



REPUBLIC[®]
SERVICES

We'll handle it from here.[®]



Our Blue Planet[®]
2018 SASB Disclosure

We work for Earth.[®]

2018 Republic Services® SASB Disclosure

This disclosure was prepared following the SASB Waste Management Sustainability Accounting Standard, Version 2018-10, using the reporting entity described in the Republic Services 2018 10-K. All data is as of December 31, 2018 for calendar year 2018.

2018 Republic Activity Metrics

| SASB Code | Activity Metric | 2018 Results |
|-------------|---|--|
| IF-WM-000.A | Number of customers by category: | |
| | Municipal | N/A |
| | Commercial | N/A |
| | Industrial | N/A |
| | Residential | N/A |
| | IF-WM-000.A Republic does not archive historical customer counts by these categories. | |
| IF-WM-000.B | Vehicle Size | 25,094 includes collection fleet, service vehicles, and equipment |
| IF-WM-000.C | Number of: | |
| | Landfills | 190 active landfills 129 closed landfills 0 active hazardous landfills |
| | Transfer Stations | 207 |
| | Recycling Centers | 91 |
| | Composting Centers | 10 |
| | Incinerators | 0 |
| | All other facilities | 75 renewable energy and landfill gas projects 37 CNG fueling stations 7 TRD facilities 11 SWD wells |
| IF-WM-000.D | Amount of material managed by our business: | |
| | Total tons managed | 115 Million tons |
| | IF-WM-000.D We believe the amount of material we manage is an appropriate metric when calculating and evaluating intensity comparisons. Data includes MSW, Recycling, and E&P waste tons managed. | |
| N/A | Revenue | \$10,041 Billion |

2018 Republic Sustainability Accounting Metrics

| SASB Code | Sustainability Accounting Metric | 2018 Results |
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| Greenhouse Gas (GHG) Emissions | | |
| IF-WM-110a.1 | (1) Gross global Scope 1 emissions | 13,199,147 Metric tons CO ₂ e |
| | (2) Percentage covered under emissions-limiting regulations | 83 % |
| | (3) Percentage covered under emissions-reporting regulations | 85 % |
| | <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>(1) Scope 1 emissions include emissions from landfills and fleet that are owned, leased, or operated by Republic. Scope 1 emissions are not a measured metric. For landfills, they are calculated using U.S. 40 CFR Part 98 Subpart HH, developed by the EPA and industry. These calculations are known to have a margin of error of +/-200%. Fleet emissions are based on emissions factors for the various types of fuels that are used. See Section IF-WM-110b for more details on fuel types. Sequestered carbon is not subtracted from the landfill emissions total, per GHG Protocol guidance. For more information on gasses covered, calculation methodology/protocols, etc see the 2018 GRI Report, disclosure 305-1, which can be found at www/republicservices.com/sustainability.</p> <p>(2) This percentage reflects the emissions that are covered by U.S. EPA's Standards of Performance for Municipal Solid Waste Landfills (US 40 CFR Part 60, Subparts WWW and XXX) and Emissions Guidelines and Compliance Times for Municipal Solid Waste Landfills (U.S. 40 CFR Part 60, Subparts Cc and Cf), as well as the State of California's Landfill Methane Control Measure (17 CCR §§ 96560 - 95476).</p> <p>(3) Only certain landfill types and those that emit >25k MTCO₂e/year are covered under emissions reporting regulations, according to the U.S. EPA Greenhouse Gas Reporting Program. Percentage also does not include fleet emissions, as they are not regulated under emissions-reporting regulations.</p> <p>CO₂e = carbon dioxide equivalents (a standard unit for measuring carbon footprints)</p> | |
| IF-WM-110a.2 | (1) Total landfill gas recovered | 80,148,584 MMBTUs |
| | (2) Percentage flared | 58 % |
| | (3) Percentage used for energy | 42 % |
| | <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>(1) This total represents the amount of landfill gas that was collected in both open and closed landfills, via gas collection systems and is typically described as "landfill gas recovered." Landfill gas generated (as requested by SASB guidelines) is a calculated amount using U.S. 40 CFR Part 98 Subpart HH and is subject to error, therefore recovered landfill gas is used.</p> <p>In the 2018 Sustainability Report, Republic unveiled new sustainability goals designed to address critical global macro trends and our most material sustainability risks and opportunities, including the beneficial reuse of landfill biogas. Our goal is to increase biogas sent to beneficial reuse by 50% by 2030 (from a 2017 baseline), as we endeavor to make our landfills regenerative. For more information about our beneficial biogas reuse goal and related initiatives, please refer to our 2018 GRI Report, Standard 301, which can be found at www/republicservices.com/sustainability.</p> <p>MMBTUs = million British Thermal Units (a measure of the energy content in fuel)</p> | |

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| IF-WM-110a.3 | <p><i>Description of long-term and short-term strategy or plan to manage Scope 1 and life-cycle emissions, emission-reduction targets, and an analysis of performance against those targets:</i></p> <p>In the 2018 Sustainability Report, Republic unveiled new sustainability goals designed to address critical global macro trends and our most material sustainability risks and opportunities, including greenhouse gas (GHG) emissions that contribute to climate change. Given our position, regulatory and market developments related to climate change present us with the potential for strategic business opportunities. Offsetting operational GHG emissions is not enough. We're taking a bold position to leverage innovation and lead the industry in combating climate change. Landfill methane emissions, vehicle and equipment emissions, and building electricity all contribute to climate change. That's why we've adopted an aggressive target for reducing our operational GHG emissions, aligned with the Science Based Targets initiative (SBTi). Our goal is to reduce absolute Scope 1 and 2 greenhouse gas emissions 35% by 2030, from a 2017 baseline year. This goal supports the United Nations "Climate Action" Sustainable Development Goal, 13.2 – reduce greenhouse gas emissions. We'll accomplish this goal through:</p> <ol style="list-style-type: none"> 1. Landfill innovation 2. Reducing fleet emissions 3. Reducing emissions when we build <p>For more information about our GHG emissions goal and related initiatives, please refer to our 2018 GRI Report, Standard 305, which can be found at www.republicservices.com/sustainability.</p> |
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| Fleet Fuel Management | |
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| IF-WM-110b.1 | (1) Fleet fuel consumed | 19,292,633 GJ |
| | (2) Percentage natural gas | 20 % |
| | (3) Percentage renewable | 15 % |
| | <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>(1) Number includes fuel consumed by collection and service vehicles only. (2) Number includes renewable natural gas. (3) Renewable as defined consistent with the U.S. Renewable Fuel Standard (U.S. 40 CFR 80.1401) and includes renewable natural gas, biodiesel, etc.</p> <p>GJ = gigajoule (a measure of energy that enables comparisons amongst different types of fuel)</p> | |

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| IF-WM-110b.2 | Percentage of alternative fuel vehicles in fleet | 20 % |
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| | <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>Number represents CNG vehicles as a percentage of collection vehicles only.</p> <p>For more information about our energy/fuel management and related initiatives, please refer to our 2018 GRI Report, Standard 302, which can be found at www.republicservices.com/sustainability.</p> | |
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| Air Quality | |
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| IF-WM-120a.1 | <i>Air emissions of the following pollutants:</i> | |
| | (1) NOx (excluding N ₂ O) | Air Emissions (metric tons) 1,400 Metric tons |
| | (2) SOx | 339 Metric tons |
| | (3) Volatile organic compounds (VOCs) | 33 Metric tons |
| | (4) Hazardous Air Pollutants (HAPs) | 53 Metric tons |

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| IF-WM-120a.2 | Number of facilities in or near areas of dense population | 78 open landfills 45 closed landfills |
| IF-WM-120a.3 | Number of incidents of non-compliance associated with air emissions | N/A |
| RSG-AQ-01 | SEC disclosable environmental enforcement proceedings relating to air and odor | 2 |
| <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>IF-WM-120a.1 Includes landfill emissions only. Landfill air emissions are calculated using measured landfill gas flow to flares, engineering calculations and mass balance calculations. For additional details on scope and method of calculations, please see the 2018 GRI Report, disclosure 305-7, which can be found at www.republicservices.com/sustainability.</p> <p>IF-WM-120a.2 Total landfill count within 5 km of urban populations greater than 50,000 people based on 2010 US Census Bureau data. Site locations are based on landfill mailing address.</p> <p>IF-WM-120a.3 SASB reporting guidelines are unclear for this metric.</p> <p>RSG-AQ-01 Please refer to Item 103 of SEC Regulation S-K. We had two new proceedings relating to air/odor in 2018. The other three proceedings disclosed in our quarterly filings for 2018 were continuations from prior years.</p> <p>For more information about our air quality management and related initiatives, please refer to our 2018 GRI Report, Standards 302 and 307, which can be found at www.republicservices.com/sustainability.</p> | | |
| Management of Leachate and Hazardous Waste | | |
| IF-WM-150a.1 | (1) Total Toxic Release Inventory (TRI) releases | N/A |
| | (2) Percentage released to water | N/A |
| IF-WM-150a.2 | Number of corrective actions implemented for landfill releases | N/A |
| IF-WM-150a.3 | Number of incidents of non-compliance associated with environmental impacts | N/A |
| RSG-ML-01 | SEC disclosable environmental enforcement proceedings relating to management of leachate, water, and hazardous waste | 1 |
| RSG-ML-02 | Total leachate collected and treated | 1.817 Billion gallons |
| <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>IF-WM-150a.1 We have replaced the SASB advised metric of Total Toxic Release Inventory (TRI) releases with Total leachate collected and treated (RSG-ML-02) because TRI releases are de minimis for our business.</p> <p>IF-WM-150a.2 SASB reporting guidelines are unclear for this metric.</p> <p>IF-WM-150a.3 SASB reporting guidelines are unclear for this metric.</p> <p>RSG-ML-01 Please refer to Item 103 of SEC Regulation S-K. We had one new proceeding relating to management of leachate, water and hazardous waste in 2018. We have added the Total leachate collected and treated metric below (RSG-ML-02) to our SASB report, because we feel that this provides</p> | | |

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| | <p>context to the small number of SEC disclosable proceedings in this disclosure relative to the large amount of leachate collected and treated.</p> <p>RSG-ML-02 Total reflects leachate that is treated by either Republic Services or a third party and then returned to the water cycle.</p> <p>For more information about our leachate management and related initiatives, please refer to our 2018 GRI Report, Standard 306, which can be found at www.republicservices.com/sustainability.</p> | |
| Labor Practices | | |
| IF-WM-310a.1 | Percentage of active workforce covered under collective bargaining agreements | 24 % |
| IF-WM-310a.2 | (1) Number of work stoppages | 1 |
| | (2) Total days idle | 1 |
| | <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods), including reason for the work stoppage, impact on operations and any corrective actions taken:</i></p> <p>IF-WM-310a.1 As of December 31, 2018, approximately 24% of our workforce was represented by various labor unions. See page 106 of our 2018 10-K.</p> <p>IF-WM-310a.2 The single day work stoppage was limited to a portion of one business unit (BU) only, representing less than 1% of our BUs across the country.</p> <p>For more information about our employee engagement goal and related initiatives, please refer to our 2018 GRI Report, Standard 401, which can be found at www.republicservices.com/sustainability.</p> | |
| Workforce Health & Safety | | |
| IF-WM-320a.1 | (1) Total Recordable Incident Rate (TRIR) | 3.873 |
| | (2) Fatality Rate | 2.425 |
| | (3a) Near Miss Frequency Rate (NMFR) for direct employees | N/A |
| | (3b) Near Miss Frequency Rate (NMFR) for contract employees | N/A |
| IF-WM-320a.2 | Safety Measurement System BASIC percentiles: | |
| | (1) Unsafe Driving | See below |
| | (2) Hours-of-Service Compliance | See below |
| | (3) Driver Fitness | See below |
| | (4) Controlled Substances/Alcohol | See below |
| | (5) Vehicle Maintenance | See below |
| IF-WM-320a.3 | (6) Hazardous Materials Compliance | See below |
| | Number of road accidents and incidents | 124 |
| | <p><i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i></p> <p>IF-WM-320a.1:</p> <p>(1) TRIR is a company-wide rate, including residential, commercial, and industrial collection, calculated using OSHA reporting guidelines (per 100 employees). All incidents, regardless of whether treated in-house or externally, are recorded.</p> <p>(2) The fatality rate is calculated per 100,000 full-time equivalent employees, consistent with OSHA and Bureau of Labor Statistics (BLS) reporting guidance.</p> <p>IF-WM-320a.1 (3a)/(3b) Republic does not track near miss data.</p> | |

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| | <p>IF-WM-320a.2 The Federal Motor Carrier Safety Administration (FMCSA) calculates BASIC percentiles for the 60+ Department of Transportation numbers under which Republic operates. These scores are available to the public at https://ai.fmcsa.dot.gov/SMS.</p> <p>In the 2018 Sustainability Report, Republic unveiled new sustainability goals designed to address critical global macro trends and our most material sustainability risks and opportunities, including safety. Republic Services is taking an ambitious leap forward in safety with a program we call Safety Amplified. Our goals are designed to enhance safety for our employees and the communities we serve. Our safety goal has two dimensions:</p> <ol style="list-style-type: none"> 1. Zero work-related employee fatalities 2. OSHA Total Recordable Incident Rate (TRIR) of 2.0 or less by 2030 <p>For more information about our safety goal and related initiatives, please refer to our 2018 GRI Report, Standard 403, which can be found at www.republicservices.com/sustainability.</p> |
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| Recycling and Resource Recovery | |
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| IF-WM-420a.1 | (1) Amount of waste incinerated in owned facilities | 0 Metric tons |
| | (2) Percent of waste incinerated that is hazardous | 0 % |
| | (3) Percent of waste incinerated used for energy recovery | 0 % |
| | <i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i> | |
| <p>Republic does not own or operate waste incineration facilities. See Item 1 – Business in 2018 10-K (page 2).</p> | | |

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| IF-WM-420a.2 | (1) Percentage of customers receiving recycling services by service type: | |
| | Residential (municipal + open market) | 71 % |
| | Small container | 25 % |
| | Large container | 12 % |
| | (2) Percent of customers receiving composting services by service type: | |
| | Residential (municipal + open market) | 24 % |
| | Small container | 1 % |
| Large container | 1 % | |

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| IF-WM-420a.3 | (1) Amount of material recycled | 5.4 Million metric tons |
| | (2) Amount of material composted | 750 Thousand metric tons |
| | (3) Amount of material processed as waste to energy | 45 Million metric tons |

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| IF-WM-420a.4 | (1) Amount of electronic waste collected | 479 Metric tons |
| | (2) Percent of electronic waste recovered through recycling | ≥ 99 % |

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| <i>Discussion/clarifications/assumptions/etc (including measurement/estimation methods):</i> | | |
| <p>IF-WM-420a.2 The customer categories shown above are consistent with Republic’s financial reporting for collection services.</p> <p>IF-WM-420a.3 (1) and (2) These totals include material that is processed at Republic owned or operated recycling and composting facilities from both Republic and third-party haulers. These figures do not include material collected by Republic and taken to third-party facilities for processing.</p> <p>(3) This is the amount of MSW that goes to Republic landfills that creates renewable energy through gas to energy projects.</p> | | |

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| | <p>In the 2018 Sustainability Report, Republic unveiled new sustainability goals designed to address critical global macrotrends and our most material sustainability risks and opportunities, including recycling and the circular economy. We believe our innovative business practices and deep understanding of scalable circular economy solutions will help us accomplish our very ambitious goal related to Materials Management, which is to increase recovery of key materials by 40% on a combined basis by 2030 (from a 2017 baseline). For more information about our circular economy goal and related initiatives, please refer to our 2018 GRI Report, Standard 301, which can be found at www/republicservices.com/sustainability.</p> |
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