

Resourcing the world

Veolia North America Sustainability Report 2021-2022



### WELCOME

# Ecological Transformation in Action

At Veolia North America (VNA), we partner with our customers and communities to address their environmental challenges and help them achieve their sustainability goals. We continually strive to carry out our mission of ecological transformation, offering innovative solutions that help turn the tide against climate change.

As a leader in water, waste and energy, VNA delivers practical, high impact solutions that address today's needs while solving tomorrow's challenges. We do this by dedicating ourselves to continuous innovation and sustainable solutions.

#### For water

We provide clean water, treat wastewater and manage biosolids for nearly 25 million people in communities all over North America. VNA's work keeps pollution out of the environment, protects public health, supports economic development, encourages water reuse and increases resilience.

#### For waste

We help customers in the industrial, commercial and governmental sectors safely manage hazardous and regulated waste streams, ensuring they are properly treated, disposed of or recycled. Our team is equipped with unparalleled knowledge, experience and technology in order to provide value-added services that protect people, their communities and the planet.

### For energy

We help customers reduce their carbon footprint by maximizing their energy efficiency with sustainable solutions that support the economic growth of municipal, commercial and industrial clients. For example, we help large building owners in cities like Boston and New York City reduce energy emissions by offering our state-of-the-art Hubgrade platform, making the most of digital technology to show areas where excess energy can be captured. This helps reduce energy costs and greenhouse gas emissions.

### For the planet

For VNA, ecological transformation means working to radically change patterns of production and consumption, so that we can preserve our finite resources while maintaining our quality of life now and in the future. For our customers it means helping them do more with less by balancing profitable economic growth with a reduction in their environmental footprints. It means providing creative, meaningful solutions to major problems for all of our stakeholders: customers, society, employees, shareholders and the planet.

In these pages, you will see firsthand how our unique problem-solving and technical expertise help enable resource recovery and solutions in the water, waste and energy industries for our customers. We have been leading this effort for decades, both across North America and the world, putting us at the forefront of the ecological transformation.

Sincerely, Fred Van Heems CEO, Veolia North America

## In this report ...

| Veolia's Purpose                       | 3     |
|--|-------|
| Dedication to Our People               | 4     |
| Dedication to Our Communities          | 5     |
| Dedication to the Environment          | 6     |
| Barometer of Ecological Transformation | 7     |
| Excellence in North America            | 8 – 9 |

| Case Studies  | 10 – 17 |
|---|---------|
| Eliminating Pollution<br>Resiliency and Adaptability<br>Circular Economy and Decarbonization<br>Waste as a Resource |         |
| Biodiversity  | 18      |
| Digital Transformation  | 19      |

### Ecological Transformation, that is our purpose.

Ecological transformation means acting to reconcile human progress and environmental protection.

We develop and implement local solutions to protect our vital resources and preserve them from depletion, while decarbonizing our way of life and adapting to the consequences of climate change.

All over the world, attuned to local cultures, we strive to improve the health and quality of life of communities.

At Veolia, we tackle economic, social and environmental issues as an inseparable whole to benefit the largest number of people.



No poverty



Quality education



Affordable and clean energy



**Reduced** inequalities



**Climate action** 



Peace, justice, and strong institutions



Zero hunger



Gender equality



Decent work and economic growth



Sustainable cities and communities



Life below water



Partnerships for the goals



Good health and well being



Clean water and sanitation

Industry, innovation, and infrastructure



Responsible consumption and production

Life on land



# Dedication to **Our People**

VNA's purpose is to care for the environment, and as we pursue that purpose, we must also care for our people.

#### Safety

At our facilities, employees embrace Goal Zero, our strategy to ensure that health and safety is held as a core value and the number one concern at all times as we continue on our path to zero injuries. Goal Zero promotes engagement, teamwork and sharing best practices, like pre-job safety analyses where employees carefully dissect potentially dangerous tasks step-bystep before initiating work to control and eliminate risk.

As one of our four non-negotiables, health and safety is of the utmost importance to VNA.



We are proud to share that 397 of our North American sites have reported **0 lost-time injuries** in the past year.

### **Diversity, Equity and Inclusion**

VNA is deeply committed to supporting and improving diversity, equity and inclusion (DE&I) among our employees, suppliers and communities. We recently embarked on a company-wide listening tour to foster collaboration and shape our program by gathering comments and feedback. During that process, we received amazing suggestions from more than 700 employees.

Our Belong group is an enthusiastic team with diverse backgrounds who serve as our sounding board, offering suggestions and opinions as we continue to prioritize DE&I. That group provides critical advice to our Director of DE&I as part of our commitment to internalizing DE&I into our institutional culture.

### **Training and Developing Employees**

VNA takes pride in training and developing our employees, creating a culture of safety and fostering an environment of professional and personal growth. Each employee undergoes an average of nearly 20 hours of training per year which includes topics such as safety, DE&I, cybersecurity, workplace harassment, compliance, management training and much more through our education platform, VNA University.

# Dedication to **Our Communities**

At VNA, finding solutions to complex environmental challenges is key to who we are and what we do. But to achieve our mission of ecological transformation, we also recognize the importance of engaging with the communities where we operate in order to make a difference for those we serve.

Driven by that sense of community purpose, Veolia is deeply connected to the cities, towns and neighborhoods where we operate, working with schools, community groups, locally based leaders and advocacy groups to help those in need and serve as a good neighbor.



Partnering with more than 500 COMMUNITIES across the United States and Canada.

In East Palo Alto, California, VNA collaborates with the city and state on an innovative program designed to bring relief for local water ratepayers who are struggling to keep up with their bills.

> In Gum Springs, Arkansas, VNA recently announced a \$5,000 annual scholarship for local high school seniors planning to pursue majors in science, math and engineering to celebrate the new state-of-the-art hazardous waste treatment facility, set to be complete in 2024.

In Connecticut, VNA partners with HarborWatch, a group of scientists who work to preserve the estuaries of Long Island Sound.

> In New York City, VNA partners with the New York Department of Sanitation to host a series of household hazardous waste collection events throughout the year, collecting over 1 million pounds of hazardous waste materials over the past decade.

# Dedication to the **Environment**

♀ GLOBAL STATS

### **Climate Ambition**

### Net Zero by 2050

Race to Zero Signatory Business Ambition for 1.5 °C

To face environmental challenges, adapting is not enough. That is why we are committed to ecological transformation, creating and implementing solutions that can radically turn the tide.

#### **Increasingly Scarce Resources**

We act to preserve and replenish resources, turning the discarded into a resource for others. This is circular economy in action.

#### **Climate Change**

We are increasing our investment in research to produce renewable and alternative energy while maximizing energy efficiency for our customers. And then we turn that research into real world results.

#### The Sustainable Development of Cities

We partner with local governments to help them meet their sustainability goals while modernizing their operations and infrastructure.

#### Fragility of Ecosystems and Biodiversity

We work to preserve natural resources and biodiversity through our corporate social responsibility commitments. "VNA's mission is to protect the environment through pollution reduction, decarbonization, circular economy, water resource management and a commitment to biodiversity. We do this through the collective strength and synergies of our three main business lines: water, waste and energy," said Dave Ross, VNA's Chief Sustainability Officer.

"While this report is filled with case studies highlighting how we help our clients meet their sustainability goals, we embrace sustainability and innovation as our corporate touchstone."

# Barometer of **Ecological Transformation**

# 55%

of Americans are convinced that we need to change the way that we live and implement technological solutions to combat climate change and pollution.

To guide our sustainability mission, we surveyed people around the world about climate change and measured the public's willingness to accept and adopt solutions that will ensure the health of our planet for generations to come. We called our initiative the Barometer of Ecological Transformation.

#### This is what we found in America:

- **64%** of Americans perceive resource scarcity and pollution as serious and imminent risks, particularly as related to direct impacts on public health.
- **61%** express a feeling of ecological and climate vulnerability, while **57%** believe that inaction will cost humanity more in the long run than taking action now.
- **25%** are so worried about the future that they are contemplating changes to major life decisions, such as having children.

## In short, Americans are concerned, and willing to do something about it with appropriate education and leadership:

- **55%** of Americans are convinced that we need to change the way that we live and implement technological solutions to combat climate change and pollution.
- But, **52%** say the necessary ecological transformation is hard to imagine, because the solutions to mitigate pollution and climate change are not sufficiently talked about.
- And yet, **50%** of the people in the United States are ready to accept **95%** of the changes needed for ecological transformation.

"At VNA, the Barometer of Ecological Transformation validated our company's purpose and invigorated our people to do more to provide lasting and cost-effective solutions to our world's most difficult environmental challenges."

# **Excellence in North America**



The world's leading provider of water services and technologies: from treating and recycling water and wastewater for cities, to recovering valuable resources for industry.





Responsible and sustainable management of hazardous and non-hazardous waste: including collection and treatment to recycling, often leading to the final recovery of waste as materials or energy.

Sustainable energy solutions and consulting services, supporting the economic growth of municipal, commercial and industrial clients while also reducing their carbon footprint.





**2.2 BGD** wastewater treatment capacity managed

**18.1 million** people served with water and wastewater services



**1.3 BGD** water treatment capacity managed



**292,200** dry tons per year biosolids processed



19,400

miles of

underground assets

managed

**416** water and wastewater facilities managed



**840K tons** of hazardous waste managed



450K tons of waste processed for beneficial reuse



**42M lbs** of metals recovered



**2M tons** of sulfuric acid regenerated



**40+** industrial facilities managed



20,000+ meters contracted for utility data management



**\$1.5 billion** annual utility billings under management



**105 BCF** natural gas procurement managed

### Eliminating Pollution Case Studies

VNA helped the city of Rahway respond to levels of some PFAS chemicals in its water by analyzing treatment options and installing a permanent solution, which brought Rahway's water into compliance with New Jersey regulations within weeks.

### Helping Clients Meet Drinking Water PFAS Regulations in New Jersey

### Challenge

- Per- and polyfluoroalkyl substances (PFAS) are a family of more than 4,700 chemicals. Their specific chemical properties have made them commonly used in manufacturing and industrial applications, such as firefighting foam, cleaning products, nonstick cookware and water-resistant clothing.
- PFAS do not break down easily in the environment, and certain PFAS can contaminate drinking water and move through soils. Assessing the contaminant and finding the best treatment is a complex process.
- VNA operates the water system in Rahway, New Jersey, under a professional operations services agreement. The Rahway Water Treatment Plant is a conventional, surface water treatment plant with an average daily treatment capacity of approximately 4.85 million gallons per day (MGD).
- In 2020, the State of New Jersey implemented a Maximum Contaminant Level (MCL) of 14 parts per trillion (ppt) for Perfluorooctanoic Acid (PFOA) and 13 ppt for Perfluorooctane Sulfonate (PFOS) in drinking water, and required long-term treatment solutions to be in place within two years. In response to this timeline, local leaders turned to VNA to provide a costefficient treatment approach.

### Solution

- VNA and the City of Rahway evaluated treatment alternatives, including the effectiveness of the existing granular activated carbon (GAC) for PFAS treatment.
- VNA teamed with a consulting firm to perform bench-scale testing of commercially available GACs and anion exchange resins for PFOA and PFOS treatment, while also assessing innovative powdered absorbents.
- The teams determined that the most cost-effective solution was the optimization of the existing GAC treatment process by replacing the media with a different GAC product better suited for PFAS treatment, and modifying the vessel's underdrains to support the smaller mesh carbon.
- The pilot scale test results indicated that effluent PFOA and PFOS levels could be significantly decreased with the optimized GAC product, including below New Jersey's new MCLs.

- The upgraded PFAS treatment process has proven to be an effective and economic solution for the City of Rahway.
- VNA implemented this solution within a matter of weeks, helping to increase community confidence in their water supply.
- The City of Rahway was able to report to its users that they were in compliance with the prospective MCLs for PFOA and PFOS ahead of schedule.

### **Building a State-of-the-Art Incinerator in Arkansas**

### Challenge

• Two incinerators at a facility that VNA acquired in Gum Springs, Arkansas, were designed to treat spent pot liner, a waste material from the aluminum smelting industry. The 50-year-old units had limited capability to treat additional hazardous waste materials and needed to be replaced.

#### Solution

- VNA is replacing the two incinerators with a state-of-theart thermal facility that will set a new standard for the safe, sustainable handling of hazardous waste materials.
- The plant will also capture waste thermal heat for the generation of electricity to meet the power needs of the plant.
- VNA's goal is for the plant to be 100% self-reliant in electrical power needs through the eventual installation of an onsite field of solar panels.

#### Outcome

• The new facility will process approximately 100,000 tons of hazardous waste materials per year and safely handle and treat many different types of waste streams.

● GLOBAL STATS



- This effort supports the larger Veolia worldwide goal of becoming carbon and energy-neutral by 2050.
- The plant will be a zero-discharge plant, with the ability to treat and reuse all process water and wastewater.

• This includes processing difficult waste streams such as banned refrigerants which have a very high halogen content that can deplete the ozone layer. These substances contribute up to 10,000 times more to climate change than carbon dioxide.



### Resiliency and Adaptability Case Studies

VNA's public-private partnership to operate Nassau County's wastewater system has resulted in cleaner water, safer operations and more resilient infrastructure, while recycling wastewater and biogas to serve the facility and to reduce its footprint for water use and carbon emissions.

### **Protecting the Western Bays in New York**

### Challenge

• The South Shore Water Reclamation Facility in southern Nassau County, New York, was built in 1949 and expanded in 1962. It includes 22 pump stations and 1,300 miles of local collection and trunk sewer lines. The facility was originally built to treat 27 million gallons per day (MGD), far below modern demand.

### Solution

- In partnership with Nassau County, a biological nutrient removal (BNR) system was constructed to lower the level of nitrogen being discharged into the Western Bays by 40%. VNA took over operations of the facility in 2015.
- Several small regional wastewater facilities that directly discharged into the Western Bays were converted to pump

- The fragile ecosystem of Long Island's Western Bays was crippled by high levels of nitrogen from the antiquated treatment process, reducing the natural resilience and biodiversity of the aquatic environment.
- After Superstorm Sandy in October 2012, the South Shore facility was completely devastated.

stations, allowing VNA to treat the additional wastewater at the upgraded South Shore Water Reclamation facility.

• The final treated effluent from the South Shore Water Reclamation Facility from the Western Bays will be rerouted to the Cedar Creek Water Reclamation Facility's outfall, which will discharge three miles offshore in the Atlantic Ocean.

- The South Shore facility today can treat an average flow of 70 MGD, more than doubling its original capacity while simultaneously achieving a 71% reduction of sanitary sewer overflows and sewer blockages. VNA uses methane-rich biogas from our waste digestion process to heat and power our facilities. The biogas prevents approximately 8,200 tons of CO2 per year from being released into the atmosphere.
- Without the excess nitrogen, the health of the aquatic vegetation near the South Shore Water Reclamation Facility has improved, providing lasting benefit to the nearshore aquatic environment.
- Occupational Safety and Health Administration (OSHA) recordable injuries have declined by 93% under VNA management.

### **Recycling Wastewater for Beneficial Use in California**

### Challenge

- Recurring droughts in Southern California have caused urban water users to rethink how they use and manage water.
- With limitations and uncertainty about imported drinking water supplies, the need to ensure adequate supplies for the entire service area, including local industries, is a priority and challenge for the community.

#### Solution

- The West Basin Municipal Water District's Edward C. Little Recycling Facility in El Segundo, California has treated wastewater to be used again for industry, irrigation and other purposes. VNA operates and maintains the facility.
- Using different customer-tailored processes such as filtering, disinfecting, removing ammonia, microfiltration and reverse osmosis, VNA treats wastewater through varying levels of purification to meet the individual needs of our customers. Those needs include industrial operations, irrigation, cooling tower processes, low and high pressure boiler feeds and indirect drinking water, as well as recharging the underground aquifer to replenish its water and create a barrier against seawater intrusion.

### Outcome

- VNA recycles 40 million gallons of wastewater per day at West Basin, including producing 11 million gallons per day of "barrier water" to recharge the West Coast Groundwater Basin, which protects the groundwater from becoming saline due to seawater intrusion.
- The West Basin plant is the only treatment facility in the country that produces five different qualities of fit-for-purpose recycled water that meet the unique needs of West Basin's municipal, commercial and industrial customers.
- The West Basin facility has received numerous awards for its innovative operations, including being honored in 2020 as a Utility of the Future Today by the National Association of Clean Water Agencies, the Water Environment Federation, the Water Research Foundation and the WateReuse Association.
- By using recycled water, the amount of treated sewage discharged into Santa Monica Bay is reduced, improving the environmental condition of our coastal waters and easing the demand for water supply imported from Northern California and the Colorado River.

**Reused Wastewater** 

GLOBAL STATS



### Circular Economy and Decarbonization Case Studies



### **Converting Food Waste into Energy in Ontario**

### Challenge

 Food waste is the single largest category of waste materials disposed of in municipal landfills in the U.S. and Canada. Once in the landfill, waste food decomposes and emits methane, a powerful greenhouse gas.

### Solution

 In 2013, the City of Toronto built a state-of-the-art anaerobic digestion plant designed to divert and revalue a broad range of acceptable materials from landfills and convert them into renewable energy and other beneficial use products.

- VNA operates and maintains the Disco Road anaerobic digestion facility, where it has maintained operational compliance and operated without an environmental incident since the plant's inception in 2014.
- The operation has diverted hundreds of thousands of tonnes of food waste from landfills, while incorporating positive environmental features such as rainwater harvesting to offset the use of potable water and the use of biogas in dual-fired boilers to satisfy the demands of processing and building heating.

- Each year, the Province of Ontario in Canada generates more than 3.7 million tonnes (metric version of U.S. tons) of food and organic waste, roughly 60% of which goes into landfills.
- As one of the largest anaerobic digestion facilities in Canada, Toronto's Disco Road Organics Processing Facility handles 75,000 tonnes of organics per year. The facility uses a wet pre-treatment technology followed by an anaerobic digestion system that produces valuable products such as biogas.
- The project supplies more than 15,000 tonnes of nutrient-rich digestive solids for composting, an inexpensive, sustainable and natural fertilizer alternative that reduces the demand for chemical fertilizers and improves the structure and moisture-holding capacity of soil. The City will be upgrading the biogas generated at Disco into a renewable natural gas to offset its carbon footprint at other City buildings and operations.
- On average, the Disco Road facility eliminates the release of 50,000 tonnes of carbon dioxide into the atmosphere each year the equivalent of removing 10,800 cars from the road.

### Transforming Energy Supply to Meet Our Customer's Climate Goals in Virginia

### Challenge

• Continued use of coal to power DuPont's Spruance facility in Richmond, Virginia, the company's largest manufacturing plant, had the potential to limit DuPont's ability to reach their 2030 climate goals.

### Solution

• VNA converted Dupont's utility infrastructure from coal to natural gas to more efficiently produce steam and electricity to power their plant and significantly reduce their carbon footprint. VNA also upgraded the plant's chilled water capacity, water networks and industrial wastewater treatment system.

### • Dupont engaged VNA to evaluate and implement strategies to reduce greenhouse gas emissions at the Spruance facility.

• DuPont and VNA signed a long-term agreement for VNA to acquire, upgrade, operate and maintain the site's utility infrastructure, apply best practices, and improve efficiencies and reliability.

- The new cogeneration facility helps optimize energy yields to ensure global environmental performance by achieving at least 50% reductions in greenhouse gas emissions compared to using coal, accelerating DuPont's 2030 climate goals.
- The conversion of the power generation system was expected to reduce greenhouse gas emissions by more than 220,000 tons annually and has already exceeded its goal by reducing overall greenhouse gas emissions by 496,773 tons. This is a 60% reduction compared to the coal-fired plant. The reductions are equal to removing more than 100,000 cars off the roads.





### Finding a Sustainable Solution for Eggshells in Pennsylvania

### Challenge

• A major pharmaceutical manufacturing company was searching for a sustainable solution to disposing of eggshell waste used in vaccine production as an alternative to landfills.

### Solution

- VNA used its expertise in regulation, operations and logistics to identify a suitable partner to accept and manage the eggshells for composting.
- VNA and the pharmaceutical company worked closely together to overcome some initial hurdles for the new composting facility,

### Outcome

• Currently, the compost waste is used to create engineered soils for road base and other approved uses.

• The company has a global goal of sending less than one percent of its waste to landfills, but a sustainable eggshell waste disposal solution had been proving elusive.

including identifying new equipment and internal processes for collecting the egg waste and then updating state permits and internal procedures so the waste could be sent to the partner facility.

• VNA continues to partner with the customer to optimize the process, manage data, and further collaborate on achieving their sustainability goals.

### **Recovering Resources from Wind Turbine Blades in Missouri**

### Challenge

- Wind energy is one alternative to meet the world's energy needs while reducing carbon emissions, a major contributor to climate change. Previously, the only solution for handling used wind turbine blades when they reached the end of their usefulness was to send them to landfills.
- Embracing ecological transformation means identifying circular economy and responsible sourcing opportunities, even for green energy solutions. VNA recognized the challenge of helping wind energy come full circle in terms of renewability.

#### Solution

- The VNA team determined that the blades offered an intriguing blend of materials that could be repurposed for manufacturing cement.
- Over the last two years, VNA has been the only company in the U.S. to offer a full-scale, innovative process to dismantle and repurpose wind turbine blades when they have reached the end of their life cycle.

- VNA developed a practical business model for breaking the blades down, cutting and shredding them, and then isolating the components to produce the right fuel blend for cement kilns.
- Once blades are taken down for decommissioning at wind farms, the blades are cut into 40-foot sections. They are then transported to VNA's processing facility in Missouri, where the sections are further processed into small pieces for sorting. Once the components are isolated, they are mixed into the right blend and transported to various cement kilns for fuel.
- An independent analysis of the process found that using the repurposed wind turbine material for cement kiln fueling reduces greenhouse gas emissions at the kilns by as much as 27 percent.
- The VNA team in Missouri has processed over 2,600 blades and anticipates that demand will grow as more blades reach the end of their life cycle.



# **Biodiversity**



### Elwha River Restoration in the Pacific Northwest

Protecting the salmon population in the Elwha River by managing a sedimentation plant after dam removal, helping increase population from 3,000 to 300,000 returning fish per year



### Protecting Nature in Alberta, Canada

Ensuring the protection of the natural environment surrounding a major facility through regular habitat, wildlife and environmental monitoring



### Turtles in Hudson Valley, New York

Helping turtles cross the road in the Hudson Valley during migration VNA is committed to protecting and enhancing biodiversity across its operating footprint. The company has identified dozens of sites throughout the United States that have the potential to support sensitive species or habitats. VNA performs biodiversity audits at those sites and uses that information to develop action plans that help protect and restore the unique variety of animals, plants and microorganisms that make up our shared environment in collaboration with our clients and communities in which we operate.

### Peregrine Falcons in Milwaukee, Wisconsin



Peregrines, native to Wisconsin, began to disappear when the pesticide DDT came into widespread use across North America, which increased the fragility of the falcons' eggs, dropping population levels close to extinction.

VNA operates and maintains one of the largest wastewater treatment facilities in the United States in Milwaukee, Wisconsin. Employees of the facility installed a peregrine nesting box on the facility's roof near Lake Michigan to facilitate the species' recovery. A live-streaming camera monitors the falcons in real time while providing the community with a window into the daily life of this iconic species.

The VNA nest has successfully produced 37 baby peregrines since installation, helping to reestablish the peregrine falcon to this area of the state.

### Honey Bees in Auburn, Alabama



Six years ago, Auburn University contacted the city of Auburn to find public sites that would be willing to host colonies of honey bees for research purposes. The University is studying the effects of honey bee parasites and how they interact with environmental stressors.

As a result, beehives have been installed around the city since 2019, including at the Northside Water Pollution Control Facility, owned by the city and operated by VNA.

Bees are pollinators, so this project is crucial for biodiversity conservation. In addition, this initiative has a positive impact on the community by raising awareness about the importance of biodiversity in our urban environments.

# Expediting Sustainability through **Digital Transformation**

In 2022, VNA continued to modernize and optimize its operations through digital transformation. We launched our first digital roadmap that established our action plan to digitize our business with measurable metrics. In 2023 and beyond, we are accelerating our use of digital solutions including highly advanced, state-of-the-art, integrated technologies to deliver value to all our stakeholders. Below are just two examples of our commitment to more sustainable operations for ourselves and our customers.

### Helping Customers Understand Carbon Footprint and the Cost of Waste through Our Digital Tool



Lack of data or data from disparate systems, platforms and channels can make gaining valuable knowledge and insights both cumbersome and confusing which creates sub-optimal experiences for customers.

VNA deployed remote sensors on several of its municipal water and hazardous waste sites. All of the data, such as energy consumption, waste volume or sustainability metrics, is sent in real-time to our world-class integrated digital platform, Hubgrade, for analysis, algorithm optimization and simulation. Meaningful data visualization is possible thanks to our customer portal.

Through the customer portal, VNA has provided increased transparency and visibility into our processes and operations, allowing our customers and our operations teams to track real-time data and reduce waste volumes and energy consumption by up to 30%.

### **Enhanced Safety through Virtual Reality**



Safety is one of Veolia's non-negotiable standards. Our employees handle various types of waste streams and participate in site-specific activities that require high safety levels at all times.

VNA uses virtual reality (VR) to train our operations teams. Through this technology, employees can project themselves and train on digital reproductions of actual sites remotely, in order to rehearse procedures correctly.

Virtual reality headsets help visualize a site's environment for immersive employee training. On sites where teams were trained through VR, risks of shutdown and accidents were reduced by 25%.

### Resourcing the world

#### © 2023 Veolia North America

Twitter: @Veolia\_na YouTube: @VeoliaNorthAmerica Facebook: veolianorthamerica LinkedIn: veolianorthamerica **veolianorthamerica.com**