considerations affect all aspects of our operations and services, goals and business strategy over both the short and long term. The most important risks and opportunities we face are:

Extreme Weather

Extreme weather associated with climate change—such as drought or water scarcity, flooding, extreme heat and rain events, and fire conditions—has the potential to threaten business continuity. These include physical risks, such as damage to our facilities and fleet, and potential disruption of service. Although we can't always know when disaster will strike, we have prepared detailed, specific plans to ensure continuity of service or a return to service in the shortest time possible. Our services are an important means to **assist our community**.

Regulatory Changes

An increased focus on the impacts of climate change has led to an evolving landscape of regulations with the potential to impact our operations. As part of our efforts to mitigate these impacts and comply with emerging policies, we develop and deploy innovative technologies to reduce and prevent GHG emissions.

Low-Emissions Goods & Services

Our customers have expressed a desire to reduce GHG emissions that cause climate change, and Waste Management has a unique opportunity to provide goods and services that meet these needs. For example:

- WM collects, processes and markets recyclables for customers across North America. Manufacturing new products from recycled content reduces emissions by displacing the need for virgin resources.
- Our portfolio includes 40 facilities that produce compost and mulch products used to improve soil structure and quality, providing valuable nutrients for farmers, landscapers and home gardeners. Replacing fossil fuel-based fertilizer with organic matter avoids GHG emissions associated with fertilizer.
- WM engaged in landfill gas to energy production at 124 of our landfills in 2019. For 97 of these projects, the processed gas is used to fuel electricity generators. The electricity is then sold to public utilities, municipal utilities or power cooperatives. For 15 of these projects, the landfill gas is processed to pipeline-quality natural gas and then sold to natural gas suppliers. For 12 of these projects, the gas is used at the landfill or delivered by pipeline to industrial customers as a direct substitute for fossil fuels in industrial processes.
- WM's Carbon Blocker Fly Ash treatment system, installed directly at coal-fired power plants, converts fly ash with increased carbon levels into a cement replacement in concrete.
- Finally, **Waste Management Sustainability Services** furthers this effort by helping customers achieve sustainability and climate change goals.

Low-Carbon Investments

Waste Management's senior leadership team analyzes lower-carbon financial incentives as part of the annual assessment of our market business strategy and uses this information to inform capital allocation. Ongoing capital allocation to transition our collection fleet from diesel to natural gas vehicles as an example, supports our fleet emissions reduction goal. In terms of future investments, we focus on deploying lower-carbon technologies that are already commercialized and identifying geographic-area targets for our **commercial recycling and green fuel projects**.

We report on physical and financial risks and opportunities in section C2 of our annual submission to **CDP**, and under "Risk Factors" in our Annual Report and Form 10-K, which is filed with the Securities and Exchange Commission. Periodically, the Board of Directors is briefed on potential regulatory and market responses to climate change that may have near- or longer-term impacts on our operations or the value of our services.

Climate-Related Goals

Goals regarding our fleet, recycling operations and generation of renewable energy will help us continue to respond appropriately to emerging opportunities and risks. Waste Management updated our goals in 2018 to align with the Paris Agreement to limit planetary warming to well below two degrees Celsius. **We aim to reduce, avoid and offset four times the emissions we generate in our operations by 2038**.

To keep our efforts on track, we refined our goals in 2019 with interim targets to reach by 2025. These new goals include purchasing 100% renewable energy at facilities that we control, developing solutions for measuring fugitive emissions at our landfills and expanding our use of renewable fuel to power our vehicle fleet. We further affirmed our commitment to climate action in 2019 by becoming a signatory to the **"We Are Still In" coalition**. **Learn more about progress toward our goals**.

These goals matter greatly to our customers. Waste Management's customer base is increasingly aware of climate risks and wants to ensure that their products and materials will not have adverse impacts on the environment. As such, they are likely to choose suppliers who focus on solutions such as recycling, GHG reductions, support for renewable energy and long-term liability protection. Therefore, setting long-term goals related to climate change affects 100% of our business strategy.

2019 Emissions (metric tons CO2e)

Scope	Canada	U.S.	Total
Scope 1	762,276	14,862,356	15,624,632
Scope 2	3,644	234,697	238,341
Scope 3	237,145	2,974,520	3,211,665

Scope 1 includes emissions from Waste Management-owned and -operated facilities and vehicles running on fossil fuel, Scope 2 includes indirect emissions from purchased electricity and Scope 3 includes business travel, employee commuting, upstream and downstream leased assets, purchased goods and services, capital goods and investments.

GHG Emissions Impact

	2018	2019
GHG Footprint (Metric Tons CO2E)		
Landfill	14,536,271	13,965,549
Fleet	1,321,914	1,209,237
Electricity	246,091	238,341
Other Energy Use	413,959	449,846
Potential Avoided GHG Emissions (Metric Tons CO2E)		
Renewable Energy Generation	2,560,000	2,329,196
Reuse and Recycling of Materials*	31,323,081	29,719,283
Carbon Permanently Sequestered	20,044,710	20,740,667

*Based on EPA WARM model using defaults

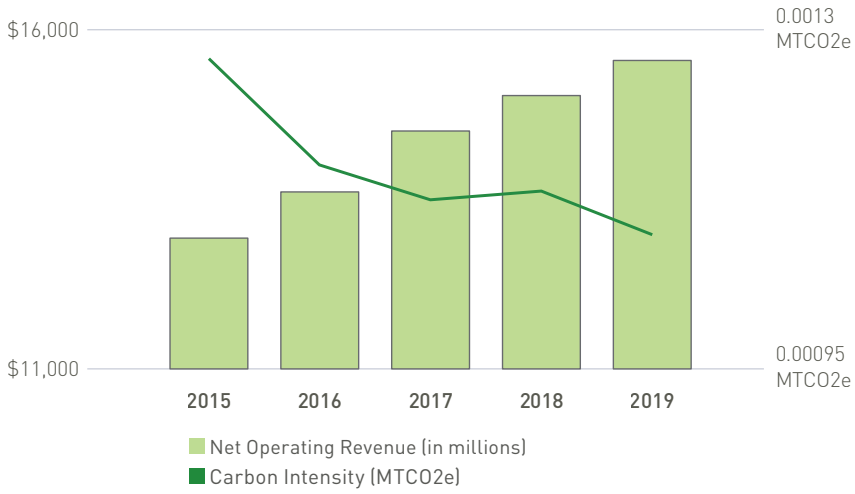
Climate Change Oversight

Our strategies on climate change are led from the top. Waste Management's CEO and senior leadership team maintain a public dialogue on GHG emissions reductions from low-carbon services. Our public sector team works closely with our local communities, helping implement programs that support local sustainability priorities. In 2019, Waste Management established a dedicated sustainability team to research, track and report on sustainability issues related to climate change at the company. This team maintains knowledge of climate issues, providing Waste Management's senior leaders and Board of Directors with information on key issues that may impact our business.

Carbon Intensity

Over the past 5 years, even as Waste Management's business has grown, our carbon emissions per operating revenue has consistently fallen. This is the result of ongoing investments in emissions reduction technologies, including our fleet, our fuel, and at our landfills.

Carbon Intensity



Learn about Waste Management's reporting and disclosures related to climate change **here**.

Energy

Waste Management aggressively seeks solutions to improve energy efficiency in facilities we operate by implementing a range of technologies and best practices that reduce environmental impacts, improve operational efficiencies and achieve cost savings.

These efforts start with the construction of our facilities, which are often built to meet the U.S. Green Building Council's LEED standards. For construction projects where we do not seek formal certification, we still align closely with LEED standards. Below are examples of ways we improve existing locations; build Waste Management facilities to be safe, healthy and efficient; and seek out sustainable options when we move locations.

- Waste Management's new 13-acre driver and technician training center in Glendale, Arizona, includes a driver training course, maintenance shop and classrooms, with solar panels on the roof to reduce our carbon footprint.
- The Eastern Canada Market Area office was relocated to a more space-efficient and central location, which makes for a more pleasant work experience. Shorter distance between the city, the airport and the office means reduced greenhouse gas emissions (Scope 1 and Scope 3) from employee travel.
- Recent improvements to upgrade fueling stations in Ohio, Delaware and Colorado included repurposed truss sections upfitted with high-pressure fueling tubing, block heaters and energy-saving LED lighting to reduce our carbon footprint (Scope 1 and 2 emissions).
- The close of 2020 will bring our headquarters team under one roof in one of Houston's most sustainable buildings. Bank of America Tower is a LEED® Platinum-certified high-performance building and is EPA ENERGY STAR®-certified.

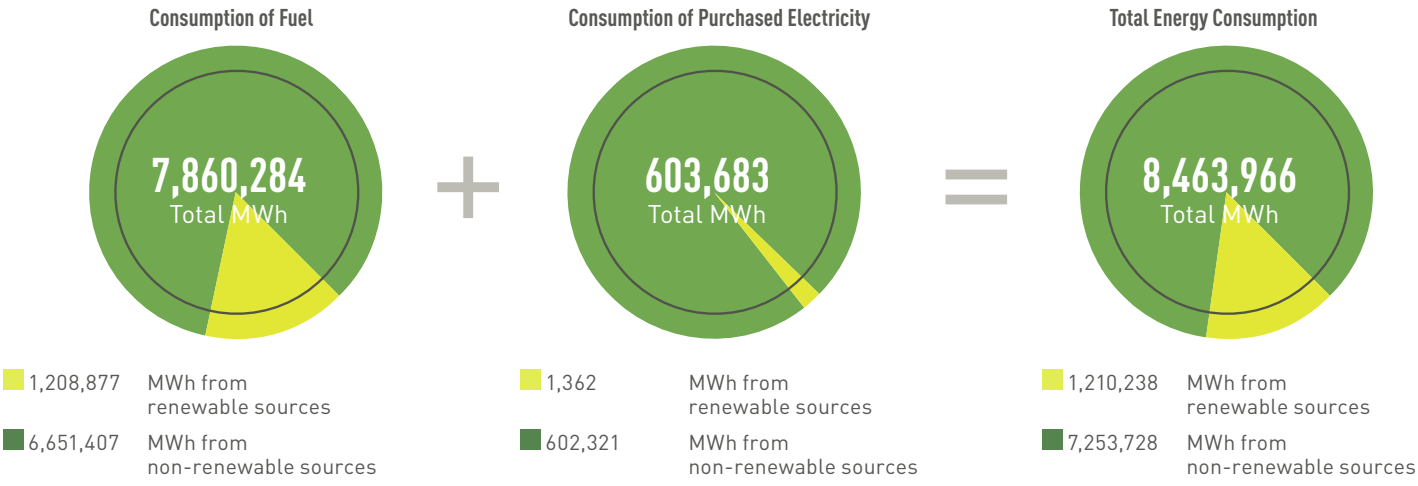
Renewable Electricity

Waste Management is both a supplier and a user of renewable energy, increasingly using sources such as wind, solar, waste heat and landfill gas to power and heat our facilities. In 2019, we consumed 603,682 MWh of total electricity, a small but increasing percentage of which was renewable, across 1,756 Waste Management sites. Our 2025 goal calls for the facilities we operate to use 100% renewable electricity.

We look for capacity to generate renewable electricity throughout the organization. For example, in 2019, we hosted 100 MWh of wind power at our landfills, and we will host up to 58 megawatts of landfill-based solar farms by the end of 2020. We continue to look for opportunities to host solar electricity in support of U.S. EPA's RE-Powering America's Land initiative, which encourages renewable energy development on current and formerly contaminated lands, landfills and mine sites when it is aligned with the community's vision for the site.

14%
of Waste Management's total energy consumption comes from renewable sources

Waste Management Energy Mix



Fleet Efficiency

Our fleet of more than 17,000 collection vehicles provides reliable, essential service to our customers. And it does so while reducing our environmental impact.

Waste Management is reducing our fleet's GHG emissions by transitioning from diesel to cleaner-burning natural gas, an increasing amount of which originates from our own landfill gas. Beyond using cleaner fuel, we are decreasing the amount of fuel we consume via logistics solutions, including route optimization technology that allows us to reach customers while traveling the least possible distance.

Progress Toward Fleet Goals

Waste Management established our first fleet emissions reduction goal in 2007. By 2011, we reached our goal of 15% reduction, primarily by transitioning vehicles from diesel to natural gas. With a vision to create a near-zero emissions collection fleet, we're now working toward a science-based target to cut fleet emissions by 45% by 2038, against a 2010 baseline. In 2019, we set an interim goal for 70% of our collection fleet to use compressed natural gas (CNG) engines by 2025, with 50% running on renewable natural gas (RNG). We are investing in both fuel and routing technologies to achieve these goals and ensure that Waste Management remains the industry leader in transportation technology.

WM's Collection Fleet by the Numbers

17,000
trucks

450M
miles
driven each year

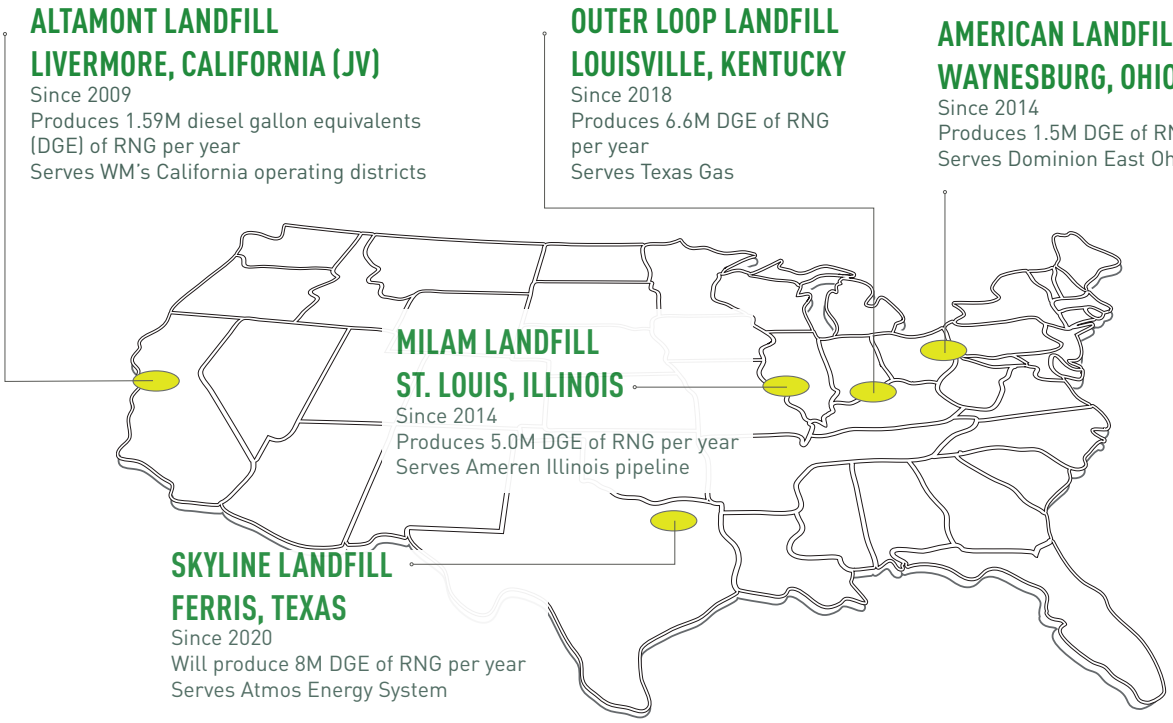
85%
new purchases
are natural gas vehicles

8.9M
fewer miles driven
2017-2019

↓36%
fleet emissions*
2010-2019

*36% reduction in total fleet emissions, excluding biogenic emissions.

Waste Management RNG Facilities



Partners Iogen and Threemile Canyon Farms RNG facility in Boardman, Oregon, and partner Vitol's RNG facility in Jerome, Idaho, use manure from thousands of dairy cows to operate anaerobic digester systems, creating a biogas that can be processed into pipeline-quality RNG. The gas is injected into the natural gas grid, and Waste Management uses a corresponding amount of RNG in our CNG collection trucks in California. **Converting waste manure to RNG is a win-win:** it reduces methane emissions at the dairy and reduces vehicle emissions from trucks on the road.

Fueling Our Fleet

Key to achieving our fleet emissions goal is a commitment to invest nearly $400 million annually in near-zero-emissions trucks available. At the end of 2019, our natural gas fleet totaled 8,924 trucks, comprising the largest heavy-duty natural gas truck fleet of its kind in North America. Vehicles powered by natural gas emit almost zero particulate emissions, cut GHG emissions by 15% and are quieter than diesel trucks. For every diesel truck we replace with natural gas, we reduce annual use of diesel fuel by an average of 8,000 gallons, thereby reducing GHG emissions by 14 metric tons.

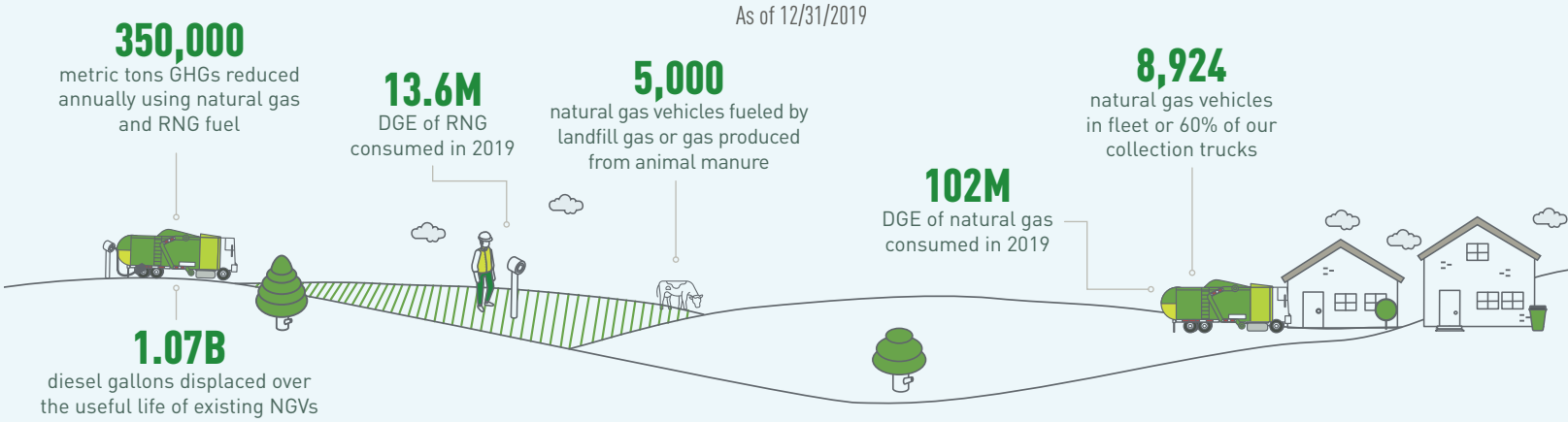
Vehicles receive CNG fuel through our network of Waste Management-owned and -operated fueling stations. As of the end of 2019, we operated 145 natural gas fueling stations across North America, with 25 of these also open to the public. Waste Management finances and constructs the stations, as well as purchasing the fuel.

We currently fuel over 40% of our natural gas fleet with RNG produced from **our own landfills and third-party landfills**. In 2019, these third parties expanded to include dairy farms. Using RNG reduces GHGs and nitrogen oxide emissions (NOx) by over 90%.

Our long-term and ongoing investments in RNG production facilities, coupled with a natural gas fleet that can operate on RNG, are moving us closer to a near-zero emissions collection fleet. In 2019, Waste Management's fleet consumed over 9,752,000 MMBtu of natural gas. Of that total usage, approximately 40% is biogas. In California, Oregon and Washington, 100% of our natural gas fleet runs on RNG.

Waste Management's "Closed Loop" Natural Gas Fueling System

As of 12/31/2019



Driving Toward Zero Emissions

While RNG vehicles have helped us significantly reduce fleet emissions, we are looking ahead for ways to reduce our impact even further through the next generation of zero-emissions battery-electric and fuel cell electric transportation. In Seattle, Washington, we currently operate two BYD 6F Class-6 battery-electric delivery vehicles.

Waste Management is also currently working with major domestic and international vehicle original equipment manufacturers to identify state-of-the-art zero-emissions truck and compaction technologies for our fleet. WM began operating our first electric powered collection truck in the summer of 2020. By the end of 2020, we expect to have taken delivery of two electric trucks, which will operate in Southern California.

Beyond these initial vehicles, we will continue testing alternative energy collection and support vehicles from nearly every major manufacturer. By experimenting with a broad range of solutions, we hope to find the technologies that allow us to be successful and operate with zero emissions in the communities we serve.

A More Efficient Network

Beyond reducing tailpipe emissions, we can also reduce the footprint of our fleet by ensuring that every Waste Management vehicle completes its service route in as few miles as possible, and that our entire network of assets operates efficiently as parts of an interconnected whole. Digital network optimization limits the time our vehicles are on the road. Daily dynamic routing improves the quality of information about our individual customer locations, helping to improve the quality of our service. Sophisticated data analytics also helps to maximize efficiencies associated with the location of landfills and transfer stations in our network, reducing time on the road even as routes change and traffic conditions vary.

The premise of efficient logistics is simple: a more efficient route means fewer miles traveled, which translates into reduced fuel consumption and associated emissions. Since 2017, Waste Management's fleet has reduced miles driven by 2%, which equates to an approximate 8.9 million fewer miles driven a year. Optimizing routes not only reduces our environmental impact, it also increases the quality of our service: we miss fewer stops for commercial and residential customers.

Credit for much of this progress goes to our Service Delivery Optimization (SDO) initiative, which helps streamline routes. Under a "Safety, Service, Savings" motto, 95% of collection vehicles are SDO-certified. SDO technology, a component of the WM Way program, includes DriveCam®, a video recorder mounted on the windshield of collection vehicles that is automatically activated by sudden movements. Where appropriate as part of the SDO process, managers watch videos with drivers to coach

Working Together to Lower Emissions on the Rails

Waste Management is reducing transportation emissions from more than just trucks. In parts of the country, we use **locomotives** to transport waste between transfer facilities and landfills. One of these locomotives travels through many densely populated neighborhoods in Brooklyn and Queens, New York. In 2019, in collaboration with the U.S. EPA and New York City Economic Development Corporation Department of Small Business Services, we upgraded an older locomotive with a Tier 4-certified two-part locomotive configuration, in which one part relies on a diesel engine and the other part uses traction motors. This **updated engine reduces diesel fuel consumption by the equivalent of 7,000 gallons per year**, leading to significant reductions of GHG and particulate matter emissions. With the project complete, the newly repowered locomotive will allow for many years of operations using the cleanest engine technology currently available.

them on fuel-saving driving techniques, such as proper acceleration, deceleration and efficient speeds. We've also instituted an anti-idling program to reduce fuel consumption. Through this program, all collection vehicles built after 1998 can program idle shutdown timers to five minutes, in accordance with the American Transportation Research Institute's Compendium of Idling Regulations.

In 2019, we transitioned several programs into one entity, which allowed us to teach, train and coach consistently across our model dispatch, SDO and maintenance SDO (MSDO) functions. We quickly saw the benefits of this approach when each MSDO-certified route averaged 30 minutes less downtime than its noncertified counterpart, contributing to an overall weighted efficiency improvement of 1.1%. Of routes certified, 93% were able to maintain, and often improve, their expected level of performance, while meeting our

Mission to Zero (M2Z) safety expectations. Currently, 50% of Waste Management routes are MSDO-certified, and we hope to have 100% of routes certified by the end of 2021. Learn more about **Systems Training at Waste Management**.

Mobile technology is an important enabler of progress. Our mobile app allows fleet managers who are responsible for multiple districts to:

- View real-time shop operations
- Communicate with shop technicians and get updates on standard repair times
- See the number of trucks needed and available to service customers
- View and mitigate possible downtime risks

Meanwhile, drivers can access logistics support, route optimization and direct dispatch support throughout the day. Replacing multiple communication devices with one device for the driver and dispatch teams makes for a safer, more streamlined operation.

In another example of GHG reduction from optimizing service, Waste Management's Bagster® service offers compact containers for sale at more than 4,000 retail locations across the United States and Canada, eliminating the need to send a truck to deliver an empty container. Bagster is strong enough to hold up to 3,300 pounds of debris or waste, and when customers are finished with their projects, Waste Management can collect up to 15 full Bagsters on a single, efficient collection route.

Putting People First

Related Content:

Putting People First

Waste Management is a company committed to People First, knowing that the daily contributions of our 44,900 employees are what enable us to play a vital role in the communities we serve. The success of Waste Management depends upon the success of each employee, and we strive to give them the tools they need to develop and excel in their careers.

Waste Management employees span four generations—**Baby Boomers, Gen Xers, Millennials and Gen Z**—each with their own preferences and expectations when it comes to ways of working. Beyond generational differences, our workforce is diverse in terms of race, sexual orientation, gender identity, ethnicity, language and life experience. We are committed to promoting and fostering equal opportunity for all employees, and we strive to maintain a workplace where everyone is valued and respected.

Waste Management is improving cultural communication with all employees. For example, "¿Qué Pasa Jim?" is a video series featuring CEO Jim Fish. Filmed in Spanish, the videos contain messages from Jim, including information about wellness initiatives or Waste Management's observance of Hispanic Heritage Month.

Pathway to Our People First Culture

As our industry and workforce evolve, we face new challenges to creating a strong and successful workplace for our employees. These challenges include high levels of turnover; ongoing cultural integration of more than 100 acquisitions over the past five years; the need to transfer knowledge and skills among our four generations of employees; an imperative to keep employees safe as waste streams and industry dynamics change; and a desire to become more diverse and inclusive at all levels of our company. We are committed to becoming and remaining an employer of choice, but achieving that goal is more complex than ever before.

To address these challenges and help reduce the wide variance in employees' cultural experiences, we launched a new Culture & Engagement department in 2019. This allows us to further mobilize our People First Culture through engaging employees in listening campaigns, dialogue and programming. Led by a Senior Director, the new department began its work by forming a Culture Council made up of a cross-section of leaders who will help drive engagement strategies. A Commitments & Values ambassador program, with over 700 designees, was also established in 2019. Ambassadors will help educate employees on Waste Management's newly adopted Commitments & Values, organizing site-based programs to demonstrate ways we can live our culture. We also developed resources to demonstrate ways to live our values, such as site posters, pledge placards and employee wallet cards listing our Commitments & Values in English, Spanish and French.

We also conducted roundtable meetings and leadership conversations; reviewed historical data; continued to conduct "Stay Interviews"; organized celebrations of Black history, Women's History Day, Women's Equality Day, Hispanic Heritage Month, Pride Month; and began the process of resetting Waste Management's vision and strategy to increase employee engagement. All insights gathered through these activities will help inform and direct the development and implementation of new company policies and programs aimed at continuing to cultivate a culture of inclusiveness and respect.

Waste Management Commitments & Values

In the simplest terms, our values come down to this: Do the Right Thing. The Right Way. This idea sets the standard for our fundamental commitments and core values, guiding our daily actions and decisions.

Commitments

- **People First:** The proud, caring and resilient members of the Waste Management family are the foundation of our success. We commit to taking care of each other, our customers, our communities and the environment.
- **Success With Integrity:** Our success is based not only on the results we achieve, but how we achieve them. We are committed to being accountable, honest, trustworthy, ethical and compliant in all that we do.

Values

- **Inclusion & Diversity:** We embrace and cultivate respect, trust, open communication and diversity of thought and people.
- **Customers:** We place our customers at the center of what we do and aspire to delight them every day.
- **Safety:** We have zero tolerance for unsafe actions and conditions, making safety a core value without compromise.
- **Environment:** We are responsible stewards of the environment and champions for sustainability.

> I choose to be a part of the solution. I choose to raise my voice. I choose to put people first. JIM FISH, CEO

Inclusion & Diversity

Fostering mutual trust and respect for one another is a cornerstone of being an inclusive and welcoming workplace—one that is well-positioned to serve our customers and communities.

It's also important that our workforce reflect the diverse customers and neighbors that make up our communities. Inclusion and Diversity (I&D) are fundamental values, as described in our **Code of Conduct**. In 2019, Waste Management maintained or increased representation of minority groups compared to peer industries in all categories, identified senior leadership sponsors for diversity initiatives and assembled diverse candidate slates for positions at the Area Vice President level and above.

In response to the growing acknowledgment of racial injustice in the United States, we launched a new page on the Waste Management website that includes candid conversations between Waste Management leaders about how we are responding and what we must do as a company to move forward. We are also evaluating our policies, practices and procedures to ensure equity. In 2020, we launched an I&D Leadership Council made up of cross-functional leaders appointed by the senior leadership team (SLT) that will act as change champions and ensure our I&D efforts are tied to the business strategy and are sustainable. Enterprise results will be reported to the SLT quarterly, and our Board of Directors receives an annual report on our inclusion and diversity strategy and progress.

We are continually working to further embed I&D as central pillars of our culture. To this end, we have set two aspirational goals to achieve by 2025:

- Achieve ethnic diversity in each segment of our workforce, with emphasis on leadership, that is greater than or equal to that of the **U.S. workforce standards**.
- Lead the industry in female representation at all levels, with a special emphasis on frontline and women in leadership.

We continue to strengthen programs to hire and retain minorities, women, veterans and individuals with disabilities. We are also broadening our focus on additional underrepresented populations, including the LGBTQ+ community.

Our Board of Directors also believes that its diverse gender, racial and ethnic composition contributes to a valuable diversity of background, thoughts and opinions. This commitment to diversity on our Board is evidenced by the fact that every non-employee director added to our Board since 2013 through the date of this report has been female or is racially/ethnically diverse.

We have spent recent months laser-focused on strengthening our current business strategy to see that inclusion and diversity are not an initiative, but core in everything that we do. For the industry to move forward, we must continue the conversation and action past the media cycle, and make sure it's a part of the business strategy. TIANA CARTER, SENIOR DIRECTOR, CULTURE AND ENGAGEMENT

Putting "People First" Into Practice

Demands for action to confront inequality throughout our society have emboldened businesses and individuals to reflect on how they can be part of the solution. **Waste Management's employees banded together in 2020 in the wake of protests across the U.S. against racial injustice.** Waste Management as a whole is taking steps to address this issue, starting from within. A few of the actions we've taken include:

- A **statement** from Waste Management CEO Jim Fish stating his ongoing **commitment to working toward greater inclusion and diversity.**
- A panel discussion on racism with members of Waste Management's senior leadership team.
- A Town Hall where employees were able to pose questions to leadership about WM's I&D efforts and response.
- A conversation guide distributed to managers to help them talk to their teams about diverse experiences.
- An enterprisewide email from our Senior Director of Culture & Engagement recognizing Juneteenth and explaining the historical importance of the day.
- A six-week podcast series, highlighted in a weekly newsletter, focused on I&D, featuring interviews with employees who talk about their experiences navigating racism in America.
- A grassroots movement focused on the power of one person, designed to enable **all employees to commit to doing one thing to improve I&D at Waste Management.**

Increasing the Number of Women in our Ranks

While the waste industry has traditionally been male-dominated, we are making significant strides to increase the representation of women. The percentage of women in professional, executive and board positions at Waste Management currently approaches or exceeds industry averages, and we aspire to lead the industry in female representation at every level, as well as minority representation at middle management and senior leadership.

We're taking steps to address challenges to hiring women at other levels by actively seeking women to recruit, hire and develop. For example, we are a Gold Member of the Women in Trucking (WIT) Association, which works to encourage employment, promote accomplishments and minimize obstacles faced by women in the trucking industry. Waste Management serves on WIT's board and works closely with the organization and other trucking industry participants to address recruitment. We were honored to be recognized by 2020 Women on Boards for having 20% or more corporate board seats held by women. As more roles incorporate technology and automation, we expect that those roles will increasingly attract women.

Area General Manager Kelly Rooney was recently named to the Women in Trucking Association Board of Directors, where she will work to elevate the issue of gender diversity in transportation and logistics. See what attracted her to a **career** at Waste Management.

In 2019, Waste Management launched an internal podcast called The Route, where employees can hear inspirational stories that define our People First culture. **In a four-part series,** veteran and driver Taylor Krause tells the story of how she went from working on the deck of an aircraft carrier to the driver's seat of a Waste Management truck.

Recognition for Our Efforts

Third-party recognition of our commitment to our workforce is a valuable benchmark. Recognition as a "best place to work" is particularly important, and we are proud of our track record as a **best place for employees from many diverse backgrounds.** Recent recognitions include:

- 2019 Black EOE Journal "Best of the Best"
- 2019 *Military Times* "Best for Vets"
- 2019 *Professional Woman's Magazine* "Best of the Best"
- 2019 Women's Choice Award—"Best Companies to Work for Millennials"
- 2018 Top 25 Companies for Diversity in Texas

Working to Meet the Needs of Individuals With Disabilities

We are continually working to better accommodate the needs of individuals with disabilities within our workforce. To support this effort, we survey our employees every five years, using the Department of Labor self-identification form CC-305. Our response rates have not exceeded 10%, a typical response rate. Based on data collected from this small sampling, employees with disabilities would be projected at less than 2% of our workforce, a number we consider unrepresentative.

Previously, employees were advised to request reasonable accommodations from their managers or people representatives, which managers were responsible for handling. With this process, we didn't have a reliable way of knowing which types of accommodations were most effective, and we didn't have a consistent way to implement them. For our 2020 survey, Waste Management is taking a new approach. We will use email and other electronic means to promote survey participation, as well as digitizing our system to accommodate the needs of employees with disabilities. Also, because we know representation matters, we will be featuring inspiring stories of existing employees with disabilities to help encourage survey participation. A new, centralized accommodation tracking system will identify commonly requested accommodations and describe best practices for addressing them, which will help us best serve employees across the company.

Waste Management has been proactive in assisting people with disabilities through our **Transition to Recovery Program** and by working with the Department of Labor on regulatory proposals to support employment of people with disabilities. We participate in various professional and industry groups, including National Industry Liaison Group (NILG) and local chapters such as the Greater Houston Industry Liaison Group (GHILG). NILG is the largest consortium of private-industry federal contractors working directly with the Department of Labor in shaping equal employment regulations and understanding their impact on the workforce.

Supporting Veterans

The recruitment of veterans is another ongoing focus for Waste Management and is one we place special emphasis on each year. The military offers a substantial pool of professionals with expertise in transportation, logistics and maintenance.

We take a systematic approach to recruiting veterans, posting all open positions on 21 military and veteran network sites that specialize in promoting placement of veterans with private-sector employers, as well as government-owned job placement sites. We also engage in strategic partnerships and marketing efforts with the Department of Labor Career One-Stop centers, Hire Purpose, Corporate Gray, U.S. Veterans Magazines and job fairs. In 2019, Waste Management talent advisors participated in 369 recruiting events for veterans and members of the military. Over the past five years, Waste Management has hired an average of 900 veterans per year in the U.S., a 7.3% hire rate, exceeding the federal benchmark of 5%.

To help retain the servicemembers on our teams, we offer a military leave policy and donate to military causes in the U.S. and Canada. Given Waste Management's successful track record, we have become a leader in advising other companies on how to hire members of the military. Recently, we contributed to the "How to Hire Military" guide for JobsMission, the largest employer-led veterans' advocate in the U.S., and we regularly speak at conferences as an expert on veteran hiring.

Diversity at Waste Management

(as of 12/31/2019)

Board of Directors

33% ethnic minorities

22% women

Senior Leadership Team

22% ethnic minorities

33% women

Company Officials & Managers

22% ethnic minorities

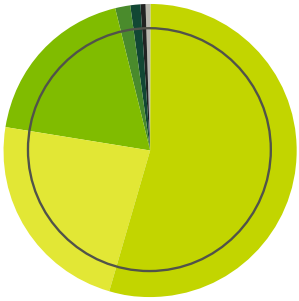
20% women

Workforce

45% ethnic minorities

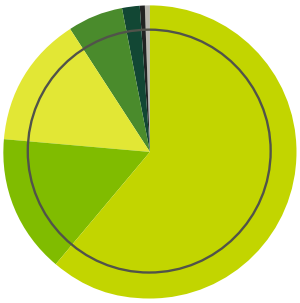
18% women

Waste Management Workforce



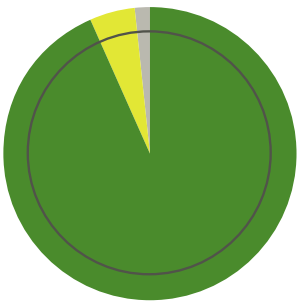
- 54.67% Caucasian
- 23.06% Hispanic
- 18.60% African American
- 1.60% Asian
- 1.01% Multiracial
- 0.67% American Indian or Alaskan Native
- 0.40% Native Hawaiian or Pacific Islander

All Private Industry Workforce*



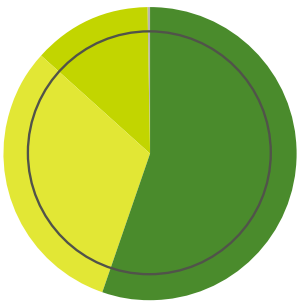
- 61.38% Caucasian
- 15.02% African American
- 14.45% Hispanic
- 6.33% Asian
- 1.81% Multiracial
- 0.55% American Indian or Alaskan Native
- 0.47% Native Hawaiian or Pacific Islander

Employees by Region



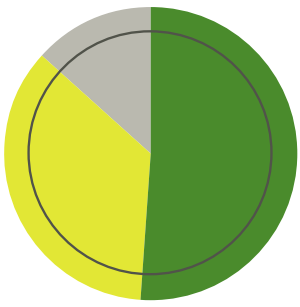
- 41,900 U.S.
- 2,199 Canada
- 740 India

Employees by Generational Breakdown in U.S. and Canada



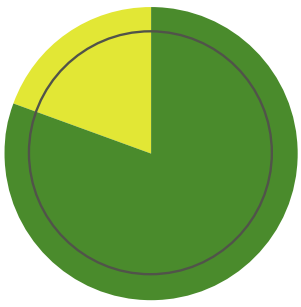
- 55.33% Gen Xers (born 1961–1980)
- 31.41% Millennials (born 1981–2000)
- 13.05% Baby Boomers (born 1944–1960)
- 0.02% Gen Z (born 1995-Current)

Employees by Age Group



- 51.13% 31-50 (1966–1985)
- 35.70% Over 50 (before 1965)
- 13.17% 30 and Under (born after 1986)

Employees by Payment Type



- 80.87% Hourly
- 19.22% Salaried

*Based on U.S. employee/population data. Total does not equal 100% due to rounding.

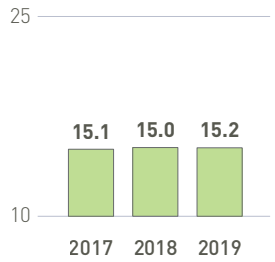
Talent Engagement & Retention

Our employees are the lifeblood of the work we do every day. At the heart of our engagement and retention strategy is a steadfast commitment to Waste Management's values.

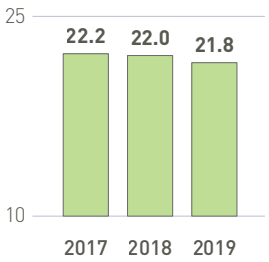
Employee turnover continues to be a concern in the environmental services industry, due to high demand in a strong economy for our skilled workers—especially truck drivers, route managers and maintenance technicians. According to the American Trucking Association, the trucking industry was short roughly 60,800 drivers in 2018, up nearly 20% from 2017. If current trends hold, the shortage could swell to over 160,000 by 2028. Increased automation in residential collection equipment and remote-operated heavy equipment may help us address this shortfall, as well as increasing safety and productivity. Remotely controlled equipment can be operated by **people with disabilities**, potentially increasing the pool of candidates from which we can recruit.

We strive to be a workplace of choice through competitive pay, solid benefits for long-term financial and personal health, and opportunities for growth across our ranks. Being an employer of choice will be critical to our efforts to reverse the voluntary turnover trend, while motivating us to sharpen our focus on our values that help us retain and empower good employees. By promoting from within and offering a wide variety of **training opportunities**, Waste Management can help employees maximize their effectiveness and grow in their careers.

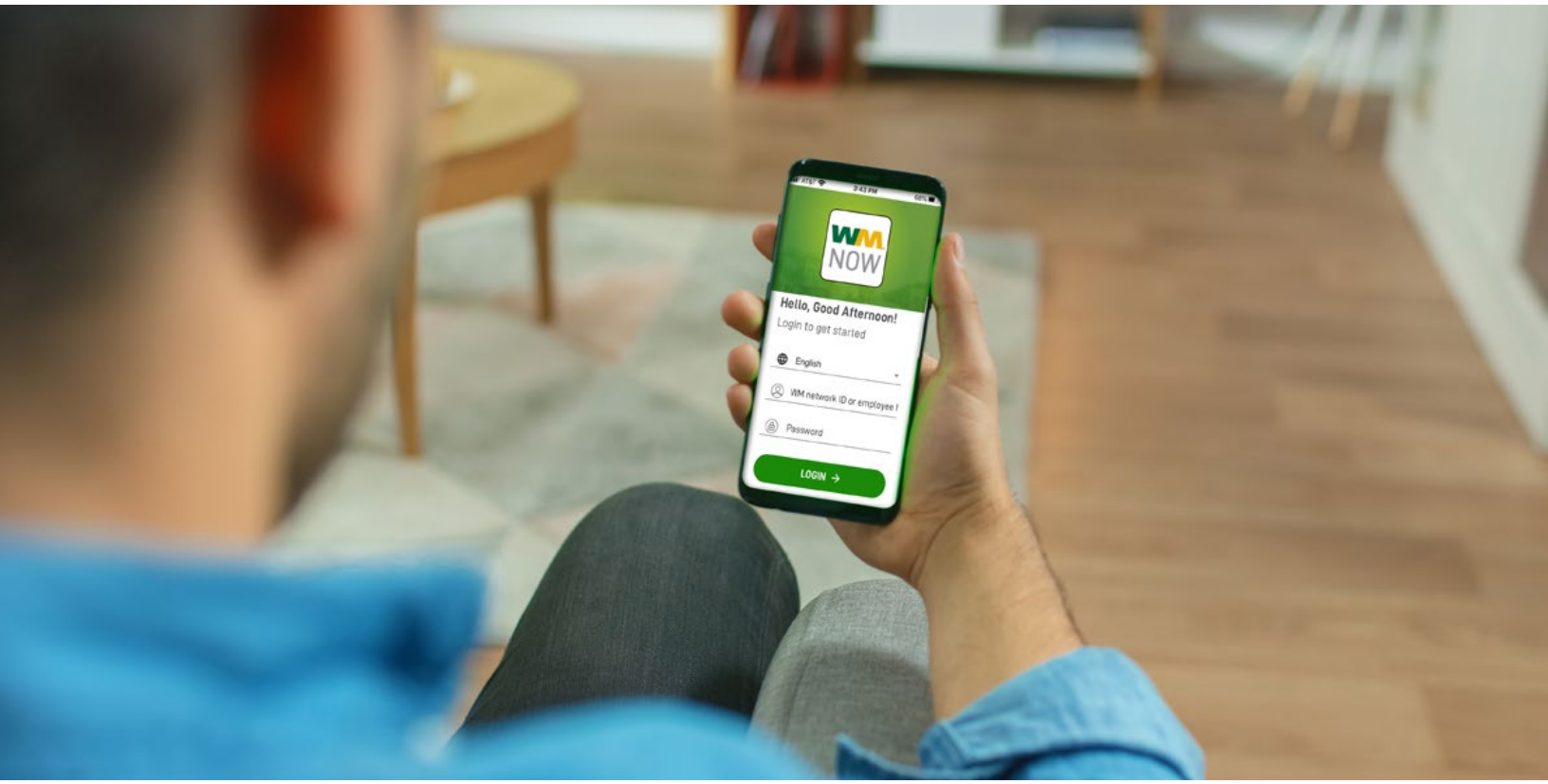
Voluntary Employee Turnover Rates



Employee Turnover Rates



In 2019, **Waste Management set a new goal** to provide a living wage for all employees, which was fast-tracked and achieved in 2020. A living wage is defined as the minimum pay received for the basic number of working hours and required to ensure coverage of workers' and their families' basic needs. Waste Management will continue to track and review employee pay scales to ensure that we remain on target.



Engagement Through Communication

Compensation and benefits are only one way we engage workers. Creating a sense of teamwork and shared purpose is also vital. Communication among company leaders and employees at all levels fosters honesty, accountability and respect, all of which are critical to retention. Each quarter, senior leaders host a town hall-style meeting that covers a variety of topics, available to all employees via live-streaming technologies. Employees unable to attend can submit questions by email and view a replay on our intranet and the WM Now app, a new employee mobile app launched in 2020, making it accessible to all 44,900 employees for the first time.

Waste Management also has a weekly internal newsletter with stories on employee safety, leader communications, potential job hazards, employee successes and updates on benefits and career opportunities. Responses to common employee questions are often included in the newsletter, which is distributed by email, posted in lunchrooms and available through WM Now—a one-stop shop for all things Waste Management, making critical information available for field employees who may not have access to a desktop computer at work. In 2020, it has included COVID-19 safety updates; episodes of "The Route," our internal podcast; latest stories from across the company; and access to employee benefits.

Communication is a two-way street, so we solicit feedback from employees on how we can improve. Constant and collaborative engagement is the foundation of our Service Delivery Optimization program, our Mechanic Service Delivery Optimization, our Peer Review safety program, our Sales Delivery Optimization program, and the fair treatment and respect that comes from the adherence to our Code of Conduct.

We stress our commitment to fair treatment of all employees and strive to apply company policies consistently throughout the organization. For our 8,500 union employees—nearly 20% of our workforce—this goal must be handled according to the practices and expectations agreed to within the collective bargaining unit. For non-union employees, we look for ways to reinforce our fair treatment and continuous learning culture.

BUILDING VALUE TOGETHER

Creating Employment Opportunities for All

Our industry experiences shortages and high turnover rates for a number of critical roles. At the same time, millions of Americans face unemployment or underemployment, leading to issues such as an inability to afford housing. Those who are homeless—as well as members of other underserved groups—confront stigmas in the workplace that prevent them from breaking cycles of poverty, leaving their potential untapped.

Through the Innovative Employment Pathways (IEP) program, Waste Management and our partners are helping to chart a new course to change lives—while creating a new pipeline of talent for our business. IEP is a recruitment program that provides second-chance employment opportunities to overlooked and underserved community populations, including those who have experienced homelessness, displacement, incarceration and significant employment gaps. Together with leading partner organizations specializing in job readiness programs that engage with these populations, we are casting a wider net to reach nontraditional applicants.

IEP builds on the success of programs like Moreno Valley, California's **Homeless-to-Work** initiative, a partnership between the city, the Salvation Army and Waste Management. The program identifies people experiencing homelessness and trains them to beautify areas of the city. Waste Management provides tools and safety equipment for workers and has hired 15 program participants for permanent employment.

In much the same way, IEP depends on collaboration with organizations such as Clean Slate DFW and Goodwill. The program begins with core training for all participants and a survey to determine what skills individuals already bring and what additional training they might need. Participants then attend a "welcome day" at a Waste Management facility where they learn more about the program and a typical day on the job. If they choose to enroll in IEP, individuals spend 90 days working as helpers, sorters and laborers at Waste Management material recovery facilities.

During this period, they can learn more about possible career paths as drivers, technicians and customer service representatives. After the 90-day period, IEP participants may have the opportunity to transition from temporary to permanent positions at Waste Management.

The program launched in June 2019 with pilots in the Dallas and Chicago areas. Since then, we've seen 50% higher short-term retention of IEP participants compared to nonparticipants. We plan to continue the program rollout at Waste Management sites across North America, with the goal of activation at 80% of our facilities and 1,000 participants obtaining work experience by 2025.

IEP doesn't just benefit our business—it illustrates Waste Management's commitment to People First, creating a culture of acceptance that helps people amplify their potential. "Without the job provided by Clean Slate DFW through Waste Management's IEP Program, I would not be able to live on my own in my own housing," says Kelly McCulley, a recent hire. "The program provided services such as transportation and housing support that I needed in order to become a permanent employee. I am so thankful for this program and love my job with Waste Management."

The IEP recruitment program and related initiatives provide second-chance employment opportunities to overlooked and underserved community populations, including those who have experienced homelessness, displacement, incarceration and significant employment gaps.

Training & Development

Finding opportunities for every employee to reach their full potential is the most important way we can maximize workforce engagement and retention.

Waste Management offers expansive learning and development solutions to meet the development needs of our people, as well as proactively recognizing good work and supporting opportunities for growth and improvement. Our talent management program is designed to reach employees at all levels. Hiring, selecting and developing future leaders, as well as evaluating employees in alignment with our values, is standard across the enterprise.

Waste Management's workforce, which is 44,900 people strong, includes a wide range of roles that require an even wider variety of skill sets. As a result, our numerous programs are equally varied. Training types fall into a few broad categories:

- **Compliance training—**Required of all employees, such as training on Waste Management's **Code of Conduct** and **Cybersecurity**.
- **Professional development and leadership training—**Often customized and conducted voluntarily as part of an individual's development plan.
- **Tailored training for specific jobs—**Including collection and fleet operations, post-collection operations and sales. Learn more about these training programs in our **ESG Resource Hub**.
- **Safety training—**Conducted upon hire and on an ongoing basis, geared toward employees in critical positions such as drivers, fleet technicians, heavy equipment operators and sorters.
- **Environmental excellence and compliance training—**Required of employees in specific roles.

In addition to training, we manage performance through regular check-in conversations, coaching and feedback, goal-setting and annual performance reviews. Annual evaluations set accountability expectations for employees with the understanding that progress is monitored throughout the year. Talent reviews and succession planning are designed to recognize and reward high-performing and hard-working employees.

How We Help Employees Learn

Our objective is to create a continuous learning culture that drives performance and supports a superior customer experience. With a vast and decentralized workforce, we take a "learner-centric" approach that allows employees to learn in the ways that are most effective and convenient for them. Our training is delivered in several modalities, including in-person and virtual instructor-led training, online training, self-study and video modules. All required training is produced in English, Spanish and French.

The Waste Management Talent Central system, our intranet learning repository, has approximately 3,600 learning modules available to all employees. The content covers all aspects of the company's operations, along with key topics that support career advancement. This learning library is always growing. In 2019, the Learning & Development department introduced 436 new, internally developed courses, which included a combination of web-based and instructor-led training. Waste Management also partners with two external vendors that create, release and update new training content on a monthly basis. In addition, we partner with colleges and credit-granting organizations to provide employees, and in some cases, their families, with tuition discounts, scholarships, grants and waived fees.

Safety Training

Waste Management engages employees on injury prevention through our Mission to Zero (M2Z) program. We reinforce M2Z with new-hire and ongoing training, including daily huddles and weekly training at all sites. Regular training helps ensure understanding of our operating policies and procedures as well as specialized topics including fire prevention, emergency response, asbestos, personal protective equipment, hazard communication, and slips, trips and falls. These topics are scheduled and communicated through our Safety Awareness Training Calendar. Read more about **Safety at Waste Management**.

Professional Development & Leadership Training

Ongoing training is tailored to an employee's individual development program and future growth plan. We offer consistent training for our leaders and managers to support the skills and behaviors we expect, as well as accelerated learning programs designed for high-potential professionals moving to frontline, mid-level and executive leadership roles. A Business and Professional Training Library, part of our internal Waste Management University, includes 800 online courses that focus on business analysis, project management, communication skills, software skills and customer service. In addition, we work hard to build our understanding of field operations and the scope of services among corporate employees. New hires and senior management team members join driver ride-alongs and visits to recycling facilities, landfills and other Waste Management assets for a behind-the-scenes look at the inner workings of the business.

In 2019, we completed a new leadership development program called The Summit, which engaged 15 leaders from six market areas. Participants spent a year learning about different segments of Waste Management's business, including the leadership challenges and concerns facing each, and completing projects to help certain segments. They also received feedback on their performance through leadership assessments and virtual coaching. Participants then worked with their managers to create individual development plans, which are being used to inform succession planning.

2019 Training Course Highlights

Compliance Training

- Code of Conduct
- Break Time Is Your Time for Hourly Employees
- Security Awareness Training
- Antitrust & Fair Competition Training

Professional Development and Growth

- Building and Sustaining Trust
- Coaching for Peak Performance
- Communicating for Leadership Success
- Creating a Culture of Accountability
- Setting Goals and Reviewing Results

Sales & Customer Service Training

Sales and customer service professionals undergo dynamic onboarding programs that last from four to 25 weeks, depending on the role. These programs combine coaching, in-person training, virtual instruction and on-the-job skills development to help new hires successfully transition into jobs and build careers at Waste Management. We are proud of our high-performing sales and customer service employees, many of whom have been with the company for more than 10 years. We view their tenure as validation of the opportunities offered to learn and grow within our organization. Our approach to sales has paid off: For the past five years, Waste Management has annually been named one of Selling Power's "50 Best Companies to Sell For."

Measuring Success

We measure the effectiveness of training in a variety of ways, depending on the goals and type of training. Waste Management compiles training completion reports for all required compliance training and onboarding programs. Measurement methods include:

- End-of-course evaluations to assess participant reaction
- Post-training assessments to measure participant knowledge
- Post-training observations to measure skill or process application

Training By the Numbers

Comprehensive training on safety, job skills and ethical conduct is important at Waste Management. Across our growing workforce, we invest significantly in training every year.

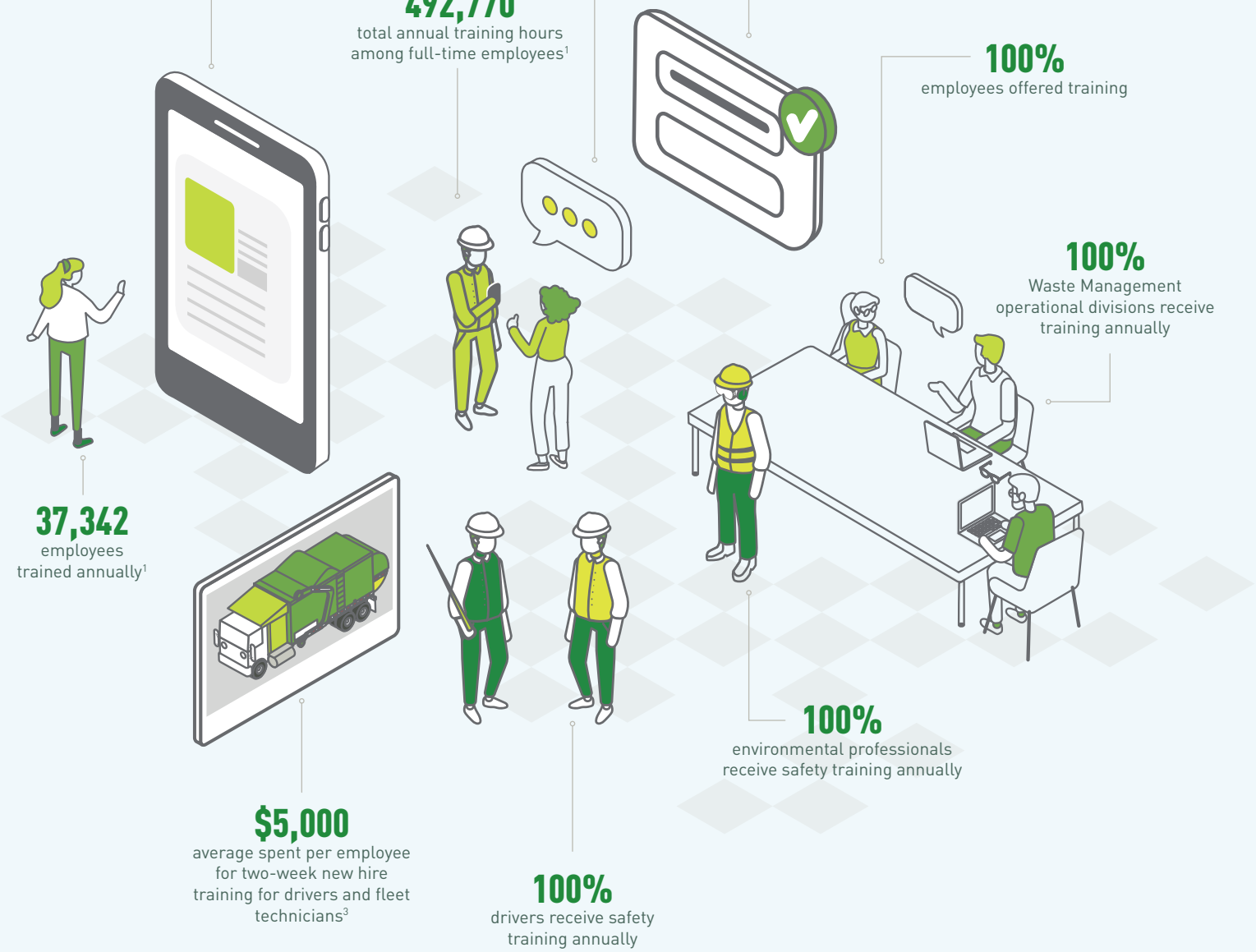
30
average hours of training per employee[1]

$600
average spent on training per full-time employee (using blended learning techniques)[2]

100%
new and current employees trained on Code of Conduct

492,770
total annual training hours among full-time employees[1]

100%
employees offered training



100%
Waste Management operational divisions receive training annually

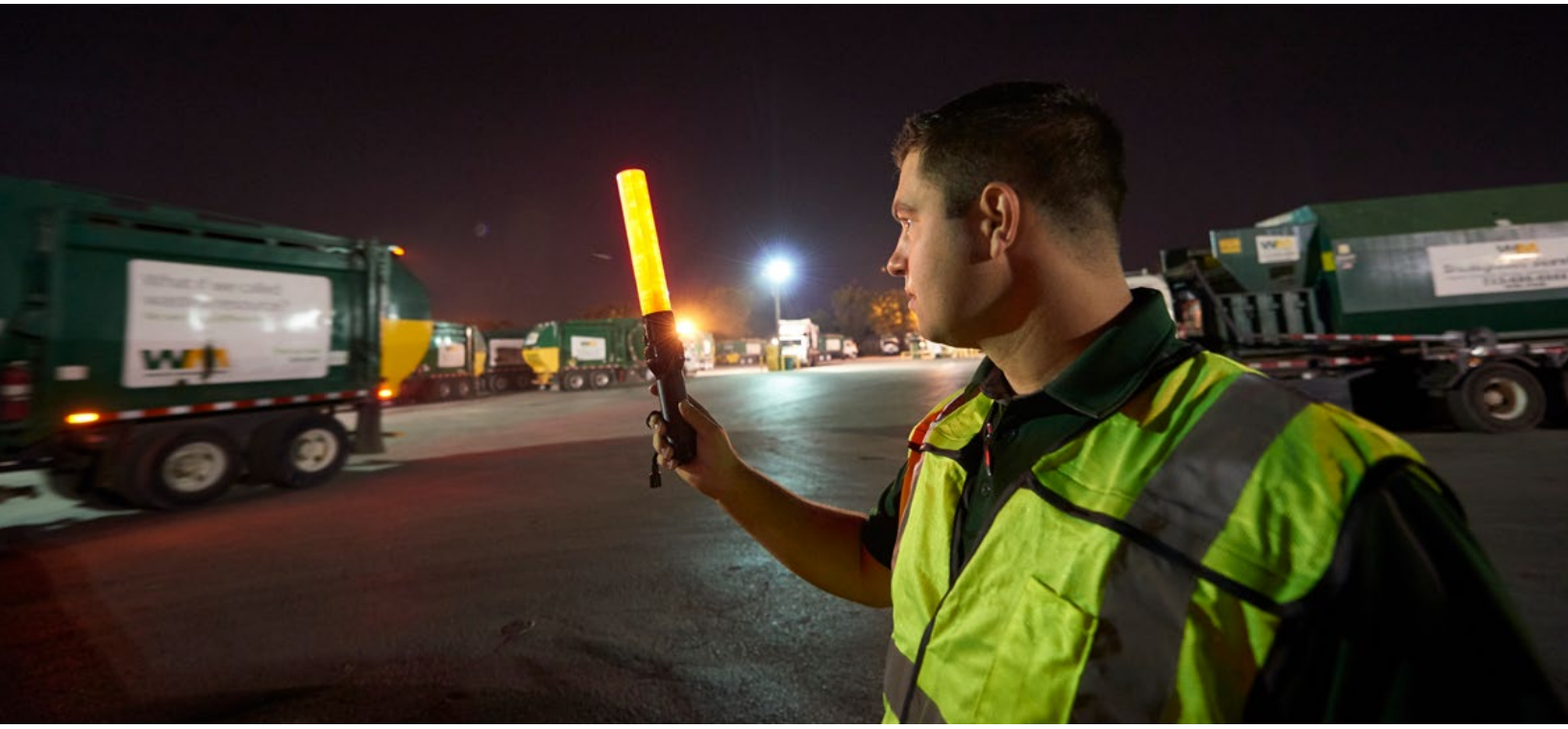
37,342
employees trained annually[1]

100%
environmental professionals receive safety training annually

$5,000
average spent per employee for two-week new hire training for drivers and fleet technicians[3]

100%
drivers receive safety training annually

Notes:
1 Includes training completions tracked in Waste Management's Talent Central System and an estimate of blended learning techniques (e.g., daily training huddles, weekly safety training, monthly observations and post-training reinforcement methods such as videos and practice sessions) that occur in the field
2 Includes learning and development team salaries/contract labor, development costs, learning management system, travel, external products and services, materials
3 Includes trainers' salaries, facilities, trucks and equipment, materials, travel/lodging/meals



Safety

Safety is Waste Management's top priority and one of our core values. A large number of our employee population work as drivers, heavy equipment operators and sorters—essential jobs that carry inherent risks.

For nearly 20 years, we have engaged employees on safety through the Mission to Zero (M2Z) program. The "Zero" in M2Z represents zero tolerance for unsafe behaviors. By engaging employees around prevention rather than simply tracking outcomes, we strive to address hazards before they can endanger employees.

Employees learn safety best practices through new-hire and **ongoing training**. To build upon lessons learned in training, we conduct structured observations of frontline employees that cover all aspects of our collection and post-collection operations, including driving, loading, unloading, lifting and lowering and arriving prepared for work. At disposal operations, significant accidents are subject to root-cause briefings, with standard rules updated to eliminate recurrence. We track monthly safety performance by market, service function and even equipment type. At present, Waste Management is working to deploy an upgraded incident management system that will provide better visibility and analysis of intervention methods.

The Waste Management Safety Services team leads regular performance reviews for our fleet operations, focusing on leading indicators and any areas needing attention. A Monthly Safety Call webcast offers a suite of key metrics, opportunities for discussion of industry issues and conversations with special guests, including senior leadership. Performance reviews and routine reports drive accountability and recognition.

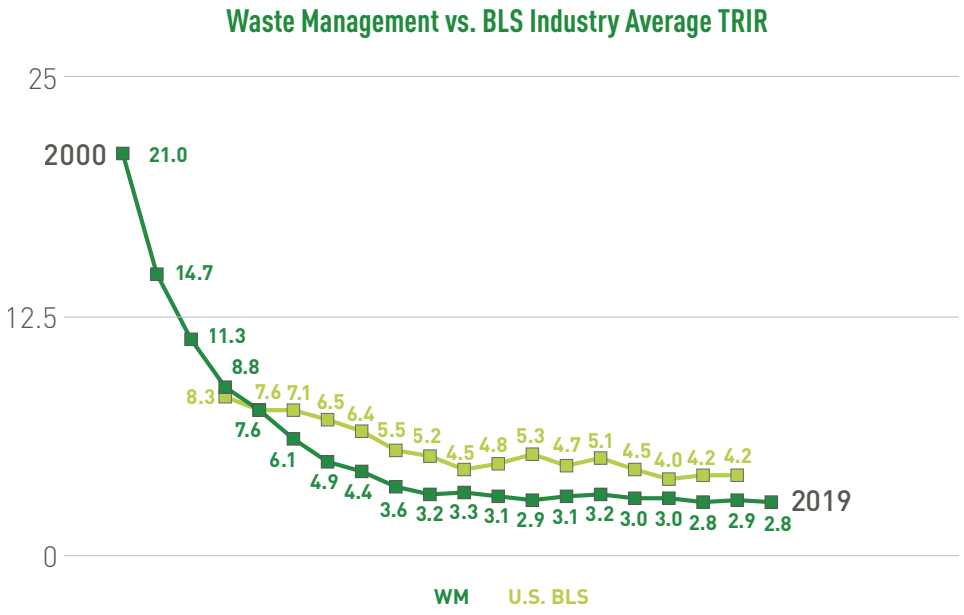
As an industry safety leader, Waste Management is committed to continuous improvement, at our sites and in the **communities where we work**. We engage other transportation and service sector leaders to share best practices and participate in dialogue related to training, recruiting, retention, technology and more.

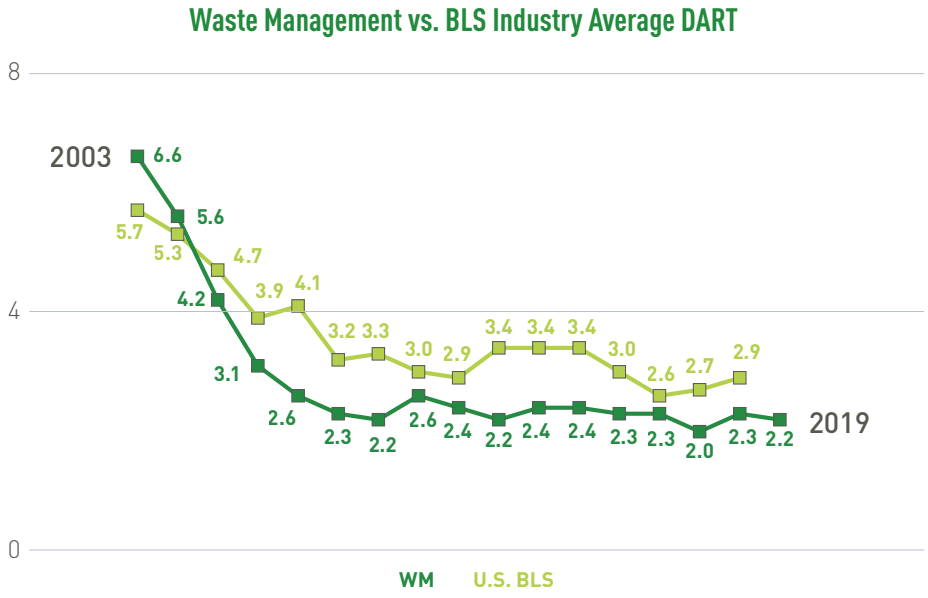
Safety Progress

As a result of our continued commitment to programs that improve roadway safety, and a focus on reducing the frequency and severity of employee injuries, 2019 was a successful year in terms of Waste Management's safety performance. We use four primary metrics to track our progress:

Total Recordable Incident Rate (TRIR)

TRIR is used by the Occupational Safety and Health Administration (OSHA) to track and report work-related injuries and illnesses. Over almost two decades, our rate of injuries per employee hours worked has continued to fall. According to published U.S. Bureau of Labor Statistics (BLS) data, Waste Management has consistently outperformed our industry on TRIR since 2005. Waste Management continues to take active steps to further prevent injuries through our injury and illness management program, hazardous energy control program and other initiatives timed with seasonal risks, including heat illnesses in the summer and slips, trips and falls in the fall and winter.





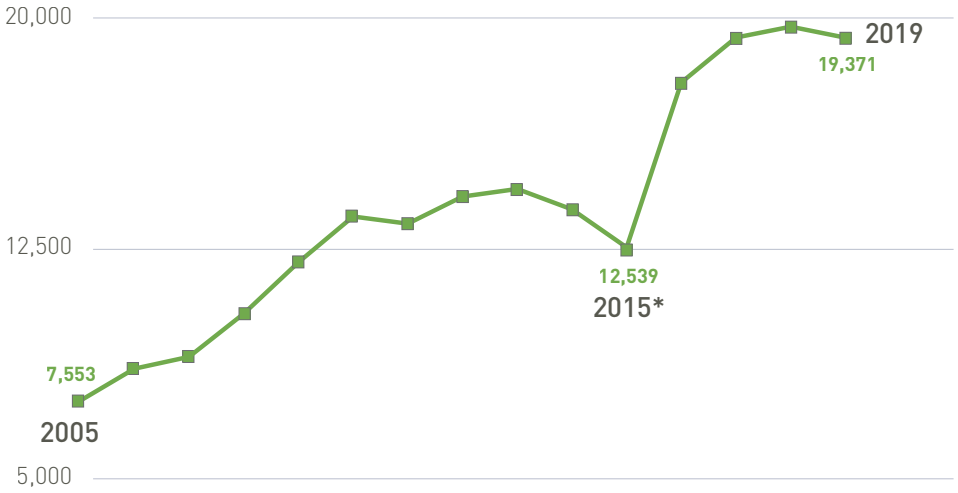
Days Away/Restricted or Transfer (DART)

OSHA uses DART rates to track and report work-related injuries and illnesses that result in lost time, restricted duty or transfer to another work function. Waste Management has outperformed our industry since 2005, including days away from work due to injury, and this metric has continued to decrease. In addition to the programs and awareness campaigns undertaken to prevent all injuries and illnesses, Waste Management has taken a structured approach to reducing the severity of incidents through safety processes that limit risk. We also work to provide prompt and complete medical care for employees who have suffered a work-related injury or illness to support their return to full duty as quickly as possible.

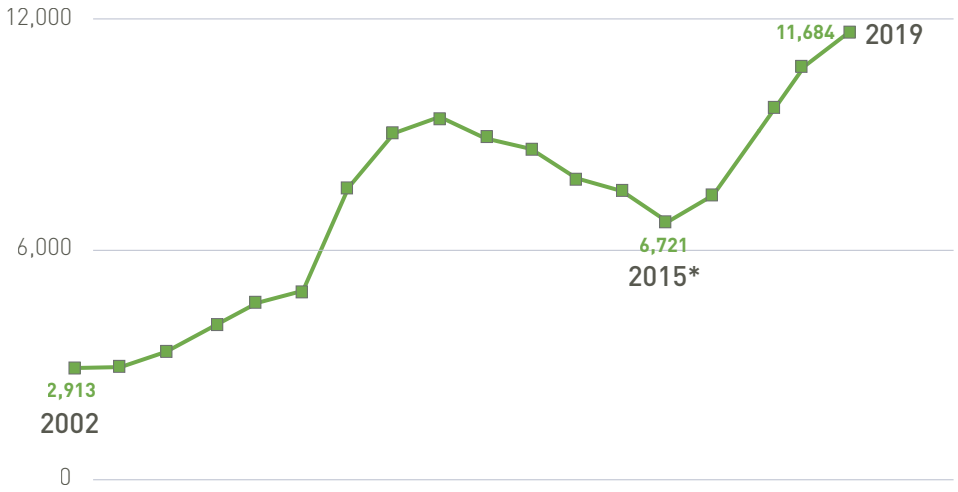
Vehicle Incident Frequency: Vehicle Accident Recordable Rate (VARR) and Hourly Accident Recordable Rate (HARR)

There are no standard metrics for measuring vehicle incident frequency in the waste industry. To understand vehicle incident performance across operations of varying sizes, we use VARR (which tracks vehicle-on-vehicle accidents) and HARR (which tracks vehicle accidents including both vehicle-to-vehicle and vehicle-to-property accidents). Of these two metrics, we believe HARR is most useful because it encourages completing a root cause investigation on all incidents involving a Waste Management vehicle. This focus on behaviors rather than on outcome of vehicle accidents helps lead to interventions that prevent future accidents. The long-term trend in the number of hours between incidents (both VARR and HARR) has increased, indicating continuous improvement in our incident performance.

VEHICLE ACCIDENT RECORDABLE RATE (VARR)



HOURLY ACCIDENT RECORDABLE RATE (HARR)



*Beginning in 2015, Waste Management decided this metric would be more informative if we exclude specific incidents where Other Vehicles Initiated Impact (OVII). This action resulted in a significant improvement in both VARR and HARR from that year onward. As we further refine our vehicle incident tracking, we will continue to evaluate potential methods for contributing to an industry-wide vehicle incident tracking metric.

Safety on the Road

As a company whose drivers must travel daily to serve customers, Waste Management maintains road safety as a particular area of focus, and we have a range of programs in place to address risks unique to transportation. An increase in automation helps to mitigate some of these risks. For example, 66% of our residential routes rely on automated or semiautomated equipment, which reduces the number of times our employees must exit the truck while collecting trash and recyclables; in turn, reducing accidents. Automated equipment also limits the need for employees to bend and lift heavy bins, which decreases the risk of sprains and strains. Beyond the safety benefits, these enhancements lead to greater driver satisfaction and retention. We continue to transition from manual to automated collection as contracts come up for renewal.

We've also installed video event recorders on all trucks, which provide visibility into drivers' performance. This allows us to both reward drivers for safe behaviors and coach drivers for improvement. Since installing cameras in 2014, we have improved safe driving behavior by 56% and significantly reduced auto accident claims.

Training for New Drivers

Robust training is especially important for drivers who operate our collection trucks. To ensure new drivers are successful in their job roles, we have established a three-phase approach. In the first phase, a newly hired driver goes through on-site orientation with management, human resources, market area driver trainers and safety specialists. This allows Waste Management to lay the foundation for drivers to get to know their teams, company policies, procedures and benefits, roles and responsibilities, and safety expectations.

The second phase teaches drivers how to perform the job, with a focus on safety rules, procedures and driving practices. Centralized training for drivers and technicians takes place at training centers in Fort Myers, Florida, and Glendale, Arizona. The new Arizona Training Center, which opened in 2019, includes a 30,000-square-foot maintenance shop, a 10-acre driver training course, classrooms, computer labs and technician workstations to simulate typical experiences at Waste Management facilities.

Newly hired drivers and technicians from across the country travel to these centers for two-week, immersive onboarding programs designed to enhance their capabilities and ensure they are the most engaged, customer-centric and safe employees in the industry. Drivers learn safety rules, procedures, vehicle inspections, safe lifting and Department of Transportation-required curricula that provide scenarios reflective of day-to-day operations. Technicians learn the basics of hydraulics, electrical, preventive maintenance practices and safety procedures.

Promoting SAFETY Behind the Wheel

The Waste Management **SAFETY Defensive Driving system** provides safe driving instruction that is specific to waste-collection vehicles. The system is refreshed monthly with videos that **address hazards in drivers' daily operating environments.** Topics include safe backing, following distances, pedestrians, bicyclists, rollover prevention and more. Videos are paired with discussions, observations and coaching to ensure consistent understanding among all drivers and managers.

At the end of the course, drivers and technicians receive a comprehensive performance evaluation, then return to their respective sites for additional on-the-job training. In 2019, 2,553 drivers and 412 fleet technicians completed training at the two training centers. At full capacity, the Arizona Training Center can develop 2,500 drivers and 750 technicians per year.

The third phase of new driver training is a 90-day, three-level, on-the-job training (OJT) program that applies everything the employee has learned about how to safely operate and maneuver our trucks. The OJT program includes a variety of observations, conducted by the driver's direct manager and a designated site trainer, that range from demonstrating their familiarization of servicing procedures of our trucks to applying the principles of Waste Management's SAFETY Defensive Driving System, an advanced training program that teaches the critical skills of safe driving (see sidebar above). Since the introduction of OJT, one-year retention of new drivers has increased from 37.5% in 2017 to 76.2% in 2019.

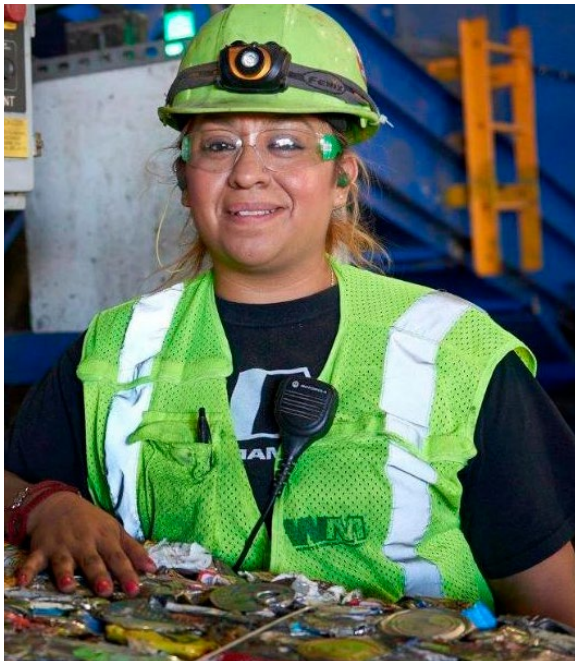
As we continue to expand our capacity to train new hires, we are able to see reduction not only in accidents and injuries, but also in driver and fleet technician turnover. This unique onboarding program positively positions Waste Management relative to other employers recruiting for these critical roles. In addition, early immersion into our company's culture and values translates to better performance and a longer career with Waste Management.

Improved road safety policies can also help keep drivers safe. Collection drivers must constantly be on the lookout for other drivers on the road, particularly those in a hurry to pass collectors during stops, which is when accidents often occur. Waste Management supports "Slow Down to Get Around" legislation, which requires drivers of other vehicles to slow down when passing collection trucks. The National Waste and Recycling Association is leading the effort to pass this law nationwide; 23 states have done so to date.

Facility Safety

Just as we work to continually improve the safety of fleet personnel through technology, legislation and training, we also work with trade associations, customers and communities to identify how they can contribute to enhanced safety for employees within our post-collection facilities. We are increasing safety in recycling facilities through additional operating protocols and efforts to reduce inbound contamination from recycling bins. Contaminants such as "tanglers" that must be manually cut out of processing equipment and lithium batteries that can ignite when their casing is compromised, pose serious consequences for the safety of processing recyclables. An important component of increasing facility safety is educating the public on the hazards created by contamination. We are working with industry stakeholders and community groups to emphasize the need to **recycle right.**

Workers in our facilities receive extensive training that covers full compliance with safety standards and policies, use of required protective equipment, preventive maintenance and good practice guidance. In addition to onboarding programs, we require ongoing training related to injury and illness prevention, hazardous energy control and seasonal risks. The Injury and Illness Prevention program uses a data-based approach that examines equipment, processes, policies and other potential causes of injury and illness; evaluates possible interventions; and assesses the success of these interventions on prevention.



All subcontractors undergo safety orientation that includes modules on basic safety, landfill safety, landfill gas, electrical safety and renewable energy. Currently, 250 Waste Management landfills and 13 renewable energy facilities participate in this training, with 1,336 contractor companies and 10,000 contractor employees registered. We also offer contractors a toll-free helpline they can use to share questions or concerns.

At certain closed landfills, renewable energy plants, maintenance shops and recycling drop-off facilities, staffing may be limited to a single person. We monitor the safety of these "lone workers" in a number of ways. Some workers manually call in to a third-party monitoring service at an agreed-upon frequency, such as every 30 minutes. Others wear a small device that sends an alert signal when certain conditions are sensed, such as a fall or an impact, or when manually activated by the employee. The signal is then transmitted to a third-party monitoring service, staffed 24/7, which notifies local emergency response personnel and emergency contacts.

BUILDING VALUE TOGETHER

Taking Care of Each Other During Times of Uncertainty

COVID-19 touched every aspect of our business, from our customers and communities to employees and operating procedures. As an essential service, Waste Management continued to operate as much of the country paused, taking on the logistical challenge of adapting our operations to a new working environment. With many businesses closed, we re-routed our commercial collection trucks to residential routes where waste and recyclables increased up to 25%. With thousands of collection routes in North America, this was no small task.

We never took our attention off our primary focus of people and safety as we adjusted to changes in our services and market conditions. For example, we:

- Continued to provide glasses, masks and gloves as necessary for frontline employees.
- Created configurations and procedures to promote social distancing, including plexiglass shield separators.
- Developed policies regarding team meetings, breaks and public spaces to ensure social distancing.
- Instituted regular and enhanced cleaning procedures at all facilities.
- Guaranteed 40 hours pay to all full-time employees, regardless of COVID-related service decreases, and company-subsidized care for children and elderly parents.
- Moved 19,000 employees to work-from-home conditions, upgrading software company-wide to handle additional online traffic.

40
hours
of guaranteed pay to all full-time employees

19,000
employees
moved to work from home

1.9M
meals
donated to those experiencing food insecurity

BUILDING VALUE TOGETHER

Taking Care of Each Other During Times of Uncertainty (Continued)

Knowing they were safe and taken care of, our employees were inspired to help others during the crisis. We launched the Million Meals Campaign, a two-week employee match program that raised funds for Feeding America and Food Banks Canada. Through our combined efforts, Waste Management provided 1.9 million meals to those experiencing food insecurity due to the pandemic. In addition, facilities across the country pitched in to help neighbors and local organizations:

- Sites in the Greater Mid-Atlantic region donated money and supplied fruit, vegetables and other essentials to a Delaware food bank supporting more than 7,000 community members.
- The Varick Transfer station in New York City, participated in a food distribution program, helping to unload produce that is delivered to local families on a weekly basis. The facility was recognized as a Queens Chamber of Commerce Business of the Week for its efforts.
- An account manager for Delaware Valley South and his family expanded the Little Free Library in front of their house to include a community food pantry, inviting community members to take what they needed and contribute what they could.
- When students at Reed College and Lewis & Clark College in the Pacific Northwest had to leave campus on short notice, Waste Management teams provided drop boxes and front-load containers to collect recyclables and trash. This helped move-outs proceed more smoothly, reducing the burden on students and school administrators.

Contributing to Communities

Related Content:

Contributing to Communities

Though our operations span almost every state and province in the U.S. and Canada, and rely on the contributions of 44,900 employees, our business has local fingerprints that serve as an integral part of thousands of communities. We strive to make our cities, provinces and counties safe, resilient and sustainable—better places to work and live, today and in the future. To do so, we support events, programs and organizations that align with three focus areas: Environmental Conservation, Environmental Education and Community Vitality.

Waste Management has a long history of collaborating to provide opportunities for community engagement. In partnership with organizations such as Keep America Beautiful (KAB), The Recycling Partnership, U.S. Conference of Mayors—City Livability Award and Wildlife Habitat Council (WHC), we have built authentic relationships with supporters who educate key stakeholders on environmental initiatives critical to sustaining our social impact priorities.

In 2019, Waste Management created a Social Impact team that will implement a new corporate strategy to help us keep up with the ever-evolving corporate giving landscape. This team convened an internal, strategic advisory group of stakeholders from across the company, representing perspectives from our sustainability, brand, employee engagement, operations and communication teams to help map a path forward. These partners will continue to bring expertise to strategize, conduct research and gather insights on how to move the needle.

Waste Management also continues to engage actively on the important issue of Environmental Justice as it pertains to our industry. **See how we have used U.S. Census, mapping and business analyst data to show the distribution of our operations in the communities that we serve**.

How We Give Back

18,000
protected acres
of wildlife habitat

$16M+
total charitable contributions
cash and in-kind donations

3,400+
events
hosted or participated in by Waste Management

393,000+
community members
participated in environmental stewardship and civic activities

Environmental Conservation

Waste Management owns a wide range of properties—large and small, urban and rural. At our larger properties, we make a concerted effort to enhance the natural value of the land by providing habitat for wildlife and offering educational opportunities and natural beauty to the surrounding community.

Waste Management partners with nonprofits, government agencies and other companies to create conservation strategies, including taking action to protect a specific animal or plant. One of the most important roles our land can play is being transformed into a home for wildlife, particularly endangered species that have experienced loss of native habitat.

WM teams across North America partner with Wildlife Habitat Council (WHC), the authoritative conservation program for businesses, to convert nearly 18,000 acres of land to promote sustainability, wildlife preservation, biodiversity and environmental education.

Through this longtime partnership, we transform land—primarily closed landfills, and smaller buffer zones at transfer stations, recycling facilities and other facilities—into certified wildlife habitat. 79 WHC-certified programs vary in scope from individual species management to large-scale habitat restoration.

All projects are included in WHC's **Conservation Registry**, an interactive database that maps conservation projects worldwide.

These sites are more than just habitat. They are vital educational spaces that bring science, technology, engineering and mathematics (STEM) to life to teach the next generation about good environmental stewardship. All acres are overseen by Waste Management employees who dedicate their time and expertise to ongoing management and education.

Grand Central Landfill, for example, has five employees who dedicate their free time to the habitat, volunteering an average of 300 hours a year. This team recently worked with a local federal bird identification group and the Department of Conservation and Natural Resources to install a new monarch garden. At Fairless Landfill, employees work closely with the Falls Township Senior Center to maintain their pollinator garden. As a result of teamwork across North America, our employees were recognized with WHC's 2019 Employee Engagement Award, which is presented to a company whose commitment to conservation is evident through the involvement of its employees. We're proud to report that our employees put in over 2,600 hours on 25 certified programs in 2019.

Through these sites, we teach the fundamentals of protecting habitat, natural ecosystems and biodiversity to neighbors who visit and spread the word about the importance of environmental responsibility. The programs also show visitors that landfills are safe, can be beautiful, and support their surrounding natural ecosystems.

Wildlife Habitat 2019 Site Highlights

The Bronx and Brooklyn, New York

For more than six years, frontline employees have maintained pollinator gardens at our Harlem River Yard and Varick transfer stations. While these areas have long served as peaceful refuges for native wildlife and insect species, they were recently opened up to nearby communities. In fact, the Harlem River Yard garden was expanded to include a new pollinator garden located by the main entrance to the facility on the South Bronx waterfront. This expansion was completed by Waste Management employees with help from Alive Structures, a Brooklyn-based minority- and women-owned landscape design firm, and workers from the HOPE Program, an environmental and social justice-focused workforce development organization, who planted a variety of native perennials, shrubs and grasses.

Through the project, the previously underutilized area was transformed into a thriving garden adjacent to a popular community gathering area on the South Bronx waterfront. The team is also evaluating the feasibility of installing a community meeting center and green roof at the Varick facility. In the East Williamsburg Industrial Zone where Varick is located, no such gathering place currently exists, so this project would meet an important community need.

Emelle, Alabama

CWM Emelle Landfill is a great example of how Waste Management partners with employees and local entities to convert buffer property into wildlife area. At this particular site, Black Belt Prairie grasslands are home to white-tailed deer, Eastern wild turkey and feral hogs. The local team partners with the Alabama Division of Wildlife and Freshwater Fisheries and the Alabama Cooperative Deer Management Assistance Program to monitor and track for white-tailed deer. In addition, the site provides food and shelter for native mourning doves to help the population withstand migration and changing seasons.

San Jose, California

Guadalupe Landfill sits on a combination of oak woodland, grassland, chaparral and riparian areas where employees actively manage and protect 411 acres for conservation. The team has also created native landscaping using drought-tolerant, deer-resistant vegetation in three plots across 2,000 square feet, surveyed by an expert from Creekside Science. Along Guadalupe Creek, employees

79
WHC-certified programs

38
Gold- and Silver-certified programs

217
habitat, species and education projects
on the ground

2,600
hours volunteered
by employees on conservation education

and volunteers serve as environmental stewards. The site's native landscape area is also home to an international, award-winning bug hotel designed and built by employees, using materials found on site.

Okeechobee, Florida

Over 2,000 of the 4,100-acres at Okeechobee Landfill are managed for wildlife, consisting of restored marsh and forested wetland habitat. Improved habitat conditions encourage animals to settle in the area, living among tree piles that provide critical shelter they may not receive elsewhere. We also work with a local wildlife rehabilitation center to introduce keystone species like bald eagles. Like many Waste Management WHC sites, Okeechobee Landfill provides enriching opportunities for students by sharing environmental conservation techniques with 4-H campers, and by offering a program that allows Scouts to earn Fish and Wildlife Management-related badges. Finally, site tours are conducted to educate community members about native vegetation, bat and bird boxes, and species reintroduction efforts.

Educational programs like Okeechobee's enrich communities by helping neighbors understand the value of conservation efforts, motivating them to change their daily habits to protect the planet, too.

Oakland County, Michigan

Many of our sites set up and run programs to support bat preservation, which opens up a unique opportunity to teach community members about the importance of a creature they typically avoid. While they may be scary to some, bats are one of the best natural indicators of health in our environment. Not only do they serve as pollinators and seed dispersers, they control insect populations by eating flies, moths and other insects. By serving as population controls, Bats help to protect plants, reducing the need for insecticides. To help students, families and friends understand bats' role, we have sponsored the Leslie Nature Center's attendance at the Orion Township Boo Bash for the past several years. At this event, nearly 250 individuals show up to trick or treat and learn about the importance of bats and other Halloween-y, nocturnal critters to our eco-system.

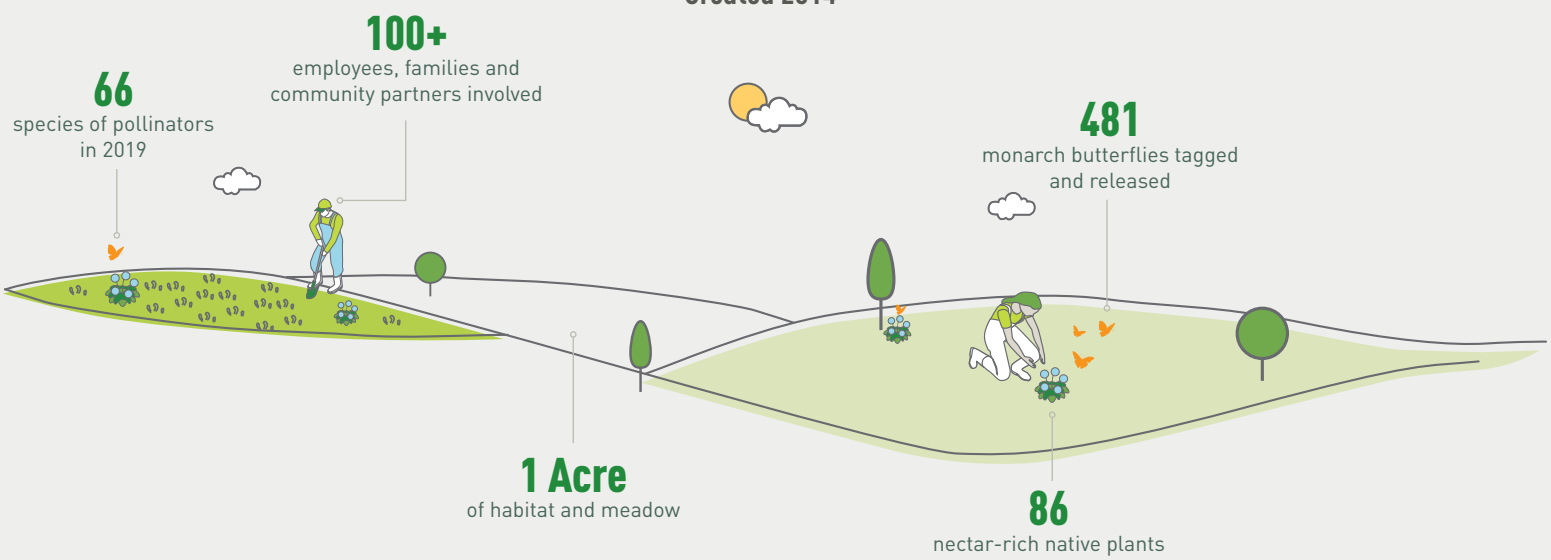
Other Beneficial Uses

In addition to habitat conservation programs, our land serves other environmentally helpful purposes. As sections of our landfills close, the land can take on new life for a variety of beneficial purposes, such as **recreation or solar farms**.

We also support the Highways Bettering the Economy and Environment Pollinator Protection Act (Highways BEE Act), a law to facilitate states' efforts to use more pollinator-friendly highway landscaping practices, including mowing less often and planting native plants and grasses that provide habitats and foliage for bees and monarch butterflies. Today, Waste Management has more than 60 programs dedicated to protecting pollinators throughout North America. In addition, Waste Management leases more than 21,000 unused acres in the United States and Canada for productive use by farmers and ranchers.

Intergenerational Pollinator Partnership Project

Created 2014



Environmental Education

While consumers want to recycle, doing so correctly can be confusing. As we move through our busy lives, it's hard to keep track of what does or doesn't belong in the recycling bin.

That's why Waste Management created the Recycle Right program, the first national, turnkey recycling education program built to feature open-source tools to help customers understand how to recycle properly. We also partner with states, cities and businesses across North America to broaden conversations and elevate understanding around the impact individual behavior can have in fostering sustainable consumption and production patterns.

Through resources, explanations of common recycling myths, and lists of dos and don'ts, **Recycle Right** provides answers for residents, businesses, educators, property managers and government institutions seeking recycling know-how. Brochures, posters, decals, videos and other resources are all available for download as part of our toolkit. Plus, municipalities and commercial customers can take advantage of a free widget that directs consumers to our Recycle Right website. For educators, we've created a standards-based, interactive learning recycling curriculum designed to align with the **Next Generation Science Standards**. In addition, our digital communication campaigns give us the chance to reach and educate approximately 8.5 million people annually via regular tips- and tricks-related posts. We also regularly update the Recycle Right web pages to provide real-time information and solutions to help our customers recycle properly. For example, since plastic bags are not acceptable to recycle in commercial or curbside recycling programs, we created a "No Plastic Bags" toolkit to provide businesses the necessary tools to train janitorial staff and employees to recycle without using plastic bags. Similarly, we created a "Free Your Bag" campaign with short videos to help residential customers set their recycling programs at home up for success.

While Recycle Right is a national campaign, we also created customized content to help our partners meet their waste and recycling goals. In Washington State, Waste Management added 11 social media channels to the company's traditional outreach programming to share information about community recycling events, Q&As, fun facts, success stories, sustainability tips and more. The content engaged younger and more diverse audiences, and garnered high marks from cities, counties, elected officials and community partners who follow us and share our content. As a result of this targeted and local approach, Waste Management won the prestigious 2020 Recycler of the Year for Innovation Award from the Washington State Recycling Association.

Other Partnerships

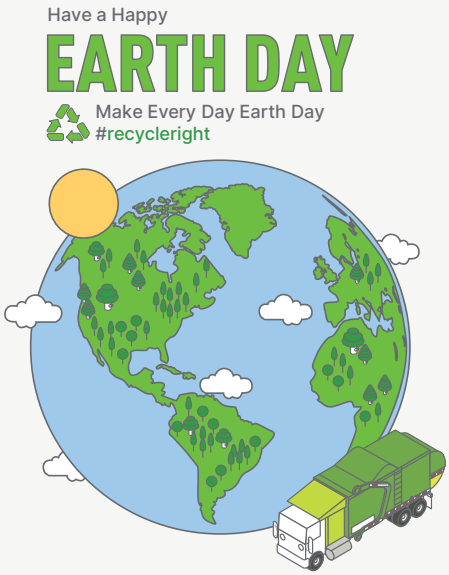
Waste Management partners with the American Institute for Packaging and the Environment (AMERIPEN), Keep America Beautiful (KAB), The Recycling Partnership (TRP), the National Waste & Recycling Association (NWRA) and others to increase individual overall awareness and understanding of the benefits of recycling right. Through national and local partnerships, we also support environmental projects and education that aim to deepen understanding of waste behavior and impacts. In 2019, during the Waste Management Sustainability Forum, we announced a $100,000 donation to support National Geographic's environmental and science education programs. Our donation helped support the creation of educational materials on the plastic crisis in National Geographic's digital **Resource Library**, a repository of free education offerings, including classroom resources, to teach students about ocean plastic and how they can be part of the solution.

KAB is a national community improvement nonprofit organization that has been working to end littering, improve recycling and beautify communities for more than 65 years. In 2019, Waste Management was a national sponsor of KAB's America Recycles Day, a nationally recognized day dedicated to promoting recycling in the U.S. To help commemorate the day, Waste Management sponsored the Recycling Hero Award, recognizing a veteran or active military servicemember who exhibits an outstanding commitment to recycling; a U.S. EPA and KAB Forum; an Innovation Fair; and the **America Recycles Summit**—where Waste Management's recycling leaders supported U.S. EPA in their recycling commitments. Many Waste Management sites also hosted community events and facility open houses to inform and educate neighbors of all ages about how to better manage their waste.

As a strong advocate of environmental stewardship, we regularly share our passion by raising awareness in news stories and through social media posts to educate the public about recycling:

Members of our Florida team spoke with **CBS Miami** about the dangers contaminants pose to recycling workers.

Brent Bell, Waste Management Vice President of Recycling, sat down with **Recycling Product News** to share recycling tips to use beyond America Recycles Day.



Earth Day 2020

While 2020 marked the 50-year anniversary of Earth Day, in-person celebrations were impacted by the COVID-19 pandemic. Instead, we focused our education efforts on outreach through social media, traditional media and webinars. Our communications encouraged community members across North America to recycle right and choose items made from recycled content. Social media posts included creative projects families could enjoy from the comfort of their home, including chalk-art challenges, crafts made from common recyclables and a tutorial for making a landfill out of candy. As part of this multichannel outreach, the New York Stock Exchange recognized Waste Management sorter David Amaro on its social media feeds.

BUILDING VALUE TOGETHER

Connecting With Our Diverse Communities

The communities we serve are diverse. That's why our local teams work closely with municipal partners to provide recycling guidelines and education that are not only translated into the languages customers speak but are also culturally relevant.

For example, we continue to grow our award-winning Spanish-language outreach campaign "Odas al Reciclaje" (Odes to Recycling). **Click to view the campaign.** Inspired by Chilean poet Pablo Neruda and his odes to everyday items, the campaign pays homage to recyclables that can take on new life to benefit our planet and future generations. We hosted a poetry contest, challenging customers to write poems in Neruda's style using the theme of "poniendo tu granito de arena," or the idea that each action helps the environment. Winning poems were featured in direct mail, online and on television. In 2019, we expanded the campaign to reach Chinese, Vietnamese and Korean communities in partnership with Snohomish County in Washington State, commissioning visuals by local artists and poets for each community. Our outreach also includes working with local radio stations and television networks that broadcast in Korean and Spanish to engage communities in Waste Management's recycling and composting programs.

In addition, for the past decade, our WM Recycle Corps has helped build bridges between Waste Management employees, our Pacific Northwest customers and potential team members from diverse backgrounds. We recruit interns fluent in Chinese, Korean, Spanish and Vietnamese, the four most common non-English languages spoken in the greater Puget Sound area. Interns undergo training on strategies to engage the public in recycling behavior change. Once they're trained, the interns reach out to businesses, property managers and residents in multicultural communities to improve recycling and waste reduction efforts.

In 2019, the WM Recycle Corps provided technical support via 1,855 educational phone calls and 905 site visits. The team also engaged in over 6,000 conversations at events, providing recycling information to over 10,300 residents via door-to-door outreach and cart tagging. In addition, nearly half of WM Recycle Corps alumni went on to work in the industry.

Community Vitality

Above and beyond providing an essential service to local neighborhoods and businesses, Waste Management is committed to making our hometowns safe, resilient and sustainable places to live by contributing to communities in a number of valuable ways.

In New York City, for example, Waste Management has built relationships with elected officials, city and state agencies, chambers of commerce, and environmental and community-based organizations. Over the course of several years, Waste Management has conducted hundreds of meetings, led transfer station tours and participated in community events. Our goal is to improve and beautify communities while educating stakeholders about Waste Management's operations, workforce and investments in innovation and technology. Key partnerships include Newtown Creek Alliance, an environmental advocacy group dedicated to the rejuvenation of the Newtown Creek Watershed area of Brooklyn and Queens; and the NYC chapter of Riverkeeper, which liaises with regulators on all environmental matters related to Newtown Creek.

During Climate Week 2019, we hosted the region's first Environmental Awareness Conference, featuring Waste Management leadership and representatives from the Newtown Creek Alliance, Riverkeeper and Surfrider NYC.

Safe Communities

When Waste Management drivers are on their routes, they become the trusted eyes and ears on the streets. For more than a decade, our Waste Watch® community program has trained thousands of drivers to recognize and handle situations that don't seem right. Program participants learn to properly observe and report suspicious activities and emergencies to local public safety and law enforcement agencies.

To become a Waste Watch-certified driver, an employee must complete a formal training program, including instruction from Waste Management corporate security and local law enforcement personnel, and pass a written exam. The program is available in more than half of the U.S. communities we serve. The Waste Watch program has received national acclaim, earning recognition from local municipalities and the National Sheriffs' Association's Award of Excellence in Neighborhood Watch. Our drivers have been lauded for reporting suspicious activity ranging from thefts to vandalism.

Going the Extra Mile

Collection truck driver Billy Shelby helped one of the customers on his route recover after a fall. Since then, they've maintained the **personal connection**.

Improving Our Cities Together

For 30 years, Waste Management sponsored the City Livability Awards, recognizing U.S. mayors who go above and beyond to keep their communities safe, healthy and thriving. Waste Management Senior Director of Public Sector Solutions presented the 2019 Awards at the U.S. Conference of Mayors annual meeting in Honolulu, Hawaii.

Recent Waste Watch heroes include a Florida residential driver Juan Fernandez, who found an elderly woman unresponsive by her front door while servicing his route. Based on his Waste Watch training, Juan immediately called 911 and waited for emergency crews to arrive. He stayed until the woman was treated and responsive. Roger Millen, a Utah-based driver, spotted a two-year-old child wandering a neighborhood on his route. He stopped his truck, picked up the boy and went door-to-door to find his home. A neighbor opened the door and identified their neighbor's child—leading to a happy ending, thanks to Roger's quick action.

In addition to Waste Watch, we partner with safety-related organizations and programs, including AMBER Alert, the National Center for Missing & Exploited Children, Community Crime Stoppers and the U.S. Department of Homeland Security.

Banding Together

Maryland-area teams **joined forces to help a neighbor** find her wedding ring after she accidentally lost it in a trash compactor. As soon as they learned of the loss, Baltimore Hauling, Centralized Dispatch and Annapolis Junction Recycling and Transfer Station **partnered to find the customer's prized possession.** Within 30 minutes of unloading the trash on the tipping floor and combing through it, the team called the customer to let her know they had her ring.

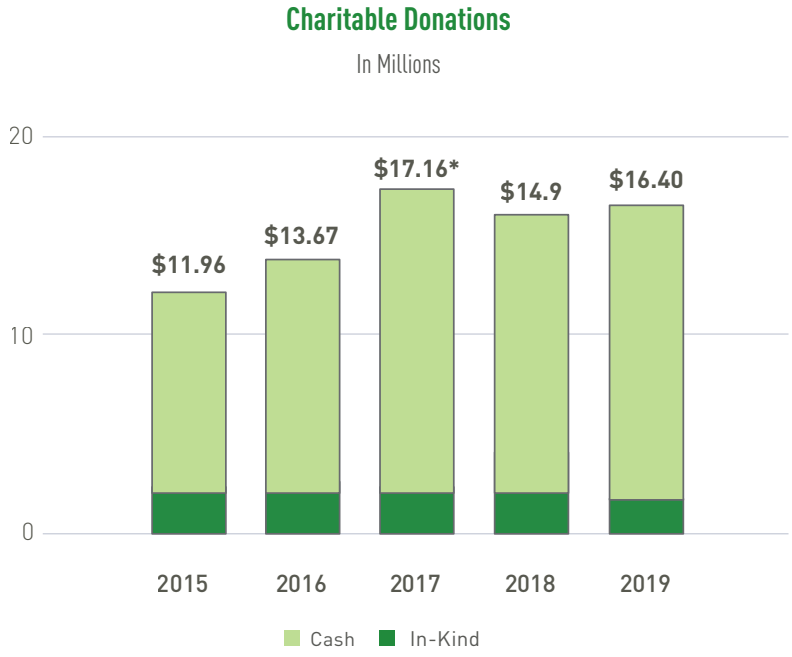
Employee Volunteerism

We pride ourselves on having an employee base that gives back to communities through volunteerism. In 2019, Waste Management employees reported contributing nearly 3,600 volunteer hours during paid working hours. Here are a few of the hundreds of examples of how Waste Management employees supported their communities in 2019:

- Participated in a festival focused on water conservation for students in Rio Rancho, New Mexico
- Fostered relationships with New England-area universities to collect and process food scraps
- Launched a friendly competition to collect items for a holiday food drive—leading to more than 2,000 items collected at our Phoenix North facility
- Granted the wish of a young cancer survivor in Western Canada who got to sit in a Waste Management disposal truck
- Brightened the holidays of less fortunate neighbors in Alabama, Tennessee, Arkansas and Kentucky by collecting canned food, warm clothing, hygiene kits and more
- Provided pickup and disposal services for 253,000 wreaths delivered to **Arlington National Cemetery**

Corporate Charitable Donations

Whenever possible, Waste Management engages with local stakeholders to understand how to support specific community needs. We give back to communities throughout the U.S. and Canada through financial contributions, in-kind giving, participation on organization boards and by sharing our expertise.



*Due to the extraordinary devastation caused by hurricanes in the fall of 2017, Waste Management donated $3 million to Hurricane Harvey aid relief and $1 million to Hurricane Irma recovery efforts.

Think Green® Grants

For more than 10 years, Waste Management has distributed Think Green® Grants to encourage the development of local solutions for improving community environments. Our 2019 Think Green Grants made a $170,000 impact across North America on issues such as reducing litter and waste, reuse instead of disposal, composting, gardens for produce and pollination, and education on the importance of biodiversity. Recipients included:

- Virginia's Bridgewater College, which installed water bottle filling stations to encourage its 3,000 students to use fewer single-use plastics.
- Kent and Sussex County, Delaware's Milford Housing Development Corporation, which supported an alternative homeownership pathway program specifically targeted towards very-low-income households, and the creation of affordable home-ownership opportunities.
- The Recycling Coalition of West Virginia, Inc., which organized a Re-Fashion show to challenge contestants to design outfits using recyclable materials. The event was attended by hundreds of people and made 475,000 online ad impressions.
- The City of Cleveland, Missouri Board of Aldermen, which made Cleveland more environmentally friendly by installing five recycle signs in city entrance points, planting tulip trees at the City Lake, and providing pamphlets throughout the area.
- Oklahoma's OSU-OKC, which supported the local Recycling Education Trailer and Exhibit and educated school children year-round on the benefits of recycling through interactive exhibits, fun activities, games and videos.
- The Solid Waste Disposal District Charter School Recycling Program in Indian River County, Florida, which

established a robust program to increase recycling, decrease garbage generation and minimize contamination through education.

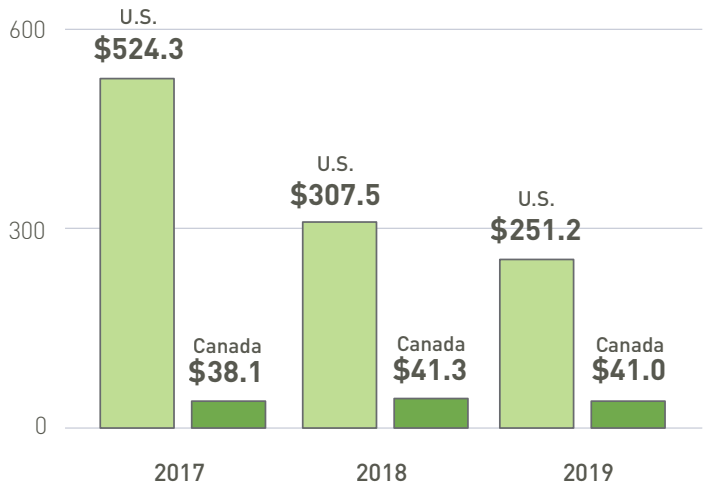
- Pennsylvania's Homer-Center School District, which received funding to upgrade their on-site produce and pollinator garden and organize a visit to a local WHC-certified site.
- The Royal Botanical Gardens in Burlington, Ontario, which held exhibition days showcasing the artwork of middle-school students that illustrated the importance of biodiversity.
- Keep Texas Beautiful, which funded Recycling Grants to expand recycling education for rural Keep Texas Beautiful affiliates and schools.
- The Habitat for Humanity ReStore in Butte County, California, which purchased a new transport van, enabling the store to pick up donations and deliver construction equipment to new building sites. This resource was especially essential after the Camp Fire destroyed the town of Paradise.

Local Economic Impact

Our day-to-day operations—from the wages and benefits we provide, to the income taxes we pay in the U.S. and Canada—boost economic growth in the communities in which we operate. Supporting small and diverse businesses through the materials and services we purchase also contributes to local and national economic growth. In 2019, we spent $264.1 million with **diverse suppliers**, and we have set a goal to grow our annual spend with diverse suppliers by 10% by 2038. Our Board of Directors receives an annual report on our spend with diverse suppliers, directly overseeing our progress toward this goal.

Income Taxes Paid

In Millions



Real Estate Taxes Paid

In Millions

Emergency Response

Waste Management and our team members across the U.S. and Canada provide essential services to tens of thousands of communities, businesses and organizations daily.

Over the years, we've dealt with many kinds of service disruptions: hurricanes, super storms, floods, fires, earthquakes and now pandemics, each requiring unique preparations associated with our planning and response to ensure a swift recovery.

In a time of crisis or disaster, garbage, debris and recycling collection are central to a community's recovery and rebuilding. To mitigate the impact of emergency events, and to speed up recovery, Waste Management has established national strategies and support systems to assist local operations. For example, Waste Management has identified qualified drivers and other workers to support local teams when crisis events occur. This group of professional employees has experience working in a variety of situations, including natural disasters, labor disruptions and other events that impact normal operations. We have pre-identified staff, called the WM Green Team, prepared to deploy after disasters or storm events.

Step-by-step guidance prepares our teams to respond safely and quickly to emergency events. Each year, we review and update our disaster management plans, building on what we learn to improve our response.

The COVID-19 pandemic underscored the need for detailed plans for every type of disruption. In this case, deploying a team of drivers and workers to travel to affected areas was not feasible. Our planning efforts allowed for adjusting our services to meet our customers' and communities' needs. Thanks to our quick and decisive response, we kept drivers on the road and customer service agents answering phones, to provide safe, environmental services to customers and to ensure that we provided essential feedstock to paper mills that rely on our recyclables to manufacture the packages necessary for medical and grocery supplies. Learn more about Waste Management's ongoing response to COVID-19 **here**.

Regardless of the type of event, we are committed to a set of overarching practices: We take care of our employees first. When employees and their families are safe, we can help our customers recover sooner. We are also committed to communicating clearly and consistently, with employees and customers, before, during and after a disaster.

While we may not be able to predict when or where natural disasters will occur, there is plenty we can do to prepare. Our goal is to remain ready to respond to these events as we always have, thanks to our employees' professionalism and compassion for one another and the communities in which they live.

Hurricanes

For some natural disasters, weather forecasts provide critical warning time to prepare. Major hurricanes in 2018 and 2019, most notably Hurricane Michael, required dedicated efforts by a team of experts to protect employees, safeguard trucks and facilities, and bring in supplies after storms passed.

When Michael devastated a large swath of the southern U.S. in October 2018, Waste Management was one of the first responders, delivering roll-off containers to essential businesses and utilities, local hospitals, grocery stores and shelters. We deployed a Green Team of approximately 30 employees who assisted with relief efforts, including driving vehicles, cleaning up debris and preparing meals. Beyond the internal cleanup and recovery process, Waste Management prioritized communicating our operational status to our customers through every available medium.

Wildfires

Compared with the tropical storms that affect the eastern and southern U.S., the fires that occur with increasing frequency in the western U.S. and Canada require very different preparation and response. Our fire-related communication plans, response and recovery efforts are increasingly tested.

In November of 2018, Waste Management's Simi Valley Landfill worked with their employees and the deployed WM Green Team to handle debris from the Woolsey Fire, which burned in California's Los Angeles and Ventura Counties. We made upgrades at the facility to accommodate the increased volume, including expanding our staff, adding equipment and renting electronic signage and lights to allow the site to run extended hours while enhancing safety. Over a five-month period, we accepted more than 362,000 tons of fire debris and recycled more than 6,000 tons of scrap metal.

The WM Employees Care Fund

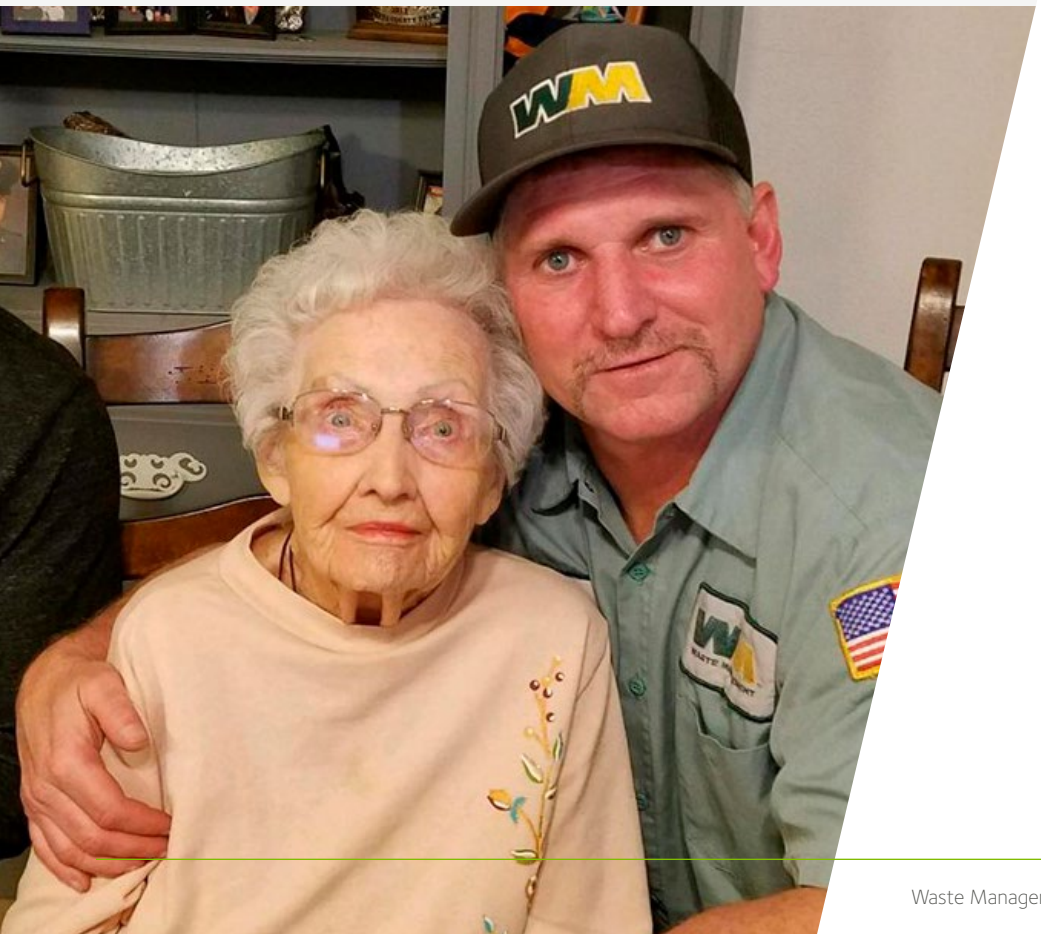
The WM Employees Care Fund, Inc. is a public, nonprofit 501(c)(3) organization that provides short-term financial assistance to Waste Management employees during unexpected financial hardships and emergencies. This fund is intended to assist employees in filling financial gaps that exist following unexpected emergencies. The vast majority of the fund is supported directly by other Waste Management employees and is one example of how we support and take care of each other during times of need.

The Camp Fire ignited in Paradise, California, the same day as the Woolsey Fire. While Waste Management does not provide service to the Paradise community, we have extensive operations throughout the surrounding area, so many of our employees, customers and business units in the region were affected. Because the containment of the fire was uncertain, our procurement staff worked to ensure operating units in the affected areas had the necessary masks, water and other critical supplies.

In the wake of the fire, 15 Waste Management employees were displaced from their homes. We secured relief for them in the form of hotel rooms, rental cars, clothing allowances and meals as well as grants from the Waste Management Employees Care Fund. Waste Management even organized a catered Thanksgiving dinner at a community center so that employees and their families could celebrate together, despite the upheaval.

Once the cleanup process began, WM Green Team members from across the country assisted with hauling and post-collection operations. Our landfill in Anderson, California, received nearly 2 million tons of fire debris over nine months. We also helped relief efforts through donations to a local Habitat for Humanity chapter, community center and library as they began the long process of rebuilding. Although both events occurred in 2018, the response and impacts were felt well into 2019 and beyond.

Power blackouts during "fire season" have become a part of life in California. These outages impact our operations and our ability to communicate with our drivers and customers. Now, we require backup generators and call centers to maintain service continuity across the state.



Taking Care of Our Neighbors

As the Camp Fire neared, North Valley Waste Management driver Dane Cummings decided to check on the elderly residents on his route. He found 93-year-old Margaret Newsum and brought her to **safety** at the home of Brian Harrison, a fellow Waste Management employee.

Forward-Looking Information

This report contains forward-looking statements, including statements concerning the company's outlook, performance or results in the future, as well as statements of beliefs about the future, plans and strategies or anticipated events. You should view these statements with caution since they are based on the facts and circumstances known to the company as of the date the statements are made and are subject to risks and uncertainties that could cause actual results to be materially different. Such risks include, but are not limited to, increased competition; pricing actions; failure to implement our optimization, growth, and cost savings initiatives and overall business strategy; failure to identify acquisition targets and negotiate attractive terms; failure to consummate or integrate the acquisition of Advanced Disposal Services, Inc. or other acquisitions; failure to obtain the results anticipated from the acquisition of Advanced Disposal Services, Inc. or other acquisitions; environmental and other regulations, including developments related to emerging contaminants and renewable fuel; commodity price fluctuations; international trade restrictions; weakness in general economic conditions and capital markets; public health, business disruption and other impacts of COVID-19 (coronavirus) and other pandemic conditions; failure to obtain and maintain necessary permits; disposal alternatives and waste diversion; declining waste volumes; failure to develop and protect new technology; failure of technology to perform as expected, including implementation of a new enterprise resource planning system; failure to prevent, detect and address cybersecurity incidents or comply with privacy regulations; significant environmental or other incidents resulting in liabilities and brand damage; significant storms and destructive events influenced by climate change; labor disruptions; impairment charges; and negative outcomes of litigation or governmental proceedings. Please also see Part I, Item 1A of the company's most recent Annual Report on Form 10-K, and subsequent Form 10-Qs, filed with the SEC for additional information regarding these and other risks and uncertainties applicable to our business. The company assumes no obligation to update any forward-looking statement, including financial estimates and forecasts, whether as a result of future events, circumstances or developments or otherwise.