



Sustainability Report

2016



# 5 Elements of Sustainability



Operations

Materials  
Management

Communities

Safety

People

**Cover photo: Truck driving through our  
Newton County Landfill in Indiana.**

: This Sustainability Report reflects our work  
: in Republic's five elements of sustainability:  
: Operations, Materials Management,  
: Communities, Safety and People.

# Our Blue Planet™

We believe in the preservation of a Blue Planet...a cleaner, safer and healthier world where people thrive – not just for today, but for generations to come.

We are guardians of our environment and have a responsibility to regenerate our planet with the materials we are entrusted to handle every day by driving increased recycling, generating renewable energy, and helping our customers to be more resourceful.

We must lead by example, working diligently to improve our relationship with the environment and society through decreased vehicle emissions, innovative landfill technologies, use of renewable energy, community engagement and employee growth opportunities.

We are privileged to serve more than 14 million customers in 240 markets across the country, creating effortless experiences that support their evolving needs and honor their unique commitments to improving their communities.

By embodying the Five R's on the Republic Star – Respectful, Responsible, Reliable, Resourceful and Relentless – our employees will thrive in an atmosphere where safety is our top priority and each person can be a passionate steward of our Blue Planet.

We're committed because it's more than picking up and handling our country's waste. This is a collective effort to do what's best for our communities, customers, employees, shareholders and environment – without exception, without fail.

This is not a fleeting cause. It is the foundation for our future, and the very heart of who we are as we work every day to protect our Blue Planet.

# Message from Don Slager

At Republic Services, we take pride in our role as responsible stewards of the nation's recycling and waste materials.

We have a critical role in helping more than 14 million customers lessen their impact on the planet. Our customers and our communities can count on us to help them with simple solutions, the highest levels of reliability and ongoing environmental responsibility.

## ADVANCING OUR SUSTAINABILITY COMMITMENTS

Our core commitments are reflected in the five elements of Republic's Blue Planet sustainability platform: Operations, Materials Management, Communities, Safety and People. These elements touch every aspect of our business and they are integrated in what we do every day. We are continually working to improve the effectiveness of our solutions, mitigate the environmental and social impact on the communities

we serve, and create added momentum toward a more durable model that will sustain these efforts over the long term.

We run Republic's operations with environmental responsibility in mind, and our commitment to sustainability also extends to responsible business practices in areas such as employee relations and corporate governance. We are extremely pleased with how far we have come over the past four years since we launched Blue Planet.

Republic earned a place on the 2016 Dow Jones Sustainability World Index and North America Index – the only company in the solid waste industry to be named to both indices, as well as being recognized as a Bronze Class company and Industry Mover.

We also were named to the Climate A List and Supplier Climate A List by CDP™ (Carbon Disclosure Project). In addition we were recognized by the Ethisphere™ Institute, which named Republic Services

to the 2017 World's Most Ethical Companies® List, and by *Forbes*, which placed Republic on its 2017 America's Best Large Employers List. These awards demonstrate our commitment and significant progress toward environmental, social and corporate governance performance.

Last year, we marked progress in all of our sustainability objectives while delivering financial value to our shareholders:

- **Recycling** – Our recycling business delivered over \$420 million in revenue in 2016, while opening doors to sustainability-minded customers and contracts across the country and reducing more than 15 million tons of CO2e (carbon dioxide equivalent) compared to the use of virgin materials.
- **Landfill Gas-to-Energy** – Renewable energy projects continue to provide a predictable, reliable revenue stream. These projects utilize a valuable

resource, reduce greenhouse gas emissions and produce renewable electricity and transportation fuels. Our focused efforts on our landfill gas projects have allowed us to generate more than 36 billion cubic feet of methane for renewable energy projects per year.

- **Fleet** – Through fleet automation, our One Fleet standardized vehicle maintenance program, conversion to compressed natural gas, and use of renewable natural gas derived from organic waste, we have lowered our fossil fuel usage, which reduces costs. In fact, over the past four years, even as our business has grown by 11.5%, we've been able to hold our fleet fossil fuel usage to just 2.5%, which also results in reduced carbon impact.
- **Safety** – Due to the nature of our industry, we prioritize safety above all else. An exemplary safety track record helps ensure that every employee returns home at the end of the day. It also helps us attract the best drivers and improves relationships with the communities we serve, while reducing costs.

## EMBRACING OUR RESPONSIBILITY

At Republic, we embrace our responsibility to regenerate our planet with the materials that we are entrusted to handle every day and we do so by driving increased recycling, generating renewable energy and helping our customers be more resourceful.

We have developed innovative products that meet emerging customer needs, including the 2016 introduction of Universal Recycling and Electronics Recycling products that offer customizable mail back, pack-up and pick-up options.

To demonstrate the depth of our personal and institutional commitment, Republic seeks out opportunities to enhance our environmental, social and corporate governance performance, while delivering profitable growth – the true definition of sustainability for publicly owned companies.

Nowhere is this challenge greater than in recycling. We continue to invest in recycling and we are committed to helping our customers do the right thing for the planet and to meet their

environmental responsibility goals. However, due to the cyclical nature of recycled commodities markets, this business can be challenging during the down cycles.

Republic remains committed to working with private industry and our customers, including local municipalities and businesses, to educate and provide simple solutions that ensure recycling is effective and available for generations to come. I believe there is a path forward to achieve this vision, but it will require deliberate and sustained cooperation among all stakeholders.

Best Regards,



Don Slager



# Our Company

We are an industry leader in U.S. recycling and non-hazardous solid waste. Through our subsidiaries, Republic's collection companies, recycling centers, transfer stations and landfills focus on providing effective solutions to make proper waste disposal effortless for our 14 million customers. We'll handle it from here.™, our brand's promise, lets customers know they can count on us to provide a superior experience while fostering a sustainable Blue Planet for future generations to enjoy a cleaner, safer and healthier world.

# Republic Services At-a-Glance

**\$9.4 billion**  
in revenue



**\$1.4 billion**  
in taxes generated\*

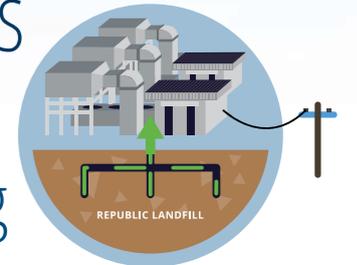
**\$9.5 billion**  
U.S. economic impact\*

**2.3** jobs created for every Republic employee\*

\*from 2016 economic impact assessment

**64** Recycling  
Centers   
**5 million tons**  
collected per year

**71** LANDFILL GAS &  
RENEWABLE ENERGY  
PROJECTS  
equates to  
powering  
**208,000 homes**



**15 million**  
tons of  
carbon dioxide  
equivalent  
(CO<sub>2</sub>e)



were saved through our recycling network, which is  
equivalent to the emissions of 16 coal-fired power plants

Republic is one of the few

**Fortune**  
**500**  
companies

whose Board has a  
Sustainability and Corporate  
Responsibility Committee



**192** Active  
modern-day,  
**regenerative**  
landfills



14 million



Customers

5th straight year our Net Promoter Score (customer satisfaction metric) improved over the previous year

7th Largest Vocational Fleet in the U.S.

with nearly 16,000 trucks



74% automated trucks



18% of our fleet is powered by Compressed Natural Gas



4 E&P landfill disposal sites, 7 treatment, recovery and disposal facilities, and 10 salt water disposal wells in 5 basins

1.8 million customers

enrolled in My Resource™ our customer portal and mobile app that enhances interaction and connectivity with customers



15,000 DRIVERS



5.8 million pick-ups each day

Safety Performance is 41% better

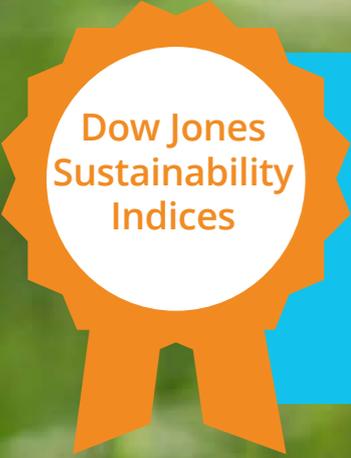
than the industry average (based on OSHA recordable rates)





# Leading the Way

Responsibility, one of our 5 values, is at the core of everything we do. We are working with municipalities to create a more sustainable recycling model, developing new products that meet businesses' emerging universal recycling and electronics recycling needs, engaging and empowering our employees to always do the right thing to minimize the impacts of all facets of our operations, and enabling our customers to make an even greater difference. Together, we are leading the way within our industry, and receiving notable recognition for our sustainability achievements.



Dow Jones  
Sustainability  
Indices

Republic earned the “gold standard” of corporate sustainability rankings, making both the Dow Jones Sustainability Index North America and World indices. Republic is the only recycling and solid waste company in the Commercial Services and Supplies sector included in the World Index.



CDP

Republic was included on two elite lists by the Carbon Disclosure Project (CDP), making both the Global Climate A List as well as the Supplier Climate A List. Only 3% of companies participating in the 2016 CDP supply chain program earned this distinction.



Forbes

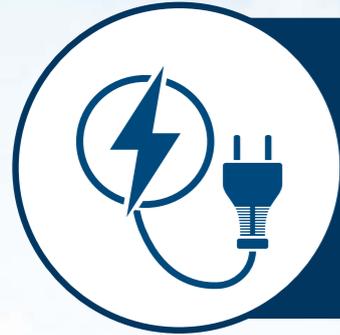
Republic was named to the *Forbes* America’s Best Large Employer 2017 List, an employer ranking based on the results of an independent survey conducted among 30,000 U.S. workers at companies and institutions across the country. Republic is the only recycling and solid waste company named to this year’s list.



Ethisphere

Republic was named to the 2017 World’s Most Ethical Companies® List by the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices.

# Our Sustainability Goals



**ENERGY** Develop at least two landfill gas-to-energy projects per year through 2018.

On Track



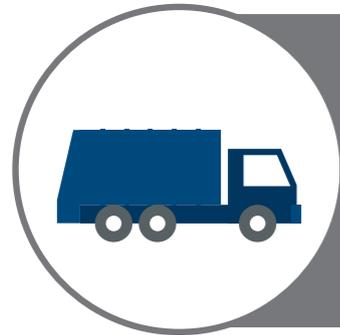
**SAFETY** Reduce our OSHA recordable rates by 7% year-over-year.

On Track



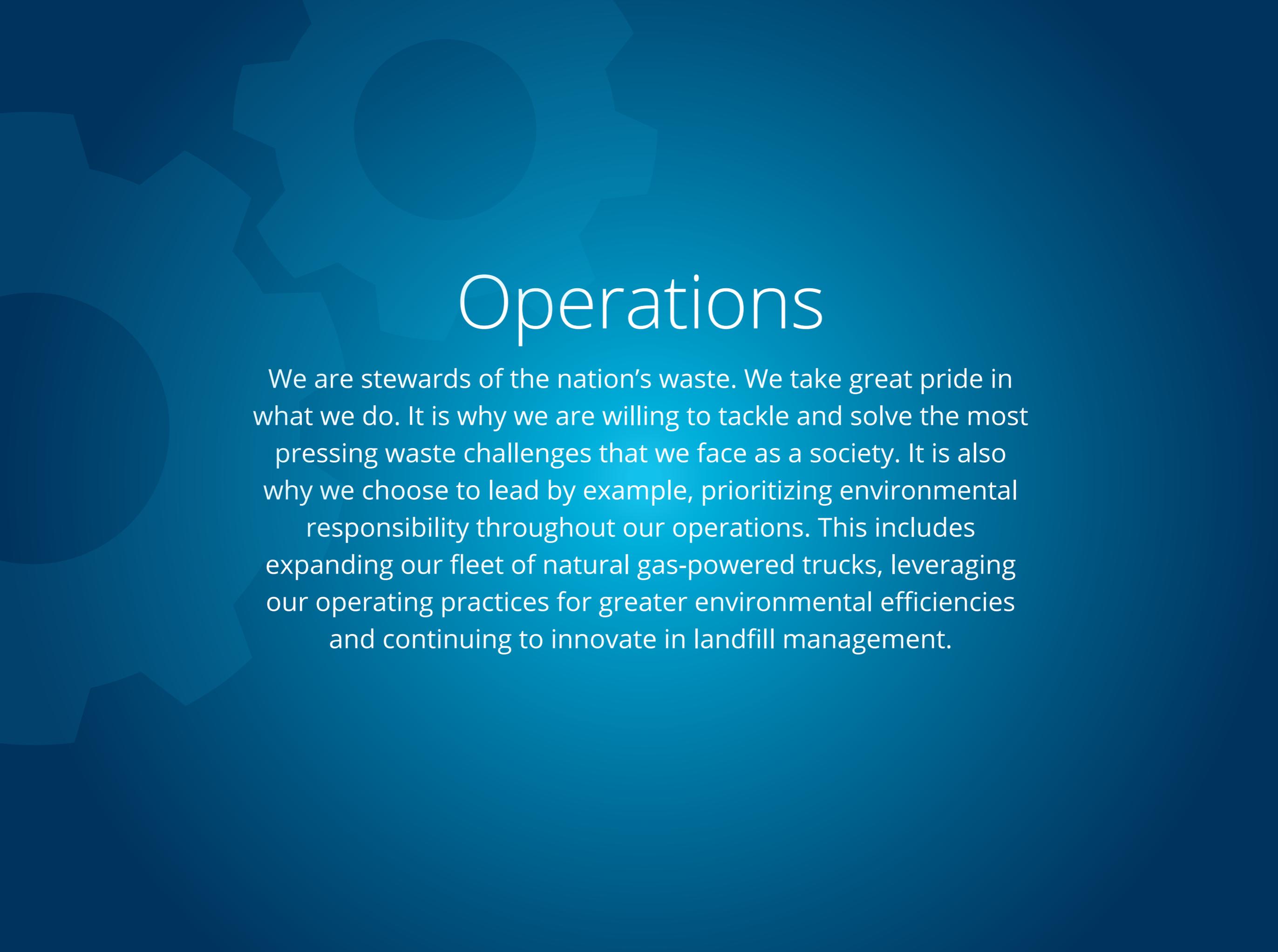
**RECYCLED COMMODITIES** Add an additional 150,000 tons or more per year of recycling capacity by 2018.

On Track



**FLEET** Reduce absolute fleet emissions by 3% from our direct operational impacts (Scope 1 emissions) by 2018.

On Track



# Operations

We are stewards of the nation's waste. We take great pride in what we do. It is why we are willing to tackle and solve the most pressing waste challenges that we face as a society. It is also why we choose to lead by example, prioritizing environmental responsibility throughout our operations. This includes expanding our fleet of natural gas-powered trucks, leveraging our operating practices for greater environmental efficiencies and continuing to innovate in landfill management.



# Fleet

As the operator of the seventh largest vocational fleet in the country, it is critically important for Republic Services to continually find ways to reduce fleet greenhouse gas emissions while also reducing fuel usage. The Company's multi-year commitment to convert its fleet to vehicles that operate on Compressed Natural Gas (CNG) and Renewable Natural Gas (RNG) is achieving this goal.

**Republic operates the 7th largest vocational fleet in the country, according to *Fleet Owner*.**

Using renewable natural gas can reduce our Scope 1 emissions by roughly **110,000 metric tons** of CO<sub>2</sub>e, which is equal to **planting 2.8 million trees**.

## Expanding our CNG Fleet

Transitioning Republic's fleet to natural gas helps save approximately 26 million gallons of diesel fuel annually. There are other benefits to transitioning to CNG vehicles, as well. Compared to diesel-fueled vehicles, compressed natural gas trucks are cleaner burning and quieter. This helps to reduce unwanted noise and air emissions in the communities that we serve.

Today, nearly 18% of Republic's total fleet operates on natural gas. In a growing number of markets, 75% or more of the local fleet is powered by CNG. In Kent, Wash., for example, 100% of our truck fleet (75 vehicles) operates on natural gas — a conversion process that has only taken six years to complete. In other markets, the percent of vehicles operating on natural gas is similarly impressive — Houston, Texas (98%); San Jose, Calif. (94%); Salinas, Calif. (93%); Boise, Idaho (91%); and Indianapolis, Ind. (90%).

## Increasing our Commitment to Renewable Natural Gas

With an ever-growing fleet of CNG vehicles, Republic is also increasing its use of RNG, a type of compressed natural gas fuel that, according to the California Air Resources Board, has the lowest carbon intensity of all commercially available transportation fuels. We're purchasing three times the amount of renewable natural gas that we used just one year ago.

The gas, Clean Energy's Redeem™ brand, is derived from biogenic methane that is generated by the decomposition of organic waste in landfills or digesters. Because of our previous investments in CNG vehicles and fueling stations, Republic will be able to use Redeem to power our CNG fleet in 20 states.

# Locations with 75% or more of the fleet powered by CNG

Kent, Wash.

**100%**

Houston, Texas (Little York)

**98%**

San Jose, Calif.

**94%**

Salinas, Calif.

**93%**

Boise, Idaho

**91%**

Indianapolis, Ind.

**90%**

Huntington Beach, Calif.

**88%**

Gardena, Calif.

**86%**

Houston, Texas (Fondren)

**81%**

Pacheco, Calif.

**81%**

Sun Valley, Calif.

**75%**

Mount Laurel, NJ

**75%**



# Fleet Innovation

Each day, our drivers fulfill a promise to our customers. This amounts to 5.8 million pick-ups, or promises fulfilled with precision and consistency. Our customers understand that each promise comes with an assurance that their recyclables and waste will be handled the right way – safely and in an environmentally responsible manner. This, of course, demands a highly advanced and durable fleet.

**More than 2,500 technicians skillfully maintain Republic's fleet nationwide while continually finding greater environmental efficiencies.**



## Technologically Smart Collections

We are leveraging advances in technology to continually enhance collections operations, which further reduce vehicle emissions while improving safety and productivity. Today, approximately 74% of our residential routes are using automated, single-operator collections trucks. Communities that have made the transition to our automated, single-operator trucks have consistently experienced an added environmental benefit through higher recycling participation rates.

## Route Optimization

We use technology to plan and optimize collection routes at every location. By calculating smart travel plans, we can further reduce fuel consumption, miles traveled and vehicular emissions while complying with municipal weight and operating hours requirements.

A **1% reduction** in total fleet miles traveled **saves 631,500** gallons of fuel. The CO<sub>2</sub>e savings are equal to **removing 1,400 cars** from local roads.

## Standardized Maintenance & Supply Chain Innovation

Our standardized vehicle maintenance program, One Fleet, combined with unique supply chain partnerships, enables technicians at every location to further reduce the environmental impacts of our collections fleet. From best practices for tire care, rotation and replacement to oil change and oil recycling, as well as advances in our standardized maintenance and supply chain practices – for our entire fleet of nearly 16,000 trucks – we achieve greater environmental efficiencies.



Our oil change program has enabled our technicians to reduce oil consumption by as much as 50% in most markets





# Landfill Innovation

Responsible landfill management involves the proper handling of landfill gas and liquids, which are byproducts of the decomposition of waste. It requires considerable science, engineering and technology to manage an evolving waste stream in a manner that is protective of the air, land and water for generations to come.

It also involves a relentless commitment to innovation. With more than 300 active and closed landfills nationwide, we are the company where the nation's leading environmental managers come to develop new ideas and innovative approaches to pressing challenges.

**Liquids pretreatment facility at Congress Landfill near Chicago, Ill.**

**1.5 billion gallons of treated waste water from approximately 300 Republic landfills were returned to the nation's watersheds.**

## Liquids Management

By removing liquids from within a landfill, site operators can improve the efficiency of landfill gas extraction wells and other interrelated operating systems.

Republic operates 17 best-in-class pretreatment facilities across the country. Upon removal, liquids are routed to an onsite pretreatment facility to eliminate constituents. Once the pretreatment process is complete, liquids are typically discharged or transported to municipal treatment facilities, much like every day wastewater. These 17 highly advanced facilities treat approximately 195 million gallons of liquids annually.

The most common form of pretreatment is aeration. This process involves introducing air into the liquids to accelerate the elimination of constituents. Two other techniques include chemical precipitation, which adjusts the water chemistry to remove constituents similar to managing the pH balance in a swimming pool, or advanced biological treatment, which uses microorganisms to consume constituents in liquids.

At select landfills, we have even eliminated our liquids disposal through two unique techniques: phytoremediation, which uses green plants to absorb liquids, and evaporative treatments, which involve applying heat to vaporize liquids as steam.

# Engineered Solutions

## **DURABLE PUMPING SYSTEMS**

Landfill gas wells typically have pumps installed at the bottom of each well to remove liquids and increase the collection, or vacuum, of landfill gas. When those pumps need maintenance, site operators must temporarily deactivate and open the well, and remove the pump from depths which often exceed 100 feet. This process takes hours and can introduce the potential for odor.

At Congress Landfill near Chicago, our team has developed a smart alternative. Working with innovative manufacturers, our technicians have situated the pump at the top of the well, rather than at the bottom. This enables our team to easily access the pumps and repair them faster — usually in less than one hour. This means more durable pumping systems, less down time for maintenance and lower risk of odor.

## **DIGITAL FLARE MONITORING**

When landfill gas is collected, it is sometimes sent to an onsite flare station, where it is responsibly destroyed. At the majority of Republic landfills, we use a digital monitoring device to evaluate and record gas flow and temperature at flare stations.

Federal regulations require measurements at all municipal solid waste landfills be taken every 15 minutes. Using technology, we evaluate gas flow and temperature readings every two minutes, or seven times more frequently than federal standards, which enables greater data accuracy and continuous compliance.

## **CREATING RESILIENCY**

Our team at Newby Island Landfill, outside of San Jose, Calif., proactively devised a sophisticated plan to protect the landfill in the event of seismic activity from the nearby San Andreas fault.

Their plan involved a deep soil mixing process in the ground beneath the

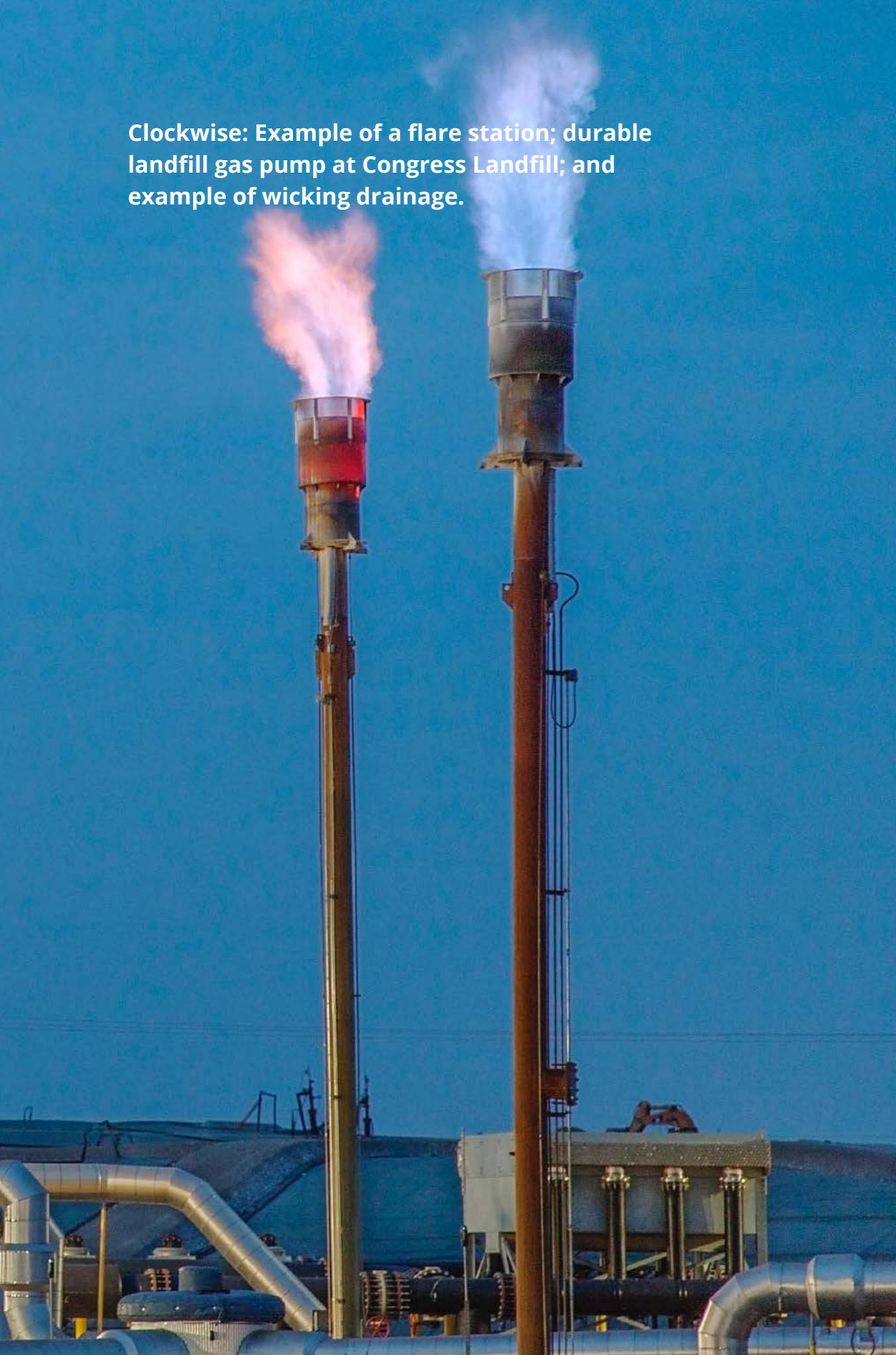
landfill, while simultaneously injecting a cement based mixture, known as slurry, into the targeted area. As a result, the landfill is fortified against the effects of a magnitude 7.1 earthquake, helping to ensure the site's resiliency and ability to serve customers throughout the Bay Area for generations to come.

## **ACCELERATING DRAINAGE**

In certain circumstances, and for various reasons, liquids within a landfill can drain at a slower rate than desired. This can create complications for landfill gas wells and other integral operating systems.

In such cases, our engineers have proactively developed techniques to enhance wicking drainage within the landfill. This technique involves vertical drains and multiple short drains that facilitate new drainage paths and accelerate the liquids extraction process. Speeding up the extraction process helps control the potential for odors.

Clockwise: Example of a flare station; durable landfill gas pump at Congress Landfill; and example of wicking drainage.





## Conserving with Natural Rock

At our Sunshine Canyon Landfill near Los Angeles, our landfill team is using permeable natural rock to enhance the site's gas management system. This will reduce the need for supplemental gas wells and pumps in the future, which will mean less electricity usage and a smaller carbon footprint.

The system, referred to as a Gabion Cube, involves large natural rocks held together by wires in a cube shape. Our team embeds multiple Gabion Cubes on the floor of each new landfill cell, placing as many as five Gabions per cell. The permeability of the natural rock facilitates liquids drainage during the waste decomposition process. This helps to prevent liquids from adversely impacting the site's landfill gas wells and pumps, which in turn optimizes landfill systems performance.

## Removing Subsurface Heat

When waste is deposited into a landfill, it is compacted to maximize space. Over time, the compacted waste mass can become a heat insulator, trapping higher temperatures as waste decomposes within the landfill.

In recent years, elevated subsurface temperatures and heat-producing subsurface reactions have become an emerging management challenge for a small number of landfills across the country.

At the Bridgeton Landfill near St. Louis, Mo., our site team developed a highly effective proprietary technology known as a Heat Extraction System, to reduce subsurface temperatures. This innovative system is engineered to circulate temperature-treated water through 28 closed-loop lines, some going as deep as 180 feet beneath the surface level. As cooler water circulates through a loop, it extracts subsurface heat before returning to a chiller for re-cooling and re-circulation.

Today, our system is reducing subsurface temperatures by as much as 50% at nearby temperature monitoring locations.

Gabion Cubes at Sunshine Canyon  
Landfill near Los Angeles, Calif.



# Materials Management

We recognize the responsibility and opportunity we have in managing the nation's waste stream to provide a source of recovered and renewable materials and energy to the economy. We are innovative and constantly exploring new options to capture value and energy from materials in the waste stream, while helping to ensure environmental responsibility and sustainability.



# A Durable Recycling Model

There has been much recent debate over the value of recycling. At Republic Services, we believe it's there – for all our stakeholders.

Republic is taking the lead in helping to build a new, durable recycling model that aims to deliver all the benefits of recycling for years to come. This involves working closely with our municipal and commercial customers to enable consumers to become better, smarter recyclers while also helping to ensure the economic viability and sustainability of recycling systems.

**Recyclables: baled milk and juice containers.**



## The Challenges of Recycling

The financial return on recycling, which is necessary for continued infrastructure growth, is influenced by two major factors: (1) recycling the right material, and (2) avoiding contamination, or unwanted substances such as residual food or liquid that can be harmful to the recycling process.

The role that consumers play in both factors is more important than ever before. Why? Because recycling programs – no matter how robust – will no longer work if they are not economically sustainable.

At the same time, we know from surveys and direct feedback that recycling is critically important to our customers. We also know that there is a lot of confusion around what recyclables are accepted in local communities, particularly when many municipalities have differing recycling programs and material acceptance capabilities.

This uncertainty leads to behaviors that can either diminish a consumer's desire to recycle or cause them to place non-recyclables into a recycling container with the hope that it can be recycled. In fact, 1 in 5 consumers will place an item in a recycling container even if they are unsure it is recyclable.

For example, consumers know that the cardboard shipping box is recyclable, but what about a disposable coffee cup, a straw or a plastic ketchup bottle with a little bit of ketchup still in it? It is this confusion that leads to contamination of the recycling waste stream.

That is why we are working with our customers to help them understand the levels of contamination found in the recycle stream, as well as the nature and source of the contamination.

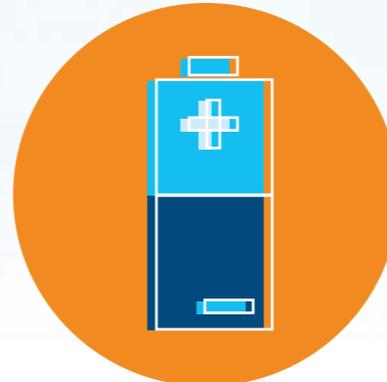
We also engage with these customers to help them better understand the business aspects of recycling, the risks and rewards associated with commodity value fluctuations and the true costs of processing the material. This transparency helps to incentivize all stakeholders to reduce material contamination while sustaining public enthusiasm for recycling within the community.

Together, we can change the way society recycles, make a lasting, positive impact in our communities and ensure the long-term viability of recycling for future generations.

# Top Non-Recyclables Contaminating the Recycling Waste Stream



**Latex Gloves**



**Batteries**



**Diapers**



**Food**



**Clothes/shoes**



**Styrofoam**



**Ropes/chain/cordage**



**Hard cover books**

# Empty. Clean. Dry.

Make sure your recyclables are **EMPTY** of their contents.

Make sure your recyclables are **CLEAN** of any residue.

Make sure your recyclables are **DRY** before placing them in a recycling container.

## Starting With the Basics

In an effort to decrease the residual material found in recyclables, thereby increasing the recovered commodity value, Republic has launched a new consumer education campaign. With a focus on recyclable containers, the campaign – Empty. Clean. Dry. – encourages consumers to take personal action to remove residual content from containers prior to recycling. The campaign is being rolled out as a collaborative effort between Republic and its municipal customers on a market-by-market basis.

Together, we are reinvigorating the economics of recycling to preserve its environmental benefits for generations to come.





# Increased Recycling Capabilities

The recycling needs of the communities we serve are constantly evolving — and we have to evolve with them. We make consistent, strategic investments in our sorting technologies and infrastructure to ensure that our facilities are capable of meeting the sustainability goals of the communities and businesses we serve.

Last year, we invested over \$13 million in new recycling capabilities at select recycling centers, even as others in the industry reduced or eliminated their investments.

**Baled recyclables at our Southern Nevada Recycling Center in North Las Vegas, Nev.**

## Investing in our Community's Goals

In Sonoma County, Calif., municipal and county officials as well as various public stakeholders determined that the Sonoma County Recycling Center had three underserved waste streams – self-haul, commercial dry waste and construction and demolition waste materials. Our community partners agreed that Republic was best positioned to address these deficiencies, so we undertook a 6,000-square-foot expansion of our 32,000-square-foot recycling center.

We added new capabilities like an in-feed conveyor for collected commercial materials such as cardboard, mixed paper, containers, film and plastics, as well as a hopper-fed conveyance system with multiple sorting stations.

The expansion and upgrades enable us to process more than 200 tons of recyclable material per day. More important, our investment in the refurbished center was an investment in our community, and our collective work to realize local climate protection goals.

## Outstanding Service Provider

Any recognition by peers is notable and worthy of celebration.

Our Northern Virginia Recycling Center in Manassas, Va., was recognized with the Outstanding Service Provider of the Year award by the Virginia Recycling Association.

The Center is one of the largest facilities in the state, serving over 140,000 households and 5,000 businesses. It can process up to 14,000 tons of recyclables each month and it has helped raise local recycling rates by 9% since the implementation of All-in-One Recycling™, where customers simply toss all recyclables into one bin.

## Earning the Highest Industry Honors

In its second year of operation, our Southern Nevada Recycling Center in North Las Vegas, Nev., was recognized for its advanced recycling technologies and capabilities, which make it the largest and smartest residential recycling facility in North America.

Last July, the facility was named the recipient of the “Gold Excellence Award” by the Solid Waste Association of North America. One month later, in August, the Center was named “Recycling Facility of the Year” by the National Waste and Recycling Association.

Capable of recycling 2 million pounds of materials per day, the Southern Nevada Recycling Center can process the recyclables from one fully loaded collection truck in under three minutes.

We collect approximately **5 million tons of materials** annually. Our recycled commodities consist of the following materials:



Cardboard & Paper – **74%**



Organics – **9%**



Glass – **6%**



Plastic – **5%**



Bi-Metal/tin cans – **3%**



Other\* – **2%**

\*batteries, bulbs, tires, copper, etc.



Aluminum – **1%**





# Renewable Energy

Our landfills provide multiple opportunities to produce renewable energy and lower our carbon footprint. Whether converting landfill gas into electricity or using our sites as solar energy platforms, we are doing our part to convert yesterday's waste into renewable energy to meet tomorrow's power needs.

**Our facility in Newton County in Indiana utilizes landfill gas to power businesses in a neighboring industrial park.**



Through strategic investments, we are working to integrate solar projects on rooftops and brownfields, like this one, whenever possible.

## Converting Waste into Renewable Energy

As waste decomposes in a landfill, it creates gas comprised of methane and carbon dioxide. Modern landfills use a sophisticated system of landfill gas wells to properly collect and control landfill gas.

By applying advances in technology, we are able to harvest landfill gas and repurpose it into energy at more than 70 landfills. Combined, the landfill gas we deliver to energy-creating projects reduces carbon dioxide emissions at an equivalent to the electricity used by approximately 208,000 homes.

## Powering 14,000 Atlanta Homes

Our latest renewable energy project involves facilities at three of our landfills in metro Atlanta. The separate facilities, spread across the metro area, combine together to generate 24 megawatts of electricity, or enough energy to power approximately 14,000 households. Based on EPA calculations, the energy produced by this project is equivalent to reducing the carbon dioxide emissions that results from burning 13.9 million gallons of gasoline.

The engineering achievements and sustainability benefits from this project are remarkable. We are pleased to have been recognized by the Georgia Chapter of the Solid Waste Association of North America with their “2016 Landfill Gas Utilization Excellence” award.

**Nearly 50%** of the landfill gas collected at our sites is used to generate energy.

## Harnessing Abundant Sunshine

At three of our closed landfills in Massachusetts, we are partnering with a leading solar energy generator on a large-scale project to harness New England sunshine and convert it into renewable energy. The project involves approximately 41,000 solar panels that together generate 14 megawatts of clean, low-cost electricity for Massachusetts municipalities. Based on EPA calculations, this project, when fully operational, will be the equivalent of removing the CO2 emissions from 1,800 homes.

## Fueling Local Business

At our landfill in Newton County, Ind., we collect landfill gas and route it to an adjacent renewable energy park. Using approximately 1,000 cubic feet of landfill gas per minute, the energy park's main tenant produces 230 million wholesale egg cartons, drink carriers and fruit tray packages per year. These finished products are then distributed to businesses locally and as far away as Iowa and Pennsylvania. Some of the cartons, carriers and trays discarded locally are ultimately recycled at one of our recycling centers, while others return to our landfill as waste, where they will once again generate renewable energy.



# Organics

Organics are a fast growing part of an evolving waste stream and represent nearly 30% of what Americans discard daily. According to the EPA, food waste is the second largest category of municipal solid waste sent to the nation's landfills. We are working with some of our nation's most iconic hotels, resorts and theme parks, and forward-thinking municipalities, on sustainable solutions for their organics needs.

**Pacific Region Compost Facility near Corvallis, Ore.**

## Using Food Waste as Power

In Anaheim, Calif., Republic collects roughly 18 tons of source-separated food waste each week from dozens of area hotels, restaurants and supermarkets. This material is pre-processed and taken to the Los Angeles County Sanitation District's anaerobic digestion facility, where it is used to generate renewable energy to help power the facility, as well as produce solids for land application, composting and landfill daily cover.

## Converting Feedstock into New Compost

At our West Contra Costa County Landfill in Richmond, Calif., we operate a 20-acre compost facility that accepts approximately 400 tons of green waste, food waste and feedstock each day. The facility features an Aerated Static Pile system – a technique used to biodegrade organic material without physical manipulation. It facilitates the accelerated decomposition of organics and is particularly well suited for wet materials and larger volumes of feedstock. Upon completion of the active composting phase, the compost material

is transitioned to a curing pile for up to four months before it is ready for reuse as compost or agricultural applications.

## Circular Economy in Action

With nearly 43 million visitors per year, Las Vegas hotels and casinos serve thousands of pounds of food each day. According to the American Hotel & Lodging Association, the average hotel guest stays for up to four days and generates roughly 2 pounds of waste per room per day.

In partnership with Las Vegas Sands (The Venetian, The Palazzo and Sands Expo), Wynn and Encore Resorts, Station Casinos, and MGM Resorts International, as well as local farmers, the Combs Brothers and Las Vegas Livestock, we developed a sustainable food waste solution that repurposes food scraps into feedstock for hogs. Republic collects the food waste at hotel and resort loading docks where it is separated from the waste stream and then transported to the hog farm for processing. Today, repurposed food waste from millions of Las Vegas tourists feeds thousands of hogs, creating a sustainable circular economy.

## Turning Food Scraps into Enriched Soil

In Orlando, Fla., Republic is working with a leader in anaerobic digestion systems to convert food waste into both fertilizer and power. We perform hundreds of pick-ups each month at popular theme parks and hotels, restaurants and supermarkets, separating food waste at the source before transporting it to a sophisticated processing plant.

We deliver 45,000 tons of food waste to the facility each year. This yields 7 megawatts of combined heat and power for local homes and businesses, as well as 5,000 metric tons of fertilizer for landscaping, gardening, and agricultural purposes.





# Recovering Value from Exploration & Production Waste

There is a renaissance of exploration & production (E&P) in Texas' Permian Basin. After a period of decline, the Basin is once again becoming one of the more active locations in the world for the oil and gas industry. In the past year, the number of active drill rigs operating in the area has tripled. This increase in activity also means more liquids and materials — byproducts from exploration and production processes — that must be managed.

At Republic, we are applying technology and forward-thinking processes to responsibly manage E&P sector waste.

**Oil wells in operation in the Permian Basin.**

## Setting the Standard in E&P Waste Disposal

At Reeves County Landfill near Mentone, Texas, we are setting the standard for environmental responsibility in the energy services industry.

The Landfill is uniquely equipped to handle E&P byproducts safely and responsibly. From a range of field services to multiple on-site services, we are enabling our oil and gas customers to grow and prosper. And, in the process, we are recovering incredible value.

We start by recovering hydrocarbons from water and oil-based muds – waste byproducts from drilling. Our sophisticated recovery process uses engineered screens to extract larger particles from the muds, removing rocks, dirt and other solids. The muds are then subjected to heat and a centrifuge process, which separates the remaining smaller solids from the liquids. Next, the liquids are sent to a decanting tank farm where the targeted hydrocarbons separate from liquids, sinking to the bottoms of the storage tanks.

There are, of course, considerable environmental benefits to our recovery operations. We responsibly return the cleaned liquids back into salt water disposal wells at the same or similar condition in which it was extracted. This has the added benefit of minimizing the volume of material that might otherwise be landfilled. We also safeguard the solids in a lined, specialized cell that is dedicated for exploration and production waste.

We recover as much as  
**180,000 barrels** of oil  
each year.



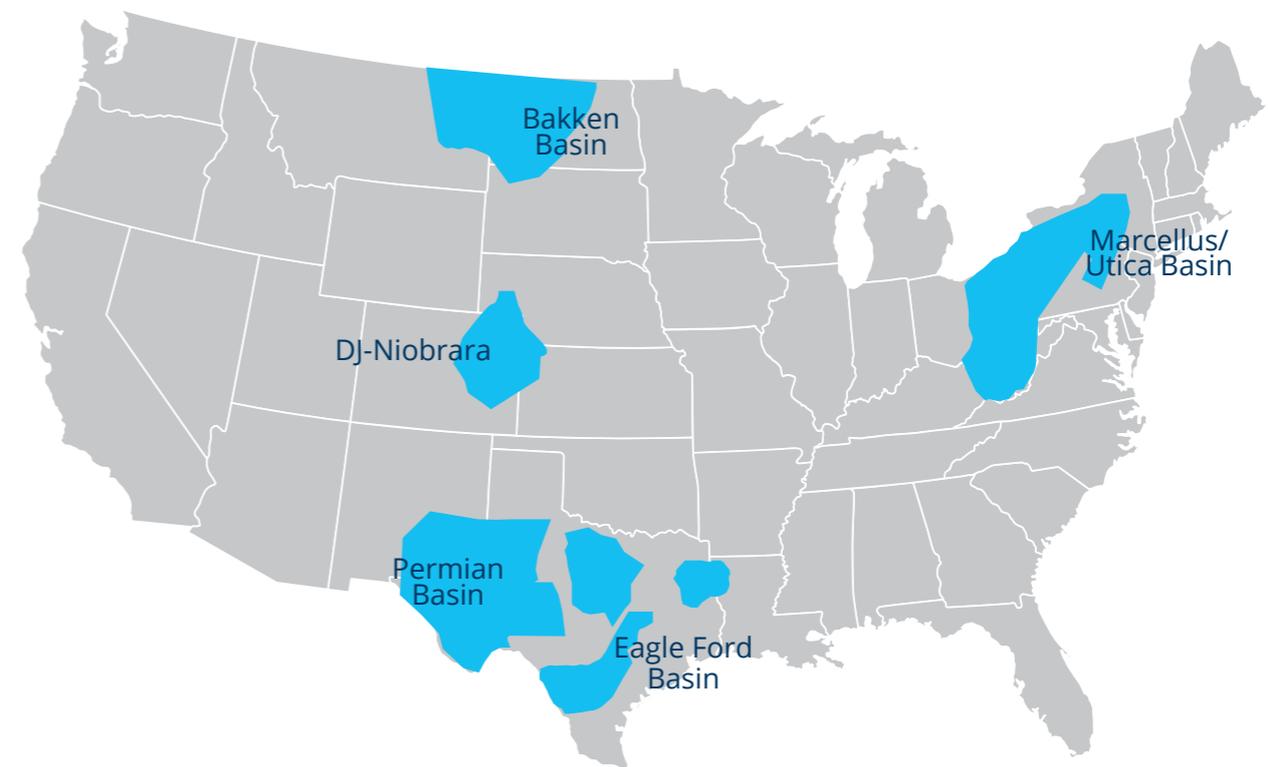
# We operate...

**4** E&P landfill disposal sites,

**7** treatment, recovery and disposal facilities, and

**10** salt water disposal wells in

**5** basins



# Communities

We are dedicated to being a good neighbor in the communities in which we live and work. This includes investing in our communities through customer engagement, philanthropic giving, volunteerism, environmentally responsible infrastructure and operating in 240 markets at the highest standards.



# Building Stronger Communities

At the heart of a community are the people who live and work there. At Republic Services, we are committed to building strong communities by supporting the people, businesses and organizations that call these communities home. We want to form a partnership with the communities we serve and contribute to the quality of life, thereby creating long-lasting and meaningful business and personal relationships.

Good neighbors



building strong  
neighborhoods



# Investing in our Neighborhoods

Building on our values as good neighbors, Republic has created a charitable platform centered on neighborhood revitalization. Through this initiative, we will help rebuild, revitalize and restore places and spaces in need – to ultimately create stronger neighborhoods where we work and live.



## Establishing a Home Field Advantage

In just six years, the Power Center Academy High School Rugby team, on the western side of Memphis' Hickory Hill neighborhood, has established itself as a dominant and fierce competitor. Their prowess has earned them exposure — a film documentary called “The Rugby Boys of Memphis” appeared at the Tribeca Film Festival.

But, for all their success, there was one element missing from their winning formula. The team did not have a home field to play on. Team practices were held in a public park with hilly terrain, no lights and all league games were “road” games.

Enter Republic Services, who happens to be the waste service provider in the neighborhood. We partnered with the Memphis chapter of Habitat for Humanity to give these special kids the ultimate rugby advantage – their own “home” field.

A new field will mean so much more for this neighborhood for generations to come. It will become a place that nurtures young scholar athletes, builds lifetime bonds and instills a pride of ownership for everyone in the neighborhood.

Investing in our neighborhoods with **\$8.4 million** in charitable giving and environmental education.

## Giving When, Where and How It is Needed

Whether it's extending a hand to help neighbors realize their life's dream, celebrating equality and tolerance or enabling community beautification, our people are there to make our neighborhoods stronger and more vibrant places to live.

- Greenville, S.C. – local team members volunteered to help build a home for a family in need and in search of the dream of home ownership
- Fresno, Calif. – our team was recognized by the City with the “Outstanding Community Service” Award for Republic's commitment to the celebration of Dr. Martin Luther King, Jr., his legacy and dreams for all Americans
- Roosevelt, Wash. – our team was recognized by the Washington Secretary of State for its work beautifying downtown and creating needed spaces for community events

## Responding During a Disaster

Because of the nature of what we do, we are uniquely positioned with the personnel, expertise and equipment to readily support disaster response and recovery efforts when emergencies engulf the communities we serve. Often, that makes us second responders. We help utilities, hospitals, and public services restore normal operations, clean up waste and remove debris and rubbish — whatever is needed.

## Hurricane Causes Major Disruptions

When heavy rains and damaging winds from Hurricane Matthew struck the Florida, Georgia, South Carolina, and North Carolina coasts last fall, Republic employees from across the nation sprang into action to assist.

Much of our initial relief effort was focused on ensuring that Republic employees and their families who lived and worked in the affected areas were safe, secure, sheltered and in good supply of provisions, clothing, toiletries and other necessities of life.

To help the affected employees and their families get back on their feet faster, Republic team members from across the country rallied to collect food, clothing and other necessities. Other teams of Republic employees, including our Company's executive leadership, went to the storm-ravaged area to provide encouragement and lend a helping hand.

With operational facilities up and running, we were able to help communities with their clean-up efforts. From clearing away storm debris to providing more containers and scheduling additional pickups, we were there to meet the needs of our customers and communities.



Republic donated **\$125,000 to the American Red Cross** for assistance in disaster relief.

## Louisiana Floods Impact Employees

Last August, more than 20 inches of rainfall in southern Louisiana resulted in catastrophic flooding that affected thousands of homes and businesses. Among the thousands of people affected by the floods were approximately 100 Republic employees, some of whom lost their homes or personal vehicles.

Once again, Republic employees from across the country rallied. Team members were quick to arrive on the ground and were ready to assist our employees, customers and communities with their specific needs. By mobilizing so efficiently, our disaster response team was able to return our Baton Rouge facility to service in just one day after the flooding, so they could serve the community.

## Quick Response in Oregon Saves Homes

On his way home from work in July, 2016, Republic employee Tim T. was informed that a wildfire was burning near our landfill and compost facility in Oregon's Willamette Valley. He responded immediately, driving to the scene where he learned that fire fighters were in dire need of a water source.

Tim drove to our facility, procured a 3,500-gallon tanker and returned to the fire where he began supplying fire trucks and responders with critical water. Further, when the tanker was empty, he drove back for more water and a second round to supply local firefighters. His quick action saved nearby homes and a pristine wildlife habitat.



# Products that Create Solutions

Everything we do is for our customers. For us, satisfaction comes from knowing we helped a customer solve a problem while making it an easy and enjoyable experience. That is why we are continually configuring our products and services to the individual customer.

Whether it is a BluePrint™ Waste Assessment that leads a customer to a configured solution, a large open-top container that makes renovating a new home a little easier or a thoughtful recycling program that engages employees through All-in-One Office™, we are passionate about offering our customers simple solutions.

**Photo submitted on Facebook by Laura G., a customer in Quincy, Ill.**

## Solutions for Devices, Batteries and Bulbs

The digital demand has led to extraordinary changes in how we live, work, interact and play. The average person today has multiple devices, which are upgraded or replaced every couple of years.

Similarly, there has been a proliferation of energy saving batteries and bulbs. They are replacing older batteries and bulbs at homes and businesses across the country.

The question for communities becomes – what to do with outdated or unwanted items? Are they recyclable? Should they go in the waste container?

To help answer these questions and provide important peace of mind, Republic has added two configurable products to its vast offering: Electronics Recycling – mobile devices, televisions, computers, and other items – and Universal Recycling – batteries, bulbs and ballasts.

## 2 New Products



Electronics Recycling

Universal Recycling

We recycle nearly  
**1.4 million pounds**  
of electronics equipment



**190,000**  
pounds of batteries per year

Each day, we recycle  
**more than**  
**3,600**  
fluorescent light bulbs



that's equal to  
the height of  
**9 Empire State**  
**buildings**

# Customer Solutions Spotlight

Republic Services employee unloading oyster shells in Mobile, Ala.





Customer Solutions Spotlight

## Responding to a Unique Need

At times, the communities we serve bring forward truly unique needs. In coastal Alabama, a local non-profit is working with partners to restore oyster beds in coastal waterways through a grant from the National Fish and Wildlife Foundation. The goal of the grant is to help seafood restaurants and their customers understand that what they previously thought was trash is actually a valuable natural resource.

Their challenge — turning a great idea into a workable, sustainable program.

Enter Republic. Having partnered with the Alabama Coastal Foundation (ACF) in the past, ACF invited Republic to help with Alabama's first ever Oyster Shell Recycling Program. Working with restaurants and other customers that serve oysters on the half-shell, we customized a solution to collect shells three times per week. The shells are then hauled to a secure location where they undergo a curing process.

The repurposed shells are then deposited in various locations in Alabama's two coastal counties where they become the building blocks of newly restored oyster beds, a safe habitat for sea animals and a natural water break to protect the shoreline.

More than **2.5 million oyster shells** are making their way back into Alabama water to help additional oysters grow.

# Safety

Due to the nature of our industry, we prioritize safety above all else. When people feel safe, they can fully participate in the opportunities that are available to them every day.

Republic's safety performance is **41% better** than the industry average based on OSHA data.

## The Best of the Best

In sports, championship teams usually have the best players. Republic's team of highly skilled drivers and technicians is no exception – it is composed of top-notch, high-caliber individuals who are truly the best and safest in the business.

To help identify – and celebrate – the “best of the best,” we hosted approximately 100 local competitions where our drivers and technicians showcased their driving and diagnostic skills, and safety acumen.

Our drivers competed in 1-of-4 truck categories. The competition involved driving a timed course with seven challenges, similar to the obstacles encountered while running their daily routes. This included simulating backing up in a narrow alleyway, parallel parking and safely navigating tight turns.

Similarly, our technicians competed in a timed troubleshooting contest, where they were tasked with identifying and diagnosing problems on a Roll-Off truck. In this hands-on competition, contestants were challenged with finding up to 10 problems in an allotted amount of time.

The top 40 drivers and 10 technicians from the local competitions earned prizes and important bragging rights. They also qualified to compete in Republic's first-ever National ROAD-EO Championship before 600 fellow employees, where the best of the best were crowned and celebrated.



Safety

The ROAD-EO is another way we are building durability into our safety platform while instilling a culture within our Company that places safety at its core.

## Drivers of the Year

It's one thing to be recognized as a safe, highly skilled driver by your employer. It's even more significant when the recognition comes from peers within your industry.

Since 2009, Republic Services drivers have won 75% of the National Waste & Recycling Association's "Driver of the Year" awards in the large company categories. The competition, sponsored annually by the industry association, recognizes exemplary customer service and superior driver safety records.

In 2016, two Republic drivers earned the distinction for their remarkable skills and safety records on the road. Honored with "Driver of the Year" awards were David Bedford from Boise, Idaho (industrial category), and Efren "Fernando" Lopez from Stockton, Calif. (residential category).



**Dave Bedford, Industrial Driver & 2016 Driver of the Year, steps into his personalized truck from Republic.**



**Efren Lopez, Residential Driver & 2016 Driver of the Year, receives the keys to his new truck from CEO Don Slager.**



*Truck*   
**ROAD-EO**  
NATIONAL  
CHAMPIONSHIP  
March 2017  
Phoenix

The logo is a blue shield-shaped emblem with a silver border. It features the word "Truck" in a cursive font, a red star with a white outline, and the words "ROAD-EO" in large, bold, white capital letters. Below that, "NATIONAL CHAMPIONSHIP" is written in smaller white capital letters, followed by "March 2017" and "Phoenix" in a smaller font.

Republic's first National ROAD-EO  
Championship, held near Phoenix, Ariz.



Safety



# Programs & Partnerships

Continual training, comprehensive programs and strategic partnerships with a leading authority on roadway safety are key components of our safety platform. Our *Think, Choose, Live* motto can be found on safety gear and operations equipment throughout our Company, as well as within learning materials. It reminds every employee to *Think* about what they are doing, *Choose* the safe answer and *Live* to go home to their family.

**Republic displays a safety message on all of its collections trucks.**

## Confronting a Major Challenge

Large, heavy trucks moving in tight places along heavily congested roads require advanced driving skills. Maintaining the skills required to safely navigate the many roadway hazards necessitates perpetual, comprehensive training. Republic's monthly, nationally recognized and award-winning Focus 6 program provides our employees with the learning they need to maintain their skills.

Each month fresh, interactive training is provided by way of video instruction and discussion. Along with support materials such as pledge posters, illustrations and more, supervisors are provided with facilitation instructions and one-on-one coaching cards to use throughout the month. To help with adult learning retention, courses are set-up for drivers to hone their skills. From backing challenges, to intersection/pedestrian challenges to increase awareness around visual obstructions, to proper ergonomics behind the wheel to reduce stress on the body, Republic is committed to improving its industry-leading safety performance.



**Our Focus 6 program equips employees with tips and techniques to prevent the six most common types of serious accidents. Last year it helped reduce accidents by 14%.**

## Driven to Save Lives

Each day, our team of approximately 15,000 drivers perform roughly 5.8 million pick-ups. Whether at a stoplight, on a parkway or neighborhood street, our trucks are continual safety reminders for motorists, bicyclists and pedestrians.

We are driven to save lives and believe in involving everyone in this mission. That is why we proudly display a safety message on all of our collections trucks, outwardly demonstrating our commitment to Together for Safer Roads.

Republic is the only recycling and waste services provider that is a member of Together for Safer Roads, a leading coalition that brings together private sector companies to collaborate on ways to improve road safety, including programs on road safety management, safer roads and mobility, safer vehicles, safer road users and post-crash response.

Together, we are actively working to achieve our shared vision of fewer road traffic collisions, deaths and injuries.



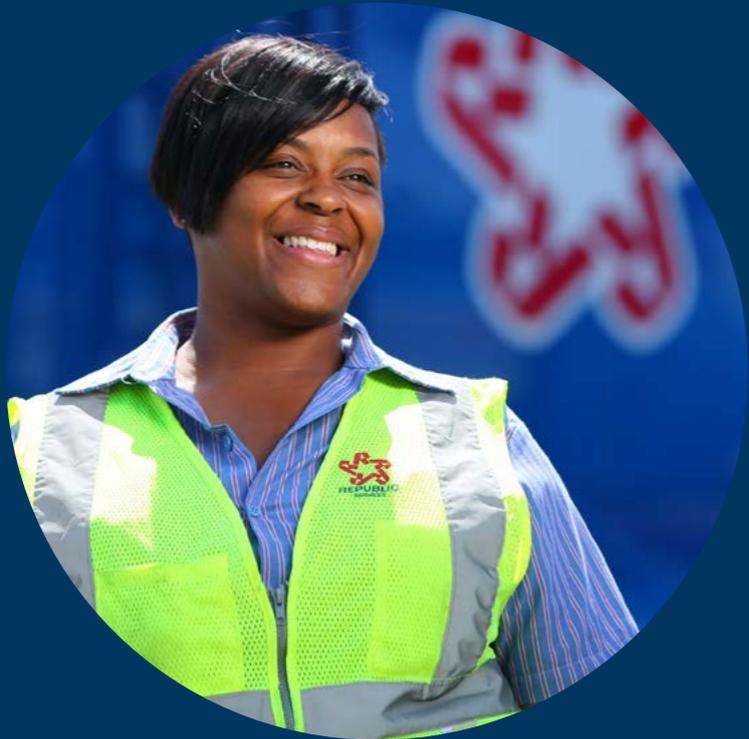
Environmental team at Congress Landfill near Chicago, Ill.

# People

We believe that engaged employees are the greatest indicator of our success. Our people make everything possible — our profitable Growth through Differentiation strategy as well as our ability to fulfill our promise to customers and the environment. They make Republic a preferred place to work, and they help make the communities we serve strong and vibrant.



People



# Becoming an Employer of Choice

Whether it's providing training, the right tools and resources for the job, growth and development opportunities or celebrating achievements, we believe in making our people feel welcomed and valued. We believe this brings out the very best in our people and it attracts the best possible outside talent. It is why we have become an employer of choice.

**Driver at our Gardena, Calif. location.**

## Employee Engagement

When employees are engaged, it means that they are in alignment with the company's vision, mission and values – it means they enjoy their job, where they work, their coworkers and they are motivated to achieve goals that represent a shared “higher purpose.”

We measure employee engagement on an annual basis by conducting a digital survey called “Republic Listens,” which tells us how valued our employees feel, how strongly they believe in our Company and how likely they are to recommend it as a place to work. Over 81% of our employees participated in the 2016 survey.

The results? Thanks to an increase in local engagement activities, focus groups and a number of new companywide initiatives, our employee engagement score for 2016 was 88 out of 100. That constitutes a 6-point increase over last year. We believe this score validates that Republic is a great place to work and it explains our notable recognition as a Best Employer.

## Best Employer

We are incredibly proud to be named to the elite *Forbes* America's Best Large Employers List. Republic is the only recycling and waste company named to this prestigious group.

Forbes undergoes an independent and anonymous national survey of 30,000 U.S. workers at companies and institutions across the country in order to identify the nation's 500

best employers. Surveyed employees are asked 35 questions on work-related topics. The willingness of an employee to recommend their employer is considered the most important criteria of the survey.

We are honored by this recognition and feel privileged to be associated with such talented, dedicated and engaged people.

**Forbes | 2017**  
**AMERICA'S**  
**BEST LARGE**  
**EMPLOYERS**

POWERED BY STATISTA

## Diversity and Inclusion

Republic cannot thrive without hiring the best talent or without a truly diverse and inclusive workplace and culture. We actively partner with national diversity organizations, colleges and universities and military and veteran organizations to create pipelines for recruiting, employing and retaining diverse talent.

We consider diversity and inclusion to be critical to our Growth through Differentiation strategy, and we are making notable progress. Republic earned a score of 85 (out of 100) on the 2016 Corporate Equality index, a national benchmarking report on corporate policies and practices relating to lesbian, gay, bisexual and transgender workplace equality that is administered by the Human Rights Campaign Foundation. The score was a 6-point improvement by Republic over the previous year.

## Resources and Incentives for Technicians

Our maintenance teams play an indispensable role in the overall success of our business. In partnership with our drivers, our roughly 2,500 technicians are directly responsible for our very strong 99.9% pick-up reliability rate for our customers.

Maintaining or even perfecting this rate means that Republic must make hiring and retaining high-quality technicians a top priority. Among the programs we employ are quarterly technician tool allowances, monetary stipends to assist technicians seeking ASE certification, allowances for working an off-shift, career development training and

Maintenance Training Days, which promote collaboration, communication and the exchange of ideas.

## Employee Networking Groups

There are many ways to engage diverse, talented and dedicated employees. Employee Network Groups are a practice embraced by many of America's leading companies.

We have introduced our first networking group — Women of Republic — which is open to all employees. This Company-approved group provides participants with opportunities to learn more about our business, exchange information and ideas, develop leadership skills, and expand their contacts inside and outside of the Company.

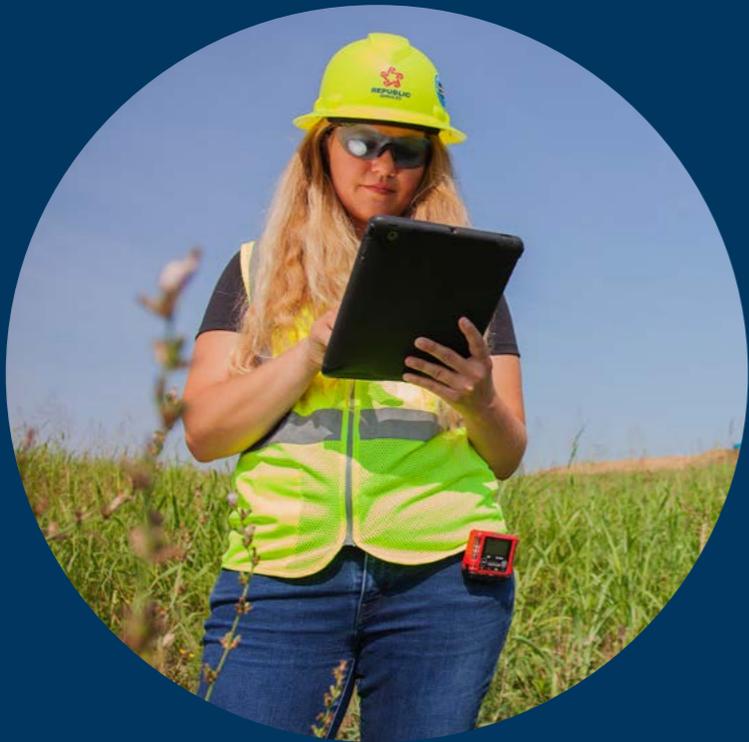
## Celebrating Sustainability Leaders

When people in your organization achieve excellent results, exhibit strong leadership skills or demonstrate a commitment to the core values of the Company, their achievements should be recognized and celebrated.

To honor and reward achievements in the area of sustainability, Republic annually presents three awards to company leaders — the "Environmental Stewardship and Sustainability Award," which rewards customer-focused sustainability projects that are truly differentiating, the "Good Neighbor Award," which is presented to the leadership team that has delivered positive and measurable impacts in the community, and the "Safety Cup," which is presented to the field leader with the best safety performance.



People



# Ethics & Compliance

We not only need to do our jobs right, we need to do them the right way — with high ethical standards and in full compliance with guidelines, policies, laws and regulations.

**Division Manager at Bridgeton Landfill near St. Louis, Mo.**



People

## Republic Named to 2017 “World’s Most Ethical Company” List

The world today is far more complicated and complex than it was only a decade ago.

From shifting societal expectations to rapid swings in technology to the introduction of new laws and regulations, businesses have their hands full as they find themselves confronted with a literal flood of challenges, changes and disruptions that confront them on a daily basis. As a result, organizations must work harder to ensure they are conducting business honestly, with integrity and in an ethical fashion. We’re proud to say we’re leading the way in this effort.

Republic was named to the elite 2017 “World’s Most Ethical Companies” list by the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices.

The award is based on how companies score in the “Ethics Quotient,” a proprietary quantitative tool developed by Ethisphere that assesses a company’s performance in an objective, consistent and standardized way. Specifically, companies are judged in five key categories – ethics and compliance program, corporate citizenship and responsibility, culture of ethics, governance, and leadership, innovation and reputation.

According to Ethisphere, the true test of an honoree company is how they respond to new and different challenges that develop. The most successful, says Ethisphere, are those that invest in the communities they serve, embrace strategies of diversity and inclusion and focus on long term-ism as a sustainable business advantage.

### Technicians at Broadhurst Landfill in Wayne County, Ga.





People

## Ensuring Sustainability in a Highly Regulated Industry

Our facilities and operations are subject to a variety of federal, state and local requirements that regulate, among other things, the environment, public health, safety, zoning and land use. The U.S. Environmental Protection Agency and various other federal, state and local authorities administer these regulations. We strive to conduct our operations in compliance with applicable laws, regulations and permits.

The following summarizes the primary federal, environmental and occupational health and safety-related laws that affect our facilities and operations:

- The Solid Waste Disposal Act, including the Resource Conservation and Recovery Act (RCRA), which establishes a framework for regulating the handling, transportation, treatment, storage and disposal of hazardous and non-hazardous solid waste, and requires states to develop programs to ensure the safe disposal of solid waste in sanitary landfills.

- The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) which among other things, provides for the cleanup of sites from which there is a release or threatened release of a hazardous substance into the environment.
- The Federal Water Pollution Control Act of 1972 (the Clean Water Act) which regulates the discharge of pollutants from a variety of sources, including solid waste disposal sites, into streams, rivers and other waters of the United States.
- The Clean Air Act which imposes limitations on emissions from various sources, including landfills.
- The Occupational Safety and Health Act of 1970 (OSHA), which authorizes the Occupational Safety and Health Administration of the U.S. Department of Labor to promulgate occupational safety and health standards.

For more information about these and other regulations that Republic Services adheres to, please see our Annual Report on Form 10-K for the fiscal year ended Dec. 31, 2016, filed with the U.S. Securities and Exchange Commission.

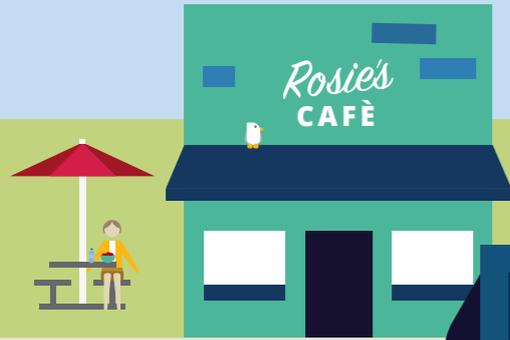
# Appendix

We know a big part of helping our customers become better stewards of the planet is by educating them on the waste process. When there is better understanding, people can make more informed decisions.

To aid in this education, we have created infographics, located on the following pages, that show the processes relating to Municipal Solid Waste collections, Landfill operations, Recycling operations, Landfill Gas & Renewable Energy projects, Organics diversion and Exploration & Production services. We hope these images will help you to understand how the waste that society creates every day is environmentally managed by Republic to preserve our Blue Planet.

# Municipal Solid Waste

Our fleet of roughly 16,000 trucks performs 5.8 million pick-ups at businesses and homes each day



The consolidated waste is then transferred to larger trucks for increased efficiency

Once a collection truck is full, it will usually go to a Transfer Station where waste is consolidated. This enables more efficient service

**TRANSFER STATION**



The larger trucks haul waste from the Transfer Station to a Landfill, where in many cases the waste eventually helps to create renewable energy



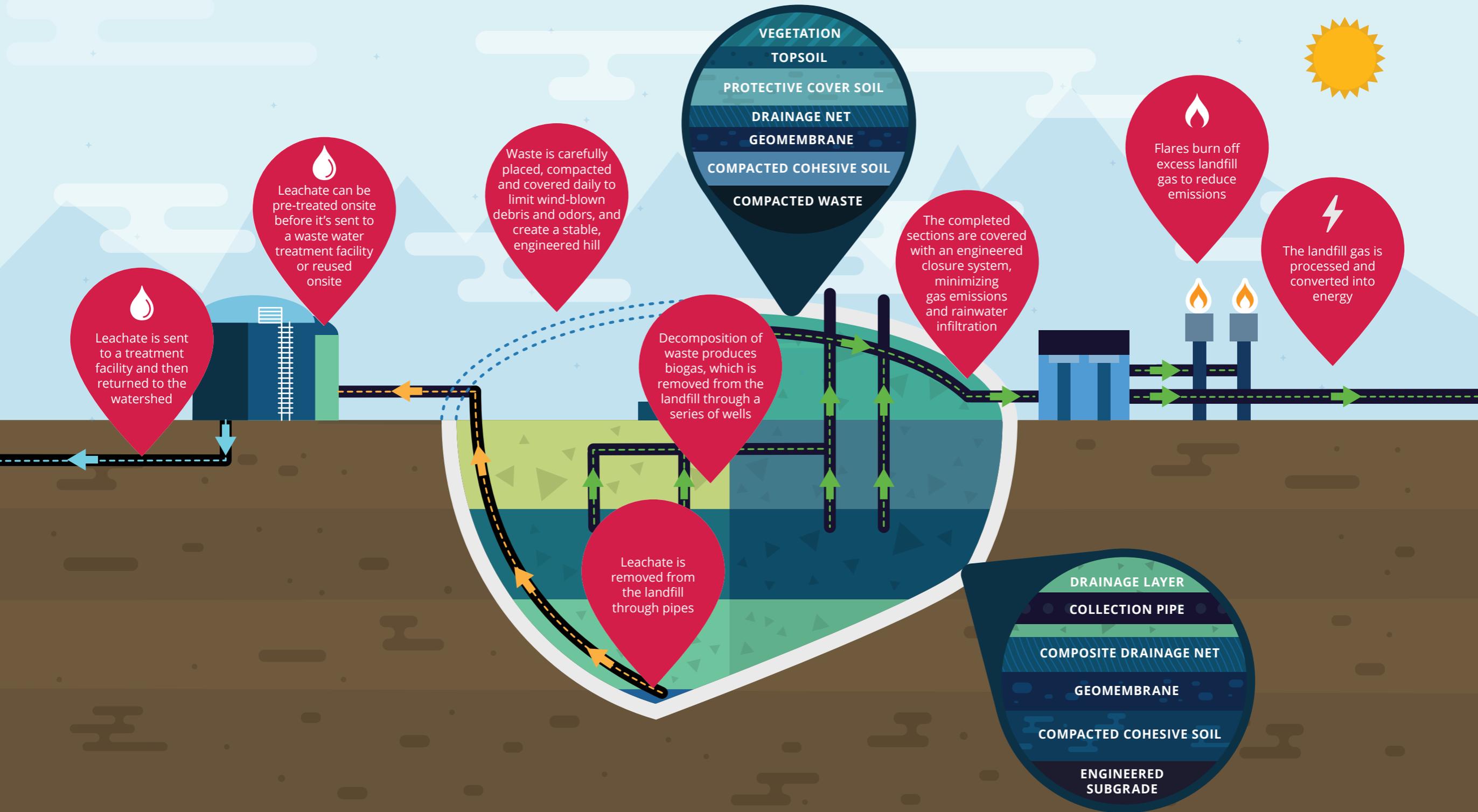
Recyclables go directly to a Recycling Center where they are sorted and processed into bales before returning to mills and manufacturers for reuse

According to the EPA, we each generate 4.4 pounds of waste and recycle or compost 1.5 pounds per day

**RECYCLING**



# Regenerative Landfill



# Recycling Operations

Today, 34% of municipal solid waste is recycled

74% of recyclable volume consists of fiber (newspapers, office paper)

Items made from recycled materials make their way back to stores to repeat the process

Once oil is used for plastics it can be recycled and processed to create new materials

Paper can be repulped into newspapers, paper, cardboard, and other products - over and over

This facility sorts materials, which are then transported to mills and manufacturers for use

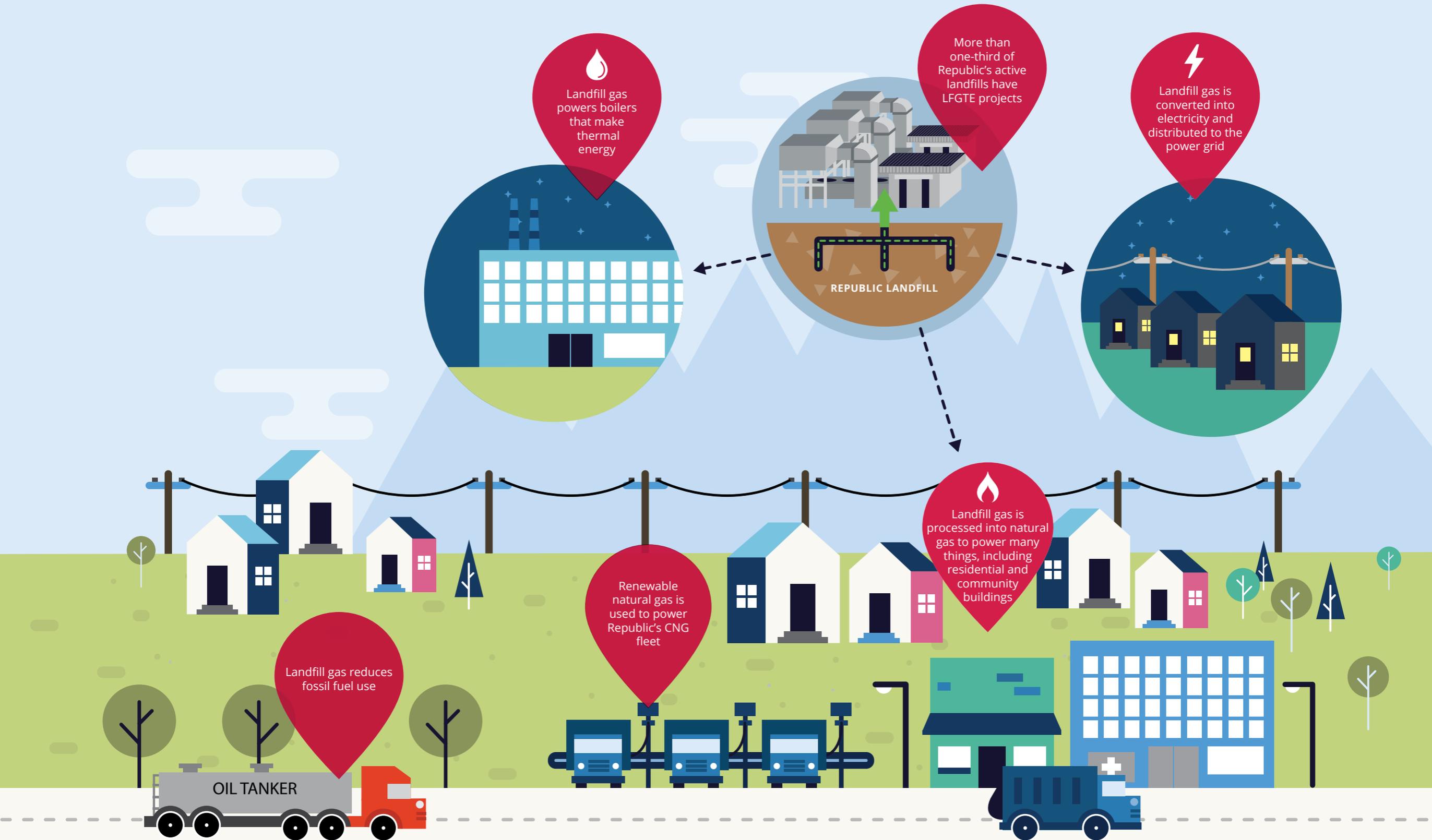
Materials are transported and reprocessed into new items - saving resources and energy

Anaerobic treatment of organic waste creates natural gas that can be used to power vehicles instead of fossil fuel

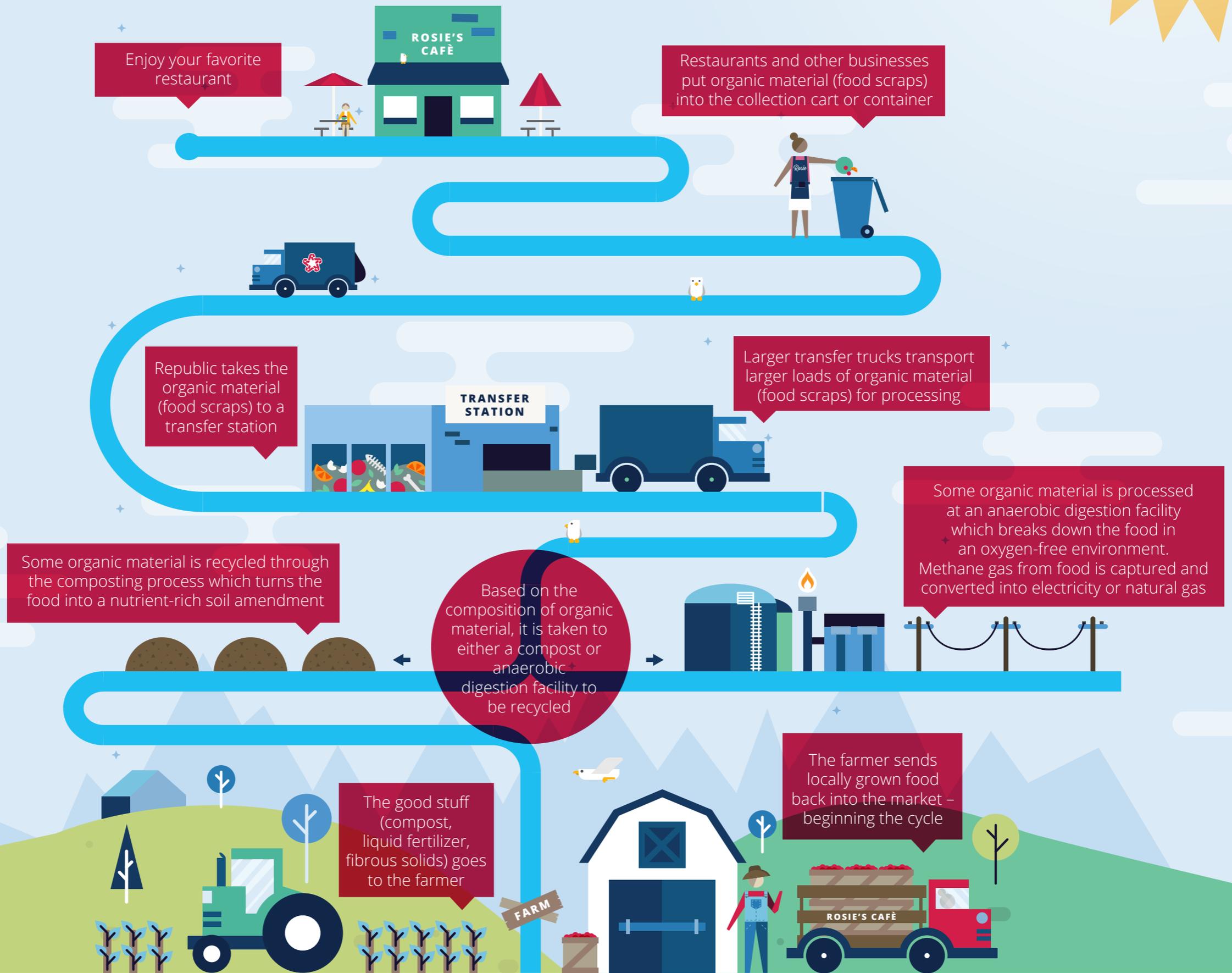
Recycled materials, like metal and aluminum cans, reduce the need to mine materials from the earth



# Landfill Gas & Renewable Energy



# Organics Diversion



# Exploration & Production Services

## FIELD SERVICES PROVIDED

Republic provides on site treatment, waste removal, hydro-excavation, pit remediation, tank cleaning and equipment rental

### STEP 1

Byproducts of the process at an active oil well are collected or brought to our treatment facility



Drilling & Production Site

This process removes rocks, dirt and other solids

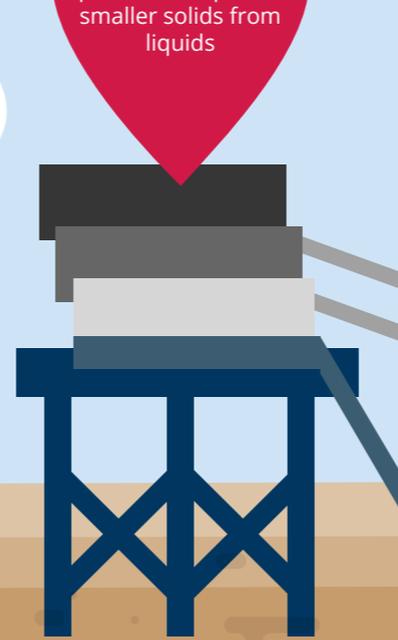
### STEP 2

Engineered screens extract larger particles from oil and water-based muds



### STEP 3

Heat and centrifuge processes separate smaller solids from liquids



### STEP 4

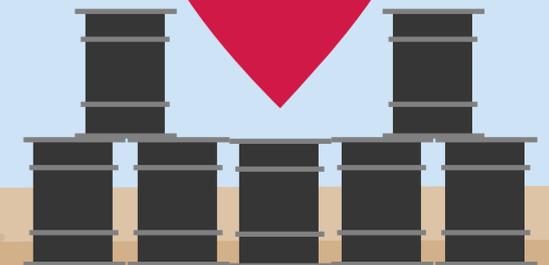
Liquids go to a decanting tank farm



Hydrocarbons separate from liquids, sinking to the tank bottom

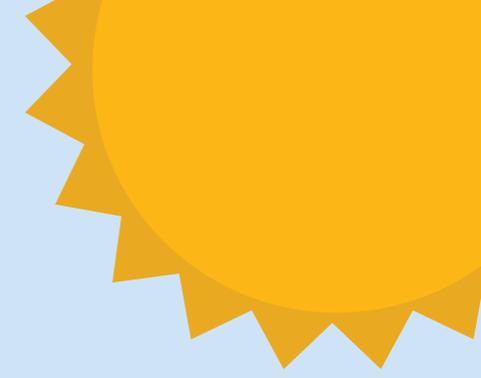
### STEP 5

Water is returned to salt water disposal wells and solids are brought to a lined, specialized cell at the landfill



### STEP 6

180,000 barrels of oil are recovered and sold annually





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We'll handle it from here.™