The Communities We Serve.

2019 SUSTAINABILITY REPORT



ABOUT WASTE CONNECTIONS

Waste Connections is an integrated solid waste services company that provides non-hazardous waste collection, transfer, disposal and recycling services in mostly exclusive and secondary markets in the United States and Canada. Through its R360 Environmental Solutions subsidiary, Waste Connections is also a leading provider of non-hazardous oilfield waste treatment, recovery and disposal services in several of the most active natural resource producing areas in the United States, including the Permian, Bakken and Eagle Ford Basins. Waste Connections serves more than seven million residential, commercial, industrial, and exploration and production customers. The Company also provides intermodal services for the movement of cargo and solid waste containers in the Pacific Northwest.

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OUR PURPOSE

Honoring our commitments provides our stakeholders peace of mind and establishes us as the premier waste services company in the markets we serve. This creates a safe and rewarding environment for our employees while protecting the health and welfare of the communities we serve, thereby increasing value for our shareholders.

Who we serve.



OUR PEOPLE

The well-being and development of our employees.



OUR ENVIRONMENT

The public areas where we offer our wide range of services.



OUR GOVERNANCE

The governance and ethics of our Company.

LETTER FROM THE CHIEF EXECUTIVE OFFICER



hank you for your interest in sustainability initiatives at Waste Connections. We recognize the importance to our stakeholders of our continuing efforts to minimize our impact on the environment by:

- :: encouraging materials recycling and reuse;
- :: using waste to generate clean, renewable energy;
- :: reducing our carbon footprint and use of fossil fuels; and
- :: exploring alternatives to landfill disposal.

But Waste Connections' sustainability efforts extend beyond the environment; we also measure the positive impacts we have on the communities we serve, the development and welfare of our employees, the financial health of our Company, and the returns to our shareholders.

As a leading environmental services company, sustainability is not a new concept for us. Over the years, we have been recycling a significant portion of the waste stream, with diversion rates in some markets in excess of 70%. Our recycling efforts recover valuable materials

for reuse, and include the composting of organic materials for reuse as a soil amendment. We also deploy anaerobic digester technology to process organics to power homes. When requested, we work to bring these programs and technologies to other communities and industrial customers we serve throughout the U.S. and Canada.

In addition to recycling and recovery, we also harvest methane gas from landfills to generate renewable energy to power homes, small industry and our fleet. We deploy route optimization software, retrofit existing fleet, utilize alternative fuels and explore new technologies, such as electric powertrains, to reduce fuel consumption and emissions, lowering our overall carbon footprint. We also construct environmental enhancements to certain of our sites through the creation of wetlands and public trails. These efforts are fundamental to a sustainable business model and the success of our Company.

Everything we do today is with an eye towards the future. We constantly monitor and evaluate







VISION OF THE FUTURE

Our goal is to create an environment where self-directed, empowered employees strive to consistently fulfill our constituent commitments and seek to create positive impacts through interactions with customers, communities, and fellow employees, always relying on our Operating Values as the foundation for our existence.

new technologies and programs that can enhance our commitment to the environment and improve our competitive positioning. Within our industry, these changes have historically been evolutionary in nature, but there is an enormous effort currently being made in alternative technologies to reduce landfill disposal, reduce greenhouse gas emissions and harness bio-fuels.

We recognize that our employees identify and lead many of our sustainability efforts at a local level. As a result, the development and welfare of our employees is critical. Our corporate culture is centered on the principles of Servant Leadership, which hold management accountable to employees. We analyze and track our success in improving Servant Leadership scores, reducing employee turnover, improving safety performance, and providing fair compensation and attractive employee benefits. We also dedicate a significant amount of management time and resources to leadership training and personnel development to improve the promotability and career paths of our employees.

Moreover, we are committed to diversity and inclusion in our workforce, as we strive to foster an environment in which all employees are supported and positioned for success.

We owe our success to the communities we serve. Our employees support more than a thousand local organizations, and we back their efforts with financial support for many of these groups. We accept the responsibility we have to increase corporate giving and introduce or broaden sustainability efforts as our Company expands.

Environmental, organizational and financial sustainability initiatives have been key components of our success since we were founded in 1997. We remain committed to growing and expanding these efforts as our industry and technology continue to evolve.

Worthing F. Jackman

President and Chief Executive Officer

SUMMARY PERFORMANCE STATISTICS¹

	2017	2018
Health and Safety		
Employee Hours	37,911,385	40,460,877
Reportable Incident Rate ²	17.4	16.3
Total Recordable Injury Rate (TRIR)	3.4	2.8
Experience Modifier Rate	0.76	0.72
People		
Total Employees as of Year End	15,283	16,356
Turnover ³	24.4%	27.2%
As of 12/31/18, the % of employees that were women was 41.0%, and the % of employees that were from the armed so		vere earlie minoriales was
Training/Leadership Development		
# of Sessions	87	108
Employees in Training Sessions	2,256	4,767
% of Total Employees	14.8%	29.1%
Financial Statistics (\$000s USD)		
Revenue	\$ 4,630,488	\$ 4,922,941
Net Cash Provided by Operating Activities	\$ 1,187,260	\$ 1,411,235
Facilities		
Hauling Operations	261	279
Landfills	90	93
Transfer Stations	146	162
Intermodal Facilities	6	6
Recycling Facilities	66	64
E&P Liquid Waste Injection Wells	22	22
E&P Waste Treatment and Oil Recovery Facilities	19	19
Total	610	645







	2017	2018
eet		
Total Trucks	12,765	13,360
Routed Trucks	9,069	9,752
CNG Trucks	1,076	1,144
Routed CNG Trucks as % of Routed Trucks	11.3%	11.39
ndfill Tons (tons per year)		
Municipal Solid Waste	24,297,387	27,158,637
Special Waste	11,225,829	11,539,499
C&D	5,635,951	6,821,864
Total	41,159,167	45,520,000
Old Newspaper	463,687 121,030	436,971
Old Newspaper	121,030	60,460
Mixed/Other Paper	150,023	232,863
Glass	90,038	117,277
Metal	40,571	137,361
Aluminum	3,354	5,268
Plastics	44,750	27,219
Commingled/Other	582,765	519,625
Total	1,496,218	1,537,044
ndfill Gas Recovery Systems		
# of Landfill Gas Recovery Systems	50	52
# of Power Generation Systems	18	23
LFG Sales as % of Revenue	1.4%	1.4%

¹All data provided here has been subject to internal review and is believed to be correct at the time of reporting. No third party assessment of the data was obtained.

²¹²⁻month rolling incident rate, defined as the number of all reportable incidents per 200,000 employee hours worked, preventable and non-preventable.

 $^{^3}$ For both 2017 and 2018, voluntary and involuntary turnover was approximately 65% and 35%, respectively.

⁴ WCN began tracking diversity statistics as of 12/31/2018; percentage of employees calculation excludes non-respondents from the denominator.









OUR OPERATING VALUES

Safety

We strive to assure complete safety of our employees, our customers and the public in all of our operations. Protection from accident or injury is paramount in all we do.

Integrity

We define integrity as "saying what you will do and then doing it." We keep our promises to our customers, our employees and our shareholders. Do the right thing, at the right time, for the right reason.

Customer Service

We provide our customers the best possible service in a courteous, effective manner, showing respect for those we are fortunate to serve.

To Be A Great Place To Work

We maintain a growth culture where our employees can maximize their potential personally and professionally. Our objective is to provide an environment where people enjoy what they do and take pride in their work. We wish to embody a work hard, play harder culture.

To Be The Premier Waste Services Company In The U.S. and Canada

We continue to provide superior returns, remain environmentally responsible, and grow in a disciplined way, deploying resources intelligently and benefiting communities we live in. We remain a "different breed".

CULTURE MATTERS

STRATEGY + CULTURE = RESULTS

We believe the superior results we have achieved since our founding in 1997 demonstrate what our culture and these values have created: industry differentiation, disciplined strategy and capital deployment, commitment to execution, and accountability to multiple stakeholders.

ur differentiated market selection strategy has produced superior financial results and shareholder returns. While our strategy may position us for success, it's our culture that delivers it. Our employees are our most important asset, and therefore, we are focused on: Employee Engagement - we strive to make Waste Connections an employer of choice; Diversity and Inclusion - we hire from a wide range of backgrounds and experiences, and we foster a supportive environment in which all employees are positioned for success through our training and development. Our approach to business starts with our Operating Values. We also have adopted the principles of Servant Leadership, which flips the "old school" hierarchical managerial

style on its head. Put simply, our managers are trained to help their employees become more successful at work and in their lives. Servant Leadership ensures that our managers place customers and employees first, thereby increasing customer retention and reducing employee turnover. Servant Leadership holds management accountable to employees, rather than solely holding employees accountable. Our managers are measured not only by the financial performance of their operations, but also by the feedback of their employees on management's embodiment of these principles. Benefits already realized from the adoption of Servant Leadership include an increase in our employees' satisfaction with their jobs, reduced employee turnover and a decrease in accident frequency.







SERVANT LEADERSHIP



the Company.

leadership webinar topics, and other safety, sales, maintenance, productivity and financial training courses serving every employee level throughout

SAFETY IS OUR #1 OPERATING VALUE.

SAFETY DRIVE

Separate of the second second

We believe that safety is the responsibility of each and every employee; it is ingrained in our culture. Our success has been driven by the development of our managers and supervisors into servant leaders and our ability to instill this commitment-based, safety-driven culture across our broader employee base. Servant leaders are accountable to employees for each employee's success at work and beyond; safety is an integral component of this commitment. The strong relationship between servant leader and employee enables us to utilize observations and tools to develop an employee risk-profile ranking and to facilitate effective communication and behavior coaching. This behavior-based approach to safety when applied to our recent, larger acquisitions drove more than a 60% reduction in incident frequency within 12 months.

Put simply, the focus on safety is just one of the ways that we invest in our most important asset—our people.

















IN OUR COMMUNITY.

BIKE BUILD

Each year culminates with a Christmas bike-building drive where employees and their families and friends assemble thousands of bicycles Company-wide to donate to local charities, first responders and military bases for distribution to deserving youth. We've donated an estimated 50,000 bikes since inception of this program.

GOLF CLASSIC FOR KIDS

We host a charity golf event that now raises more than \$1,000,000 each year for donations to charities that support at-risk youth and their families. Over the past 11 years, our Golf Classic events have raised almost \$6,000,000 for such charities.

EMPLOYEE RELIEF FUND

In 2017, we created the Waste Connections
Employee Relief Fund to help employees and
their immediate families who have experienced
significant financial hardship following a natural
disaster or other catastrophic events. Through
contributions from Waste Connections, our
employees and vendors, we assist impacted
employees by helping to pay for essential living
expenses, such as food, clothing, utilities,
temporary housing, property repairs, and
other basic necessities.

GIVING FOR SUSTAINABILITY

Waste Connections aligns its major financial contributions with its goal to further advance environmental sustainability. For example, our first major grant helped establish the Global Waste Research Institute ("GWRI"), developed in conjunction with California Polytechnic State University, San Luis Obispo. The GWRI's mission is to advance state-of-the-art research and development of sustainable technologies and practices to more effectively manage existing and emerging wastes and byproducts.

GIVING BACK.

At Waste Connections, we measure our success by the continuing, positive impact we have within our local communities. The Company and its employees support more than a thousand organizations through direct contributions, volunteering or fundraising — a few of which are listed here.

Alzheimer's Association

Alzheimer Society of Hamilton Halton

American Cancer Society

American Diabetes Association

American Heart Association

American Lung Association

American Red Cross

Appalachian Children's Home

Association québécoise

de prévention du suicide

Autism Awareness Canada

Autism Speaks

Big Brothers Big Sisters

Boys and Girls Clubs

Brantford Community Food Bank

Canadian Association of Chiefs of Police

Canadian Diabetes Association

Canadian National Autism

Foundation

CASA

Cayuga Seneca Community Center

CEOs Against Cancer

Child & Family Center

Children's Miracle Network Hospitals

Children's Wish Foundation

Columbia Pacific Food Bank

Daybreak Youth Services

Disabled American Veterans

Elm Grove Elementary School

Feed My Starving Children

Food Bank of Eastern Michigan

Fort Vancouver National Trust

Girl Power 2 Cure

Habitat for Humanity

Hamilton-Burlington SPCA

Helping Hands House

Home with Heroes

Hope House

Illinois Special Olympics

Interfaith of The Woodlands

Juvenile Diabetes Research

Foundation

Kids 'n Kinship

Leukemia & Lymphoma Society

Littleton Firefighter Association

Love Fosters Hope







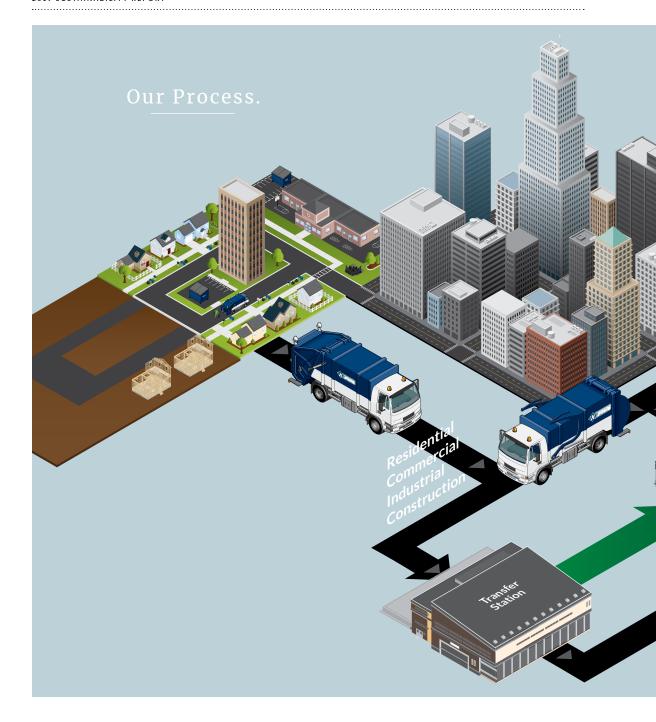
Make-a-Wish Foundation
March of Dimes
Meals on Wheels
Mission of Hope
Montgomery County Food Bank
Multiple Sclerosis Society of Canada
Muscular Dystrophy Association
National Children's Cancer Society
National Kidney Foundation
National Multiple Sclerosis Society
National Wildlife Federation
Northwest Association for Blind Athletes
Open Door Mission
Panther Creek Inspiration Ranch
Pink Lemonade Project

River City Youth Foundation
Roger Clemens Foundation
Ronald McDonald House Charities
Save the Children Canada
Seneca Falls Rotary
Six Nations' Christmas Baskets
Special Olympics
St. Jude Children's Research Hospital
Susan G. Komen
Take Steps for Crohn's and Colitis
The Marfan Foundation
The Salvation Army
SMART
The Star of Hope
Tim Horton Children's Foundation
Toby Keith Foundation

Relay for Life

1-/
Tri-City Youth & Family Center
United Way
Veterans Legal Initiative
Veterans Miracle Center
WayOut Kids
Women in Need
Working Against Violence
Wounded Warriors in Action
Wreaths Across America
Yes to Youth

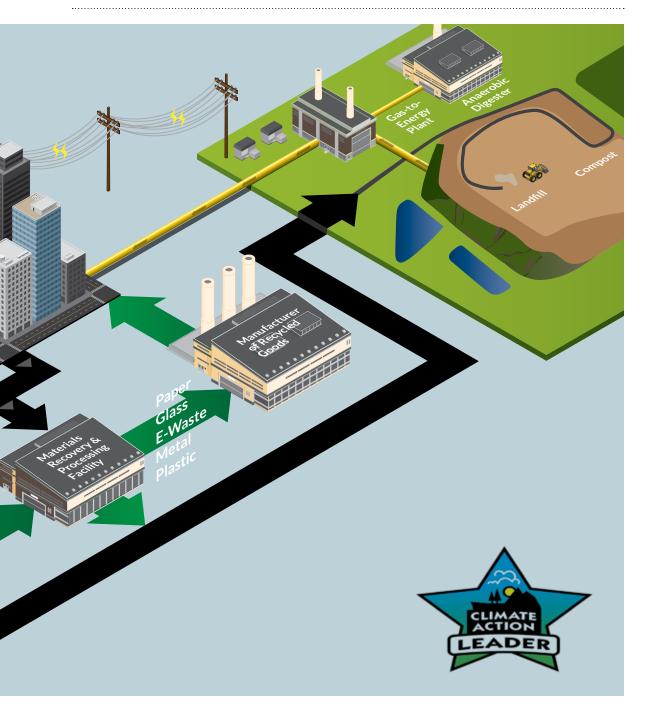
Toys for Tots











WE RECYCLE OR DIVERT OVER 50% OF OUR COLLECTED WASTE VOLUMES IN MANY MARKETS, IN SOME CASES OVER 70%.

Recycling has been a well established component of the municipal solid waste system for over 30 years. When requested, we are deploying this recycling expertise in many of our markets across the U.S. and Canada, often for the first time, to further encourage materials reuse and waste minimization. In certain markets, we have introduced a loyalty and rewards program to encourage customers either to begin recycling or to increase their current recycling efforts.

To improve the purity and resulting value of recycled materials, we deploy new technology, such as optical sorting machines, and work to educate our customers to improve separation at the originating source.

We recently introduced the Bob Davis Award for Leadership in Sustainability, the annual recipients of which are employees who demonstrate the greatest commitment to sustainability.









WE SUPPORT ZERO WASTE INITIATIVES.



The composting and reuse of green or yard waste and food waste are critical components for any community's march to a Zero Waste goal. We continue to increase our composting efforts through investments to expand capacity at existing operations, through the acquisition of new facilities and the deployment of new technologies, such as anaerobic digesters.

We also work with our industrial customers in their environmental stewardship efforts to reduce waste sent to landfills. By increasing the number of zero-waste-to-landfill facilities, our customers reduce waste disposal costs and emissions, while potentially increasing their income from recovered waste streams. Our easy-to-use reporting and analytics tool, Recycle 360°, enables our customers to develop waste management plans and track ongoing performance against waste reduction and recycling targets.











WE DEPLOY GAS RECOVERY SYSTEMS, INCLUDING ONE OF THE LARGEST SUCH RECOVERY PLANTS IN NORTH AMERICA, TO PROVIDE RENEWABLE ENERGY TO MANY OF THE COMMUNITIES WE SERVE.

Solid waste landfills over time generate a greenhouse gas, methane, which can be collected and converted into a valuable source of clean energy. We deploy gas recovery systems, including one of the largest such recovery plants in North America, to collect methane that is then used to generate electricity for local households, fuel local industrial plants, power alternative fueled vehicles, or qualify for carbon emission and renewable fuel credits.









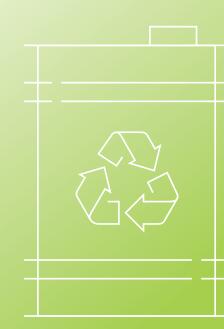
REDUCING OUR FLEET'S CARBON FOOTPRINT.

As a route-based business, a portion of our carbon footprint is linked to our fleet. Vehicles that use alternative fuel sources such as CNG, LNG, Bio-diesel or electric, can reduce fleet emissions. We have deployed alternative fueled vehicles in many markets and plan on directing a continuing portion of our future fleet capital toward such vehicles. However, a convenient and reliable fueling infrastructure is critical to how fast we can convert our fleet. So we have either built or partnered with third parties to facilitate investment in local fueling infrastructures.

In addition, we seek to reduce our fleet emissions and consumption of fuel and petroleum-based products by replacing older trucks with newer more efficient trucks, deploying tablets and route optimization software to minimize driving time, utilizing a network of transfer stations to consolidate waste onto fewer trucks and minimize drive time, installing controls to minimize idling time, switching to synthetic motor oils with longer replacement intervals, and reducing emissions by installing more advanced engine filters.



HELPING TO TRANSFORM OILFIELD WASTE.



Today's exploration and production environment presents new technical, regulatory and economic challenges that raise the stakes for how waste is managed. We help oil and gas operators better manage drill cuttings, drilling fluids, produced water and other non-hazardous waste. Our processes and technologies transform oilfield waste into usable and highly marketable commodities, such as reclaimed oil, R3 Roadbase, recycled produced waters and reusable drilling fluids. We also deploy thermal technology, which significantly reduces waste byproducts and can be supportive of zero waste initiatives.



GOVERNANCE AND ETHICS

s part of our ongoing commitment to sound principles of corporate governance, we have adopted, among other measures, a Corporate Governance Guidelines and Board Charter as well as charters for the committees of the Board of Directors to promote the effective functioning of our Board of Directors and its committees, to promote the interests of the Company as a whole and to ensure a common set of expectations concerning how our Board of Directors, its committees and management should perform their respective functions.

Highlights of what we believe exemplify our adherence to sound principles of corporate governance include:

- :: Directors are elected individually;
- :: Majority voting policy for the election of our Directors;
- :: Separate CEO and Chairman of the Board of Directors, or Board Chairman positions;
- :: Having a strong, Lead Independent Director serve on the Board of Directors:
- :: Annual Board of Directors and committee evaluation processes;
- :: Board of Directors' oversight of risk;

- :: Robust risk management program related to compensation;
- :: Share ownership requirement for Directors and corporate officers;
- :: Regular executive sessions of only independent directors; and
- :: Director retirement policy.







Our Board of Directors has four standing committees: the Executive Committee, the Audit Committee, the Compensation Committee, and the Nominating and Corporate Governance Committee. Except for the Executive Committee, the committees are composed entirely of independent, non-employee directors.

The Board of Directors' Role in Oversight of Risk

The Board of Directors and its committees have an active role in overseeing management of the Company's risks. The Board of Directors regularly reviews information from members of senior management regarding the Company's financial performance, balance sheet, credit profile and liquidity, as well as the risks associated with each. The Audit Committee receives reports from members of senior and regional management on areas of material risk to the Company, including market-specific, operational, legal, information technology, regulatory and strategic risks. The Audit Committee also oversees management of financial, financial reporting and internal controls risk. The Compensation Committee assesses and

monitors risks relating to the Company's corporate officer compensation policies and practices. The Nominating and Corporate Governance Committee is responsible for overseeing the management of risks associated with the independence of the Board of Directors and potential conflicts of interest.

Communications with the Board

Shareholders and other interested parties may communicate with the Board of Directors generally, with the non-employee directors as a group or with a specific director at any time by writing to the Board of Directors, the non-employee directors or a specific director, care of the Company's Secretary, at our principal administrative offices located at Waste Connections, Inc., 3 Waterway Square Place, Suite 110, The Woodlands, Texas 77380.

Shareholder Outreach

We believe that our relationship with and accountability to multiple stakeholders are critical to our success. Engaging with our shareholders helps us to understand how they

Our Code of Conduct and Ethics details Company principles to guide employee decision-making in many areas.

view us, to set goals and expectations for our performance, and to identify emerging issues that may affect our strategies, corporate governance, compensation practices or other aspects of our operations. Our shareholder and investor outreach includes investor road shows, analyst meetings and investor conferences. Through these efforts, our President and CEO, Chief Financial Officer and other members of senior management regularly meet with investors to discuss strategy, financial and business performance and to update investors on key developments. We also communicate with shareholders and other interested parties through various media, including our annual and quarterly reports, proxy statement and other SEC and Canadian securities filings, press releases and our website. Our conference calls for quarterly earnings releases and major corporate developments are open to all. These calls are available in real time and are also archived as webcasts on our website.

Code of Conduct and Ethics

We have also adopted a Code of Conduct and Ethics that applies to all of our directors, officers and employees. Our Code of Conduct and Ethics details Company principles to guide employee decision-making in many areas, including:

:: Conflicts of Interest:

No officer, director or employee may be subject to influences, interests or relationships that conflict with the best interests of the Company.

:: Full, Fair and Accurate Disclosure:

It is the Company's policy that the information in its public communications, including its SEC filings and filings with the Canadian Securities Administrators, be full, fair, accurate, timely and understandable.

:: Compliance with Laws, Rules and Regulations:

It is the Company's policy to comply with all laws, rules and regulations applicable to the Company and its operations. The Company's strict compliance policy also extends to all other applicable laws and regulations, including compliance with the U.S. Foreign Corrupt Practices Act (FCPA), the Canadian Corruption of Foreign Public Officials Act (CFPOA), and other applicable anti-corruption laws; antitrust laws; tax laws; environmental and safety regulations; equal opportunity; non-discrimination and fair







We believe that our relationships with and accountability to multiple stakeholders are critical to our success.

employment; and, foreign asset control regulations.

:: Prohibited Accounting Practices:

The Company's policy is to make and keep books, records and accounts that accurately and fairly reflect the transactions of the Company.

:: Reporting Illegal or Unethical Behavior:

All officers, directors and employees should promptly report to senior management all actual or potential illegal or unethical behavior of Company personnel that they observe. The Company encourages and expects full and open communication with senior management even when it appears that less candor may be desirable to protect the Company or members of management.

:: Compliance and Discipline:

Violations of this Code by officers, directors or employees will result in disciplinary action that may include termination, referral for criminal prosecution and reimbursement to the Company for any losses or damages resulting from the violation.

:: Fair Dealing; Moral and Ethical Standards: Each officer, director and employee must endeavor to deal fairly with the Company's customers, suppliers, competitors and employees and not to take unfair advantage of anyone through manipulation, concealment, abuse of privileged or misappropriated confidential information, misrepresentation of material facts or any other unfair dealing practice. More generally, each officer, director and employee must adhere to and comply with the highest moral and ethical standards of our society in conducting business on behalf of the Company.

:: Insider Trading:

Buying or selling securities, directly or indirectly through family members or other persons or entities, while possessing material nonpublic information or selectively disclosing such information to others who may trade based on it is prohibited by applicable securities laws.

:: Contributions:

Officers, directors and employees may not (directly or indirectly) use Company funds or assets for contributions to any kind of political party or committee in the United States or Canada or to any candidate for, or holder of, any office of any national, state or local government in the

Environmental, organizational and financial sustainability initiatives have been key components of our success since we were founded in 1997.

United States, or any national, provincial or local government in Canada. Exceptions may be permitted for state, provincial and local contributions in jurisdictions that permit corporate political contributions, but only upon approval by the Company's Chief Executive Officer. In countries other than the United States or Canada, the policy will be determined in accordance with local law and practice as well as laws applicable to the Company.

The Nominating and Corporate Governance Committee is responsible for ensuring the Company implements good corporate governance practices, including compliance with the Code of Conduct and Ethics.

Copies of our Corporate Governance Guidelines and Board Charter and our Code of Conduct and Ethics are available on our website at http://wasteconnections.investorroom.com. A copy of the Corporate Governance Guidelines and Board Charter and our Code of Conduct and Ethics may also be obtained, free of charge, by writing to our Secretary or Investor Relations at our principal administrative offices located at Waste Connections, Inc., 3 Waterway Square Place, Suite 110, The Woodlands, Texas 77380.









GLOBAL REPORTING INITIATIVE EMISSIONS DISCLOSURE

EMISSIONS DISCLOSURE

Waste Connections emissions disclosure was developed using the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines. The Waste Connections GHG Inventory was prepared in a manner consistent with The Climate Registry (TCR) General Reporting Protocol (GRP) Version 2.1 dated January 2016 and its associated updates and clarifications. Year-over-year increases primarily reflect the impact of acquisitions.

In 2018, Waste Connections began using the SWICS calculation methodology. This methodology results in lower scope 1 emissions and was utilized for comparison purposes relative to the solid waste peer group.

Utilizing our previous methodology, Scope 1 emissions would have been 9,252,375 and 9,622,868 MT CO_2e .

The impact of carbon sequestration in our landfills is significant and well documented in scientific literature. Due to anaerobic conditions that exist within landfills, lignins and hemicellulosic materials remain undecomposed. They represent approximately 50% of biogenic carbon in the waste stream. Waste Connections disposed of 29,933,338 tons of MSW and C&D materials in 2017 and 33,980,501 tons of MSW and C&D material in 2018. Approximately 50% of that material is carbonaceous. This suggests that the landfills sequestered 7.5 MT CO $_2$ e in 2017 and 8.5 MT CO $_2$ e in 2018.

G4-EN15:
Direct (Scope 1) greenhouse gas (GHG) emissions

G4-EN16:	
Energy indirect (Scope	e 2) GHG emissions

MT CO₂e		MT	CO₂e		
	2017	2018	2017	2018	
	4,683,673	5,089,083	55,718	53,993	

G4-EN17: Other indirect (Scope 3) GHG emissions

Emissions Source	MT CO₂e	
	2017	2018
Purchased goods and services	812,663	821,606
Capital goods	212,455	233,539
Waste generated in operations	119,646	117,871
Upstream transportation and distribution	399,578	429,847
Business travel (air and vehicle)	54,617	53,166
Use of sold products	22,812	54,785
Total	1,621,771	1,710,814







G4-EN18: GHG emissions intensity

	Unit	2017	2018
Gross Revenue	\$US Dollars Millions	\$ 4,630	\$ 4,923
Scope 1 Emissions	MT CO₂e	4,683,673	5,089,083
MT CO₂e/\$M Revenue		1,012	1,034
Scope 2 Emissions	MT CO₂e	55,718	53,993
MT CO₂e/\$M Revenue		12	11
Scope 1 & 2 Emissions	MT CO₂e	4,739,391	5,143,076
MT CO ₂ e/\$M Revenue		1,024	1,045

G4-EN19: Reduction of GHG emissions

Waste Connections has undertaken several initiatives to reduce GHG emissions. The Company currently operates 23 landfill gas to energy facilities. Operation of these facilities results in annual avoided GHG emissions estimated at 646,668 MT CO $_2$ e. The estimate of avoided emissions assumed that natural gas was the fuel replaced by the use of landfill gas. The avoided emissions were calculated using default methodologies from TCR included CO $_2$, CH $_4$ and N $_2$ O emissions.

Waste Connections diverts over 50% of collected waste volumes in certain markets, in some cases over 70%. The estimated avoided GHG emissions in 2017 and 2018 from recycling was 5,193,730 and 4,807,858 MT $\rm CO_2$ e, respectively. These values were calculated using the USEPA Waste Reduction Model (WARM).

Over the past several years, Waste Connections has deployed vehicles using alternative fuels such as compressed natural gas (CNG) and biodiesel as a means of reducing its GHG footprint. Waste Connections currently deploys more than 1,100 CNG vehicles. The estimated annual reduction in GHG emissions from

CNG vehicles is approximately 16,700 MT CO₂e, using an equivalent diesel vehicle as a baseline.

G4-EN22: Water discharge by quality and destination

In 2017, Waste Connections collected 537,805,480 gallons of leachate with 431,037,230 gallons being sent to a third party for treatment. In 2017, Waste Connections also collected 860,735,255 gallons of E&P produced water for onsite treatment. A total of 8,408,535 gallons of E&P produced water was sent to a third party for treatment in 2017.

In 2018, Waste Connections collected 615,420,838 gallons of leachate with 413,921,040 gallons being sent to a third party for treatment. In 2018, Waste Connections also collected 639,205,013 gallons of E&P produced water for onsite treatment. A total of 11,677,770 gallons of E&P produced water was sent to a third party for treatment in 2018.

Our E&P water treatment technologies allow us to process and dispose 100% of drilling-related waters without discharging to surface waters. The majority of waste fluids are injected into brine formations via deep wells.

SUSTAINABILITY ACCOUNTING STANDARDS BOARD DISCLOSURE







SASB APPENDIX

Greenhouse Gas Emissions

	Unit	2018
Gross global Scope 1 emissions	MT CO ₂ e	5,089,083
Scope 1 coverage under emissions-limiting regulations	Percentage (%)	84%
Scope 1 coverage under emissions-reporting regulations	Percentage (%)	84%
Total landfill gas recovered	Million British Thermal Units (MMBtu)	18,476,404
Landfill gas flared	Percentage (%)	52%
Landfill gas used for energy ¹	Percentage (%)	41%

Fleet Fuel Management

	Unit	2018
Fleet fuel consumed	Gigajoules (GJ)	9,563,973
Natural gas as a % of fuel consumed	Percentage (%)	6.6%
Renewable as % of fuel consumed	Percentage (%)	N/A
Alternative fuel vehicles as % of fleet	Percentage (%)	11.3%

Air Quality

	Unit	2018
NO _x (Excluding N ₂ 0)	Metric Tons (t)	N/A
SO_{χ}	Metric Tons (t)	N/A
Volatile organic compounds (VOC)	Metric Tons (t)	N/A
Hazardous air pollutants (HAP)	Metric Tons (t)	N/A
Number of facilities in or near dense population centers	Number	7
Non-compliant air emissions issues	Number	0

¹Landfill gas flared and gas used for energy does not total 100% because 7% is mixed use and unable to be separated by category.

Management of Leachate & Hazardous Waste

	Unit	2018
Total toxic release inventory (TRI) releases	Metric Tons (t)	N/A
Toxic release inventory released into water	Percentage (%)	N/A
Total leachate collected	Gallons (000)	615,421
Total leachate treated by third parties	Gallons (000)	413,921
Corrective actions implemented for landfill releases	Number	0
Incidents of non-compliance associated with environmental impacts	Number	0

Labor Practices

	Unit	2018
Active workforce covered under collective bargaining agreements	Number	3,096
Work Stoppages	Number	0
Total days idle	Days	0

Workforce Health & Safety

	Unit	2018
Total recordable incident rate (TRIR) ¹	Rate	2.83
Fatality rate ¹	Rate	N/A
Experience Modifier Rate	Rate	0.72
Near miss frequency rate for direct employees	Rate	N/A
Near miss frequency rate for contract employees	Rate	N/A
Safety measurement system BASIC percentiles	Percent (%)	
Unsafe driving	%	N/A
Hours-of-service compliance	%	N/A
Driver fitness	%	N/A
Controlled substances/alcohol	%	N/A
Vehicle maintenance	%	N/A
Hazardous materials compliance	%	N/A
Road accidents and incidents	Number	N/A

¹Instead of BASIC scores and Fatality rate, WCN prefers to use TRIR and Experience Modifier Rate as the best barometer of risk.







Recycling & Resource Recovery

	Unit	2018
Waste incinerated	Metric Tons (t)	0
Hazardous waste incinerated as percent of waste incinerated	Percentage (%)	0%
Energy recovery from waste incinerated	Percentage (%)	0%
Customers receiving recycling	Percentage (%)	N/A
Customers receiving composting	Percentage (%)	N/A
Amount of material recycled	Metric Tons (t)	1,394,397
Amount of material composted	Metric Tons (t)	178,465
Amount of material processed as waste-to-energy	Metric Tons (t)	N/M
Amount of electronic waste collected	Metric Tons (t)	N/M
Percentage of electronic waste recovered through recycling	Percentage (%)	N/M

Activity Metrics

	Unit	2018
Customers	Number	
Municipal Contracts	Number	2,000
Commercial	Number	600,000
Industrial	Number	100,000
Residential	Number	6,500,000
Other	Number	200,000
/ehicle fleet size	Number	13,360
Landfills	Number	93
Transfer stations	Number	162
Recycling centers	Number	64
Composting centers	Number	6
ncinerators	Number	0
All other facilities	Number	318
Total amount of materials managed ²	Metric Tons (t)	
Municipal	Metric Tons (t)	N/A
Commercial	Metric Tons (t)	N/A
Industrial	Metric Tons (t)	N/A
Residential	Metric Tons (t)	N/A
Other	Metric Tons (t)	N/A

 $^{^{2}\}mbox{Waste}$ Connections does not measure materials managed by customer type.





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