

Letter from our Chief Technology and Sustainability Officer

The power of connection to drive scale and impact

Right now, we're living in the most interconnected world we've ever known. Each one of us is linked in some way—by society, culture, opportunity or need; there's an endless list of possibilities. These connections are incredibly powerful tools that spark innovation and transformation. At DuPont, our deep understanding of science and technology and close collaboration with customers enables us to create sustainable solutions that have the potential to change the world. Through a profound connection to purpose, empowering the world with the essential innovations to thrive, we're inspired to take on some of the world's most pressing challenges and create a lasting impact for this generation and many more to follow.

Our 2030 Sustainability Goals have been a focal point of our company since 2019 and are embedded in everything we do. It's evidenced in this year's sustainability report, which tells a story of collaborative networks and progress across our nine goals, with significant impact in three areas—innovation, climate, and diversity, equity and inclusion (DE&I). Highlights from the report include:

- **Connecting with our customers:** To accelerate speed and impact, we aligned our sustainability actions with areas of greatest importance to our customers through a needs-based assessment, creating a more focused and direct link to solving sustainability challenges across the value chains in the industries and end-markets we serve. For example, mobile device antennas made with DuPont's Pyralux® polyimide laminate solutions tackle the dual challenges of delivering high signal fidelity at high frequencies while significantly improving manufacturing yields, reducing industrial waste and lowering cost to make 5G phones more affordable.

- **Connecting with our communities:** Despite the challenges of COVID-19, employees at our operating sites around the world continue to be active in communities where they live and work, including more than 450 charitable projects in 2021 contributing to impacting more than 3.5 million lives since 2020.

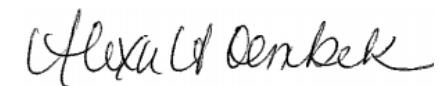
- **Connecting with industry partners:** We partner with organizations around the world in support of global sustainability initiatives. In 2021, we joined [RE100](#), a global initiative that brings together 320 of the world's leading businesses committed to sourcing 100% renewable electricity in their global operations by 2050. We're also continuing our work as a member of the [CEO Climate Dialogue](#), a collaboration between large companies and NGOs working together to advance effective climate legislation in the United States.

- **Connecting with suppliers:** We've long been committed to supplier diversity as an essential business strategy and seek out opportunities for small businesses, minority-owned, women-owned, veteran-owned, disabled-owned, LGBTQ+ owned, among others. In 2021, we spent approximately \$395 million with 2,200 small and diverse suppliers in the US.

- **Connecting to our future:** We offer employees the ability to contribute meaningfully, through challenging experiences, flexible work practices and an open environment of mutual respect. We understand that our future is predicated on what we do now to foster an inclusive culture, and our leadership team is deeply involved in championing our employee resource groups, expanding their global participation, and identifying intersections. Our future also relies on attracting diverse and underrepresented talent. Throughout the year, we enhanced our existing relationships with historically black colleges and universities, minority serving institutions, and STEM and diversity organizations. Our DE&I commitment is intertwined at the most fundamental level with our Core Values and talent management philosophy.

I'm incredibly proud of our team for their accomplishments and grateful for the insights and partnership from multiple stakeholders around the world. While our report is a look back in time, we know the world is constantly changing and to be successful, we have to learn even faster. We're looking beyond today and well into the emerging needs of the future to identify gaps and opportunities. That's why our report includes new additions like the climate Scope 3 emissions narrative and data as well the TCFD Index on climate risk assessment and preparedness. We've conducted external performance assessments, revised our Enterprise Risk Management strategy, enhanced our governance practices, directed materiality assessments, and engaged our stakeholders for powerful insights. All of this information and more directs our 2022 priorities for swift and precise action, now.

While we're proud of all we accomplished last year, we recognize there's much more we need to do. Commitment runs deep within our company, starting at the very heart of why we exist, our purpose. I encourage you to read the report to learn more about our contributions and I invite you to connect with us to discover what we can do together. I speak for all of us at DuPont when I say we're excited, energized and incredibly honored to be part of this work.



Alexa Dembek

Chief Technology and Sustainability Officer



Connected for tomorrow

Innovate for good

The UN SDGs paint a bold vision for a just and sustainable world by 2030. Success requires commitment and investment from all companies and governments including unprecedented levels of connection and collaborative innovation across and between sectors. At DuPont we commit to using our innovation expertise to work on important and valuable market-based challenges aligned with the UN SDGs. Our innovation strategy advanced significantly in 2021 to ensure healthy core businesses by increasing relevance in existing value chains with new products and applications, and by extending into high growth markets with unmet and valued sustainability challenges.



Our sustainability strategy

Our company

Innovate for good

Protect people and the planet

Empower people to thrive

Ethics, respect, and responsibility

About this report

Appendix

In 2021, we prioritized sharpening insights into customers' sustainability-driven innovation needs. Our approach was to engage in a disciplined process with strategic customers and end users around the world to better understand their needs and to strengthen our innovation platforms directly linked to solving sustainability challenges in the industries and markets we serve. We recognize the need for agility and the urgency of addressing connectivity and digital solutions, climate change, access to clean water and healthcare, resource efficiency and sustainable production. The feedback from our customers, together with insights from multiple external stakeholders, helped align our innovation platforms for greatest impact and increased investment. The diagram to the right summarizes our strategic growth choices into established (5) and emerging (3) innovation platforms that align to specific SDGs and our global customers' most pressing needs.

In addition to our innovation portfolio choices, we're taking action by increasing critical science-based competencies such as lifecycle assessment (LCA), circular design and green chemistry, and by further embedding sustainability in our enterprise and business innovation strategies.

These innovation platforms support the three goals of our Innovate pillar: Delivering solutions for global challenges, enabling a circular economy, and innovating safer by design, as well as our other goals and actions to create a more sustainable world. Throughout this report we include examples of DuPont colleague's expertise, passion, and ingenuity in action.

For more *Innovate for good* case studies, visit our [website](#).

DuPont innovation platforms

Established platforms

Clean water

Solutions for global water challenges for purification, conservation and reuse

- Water Optimization
- High value separations

Personal protection

Advanced multi-threat protection with optimal comfort and durability

- Industrial workers
- Front-line responders
- Military Personnel

Advanced mobility

Solutions to enable electric and smart vehicles, solving critical challenges in

- Thermal management
- Battery assembly
- Connectivity

High performance computing

High speed data solutions that deliver high signal integrity by enabling

- Advanced nodes
- Packaging architectures
- Printed circuit board (PCB) designs

High frequency connectivity

Device & infrastructure connectivity solutions for fast, reliable transmission of vast quantities of data

- High signal integrity
- High bandwidth (data)

Emerging platforms

Applied healthcare solutions

Advanced material solutions that enable

- Single use systems
- Drug delivery
- Sterile packaging

Sustainable and productive construction

Integrated building envelope solutions that enable

- Energy efficiency and weatherization
- Durability and fire resilience
- Build cycle reduction and quality install

Internet of things

Display and wireless solutions that enable transformational improvement in

- User interface
- Machine learning
- Augmented reality





Q&A

Shawn Hunter, Global Sustainability Leader, DuPont Water & Protection

What excites you about your role as Sustainability Leader in the Performance Building Solutions & Corian® Design business?

There are so many things that excite me about my role and our sustainability work! It's a privilege to be able to work with so many colleagues who are passionate about advancing sustainability through their work, and we've seen that excitement materialize more and more in the market—the pull for sustainability from our customers has never been stronger. Also, the work we've done in our business to activate our sustainability DNA by defining our sustainability strategy, and the alignment that we have within our business leadership, is making it more actionable and easier for our team to understand and get involved. That's one of the most exciting things, seeing the passion the people in our business have for this work.

How has your team's innovation helped advance DuPont's sustainability goals?

Our awesome innovators have delivered some incredible innovations recently that are enabling huge reductions in embodied carbon and GHG emissions associated with our Styrofoam™ Brand Insulation and Froth-Pak™ Spray Foam products. Not only are these innovations helping our customers advance their climate goals, but they also drive significant GHG reduction for our company. I'm super proud of the teams that made this happen and thrilled to see the Low GWP Froth-Pak™ Spray Foam innovation recognized with ACC (American Chemistry Council) and ASC (Adhesives and Sealant Council) awards last year.

Can you share more about how we create value for customers through sustainability?

In the Performance Building Solutions & Corian® Design business, our customers are looking for innovation that helps them drive the transition to sustainability in the built environment. We can help the most with climate, circularity, and solutions that are safer by design. On climate, for example, we will continue to innovate for lower embodied carbon solutions and provide energy efficiency solutions that help drive total carbon of

buildings to zero. Sustainability is core to our innovation strategy, and we will continue to seek partners and collaborators who are eager to work toward our shared vision. We've seen some great examples of mutual customer value creation based on sustainability, and our continued focus here will lead to even more innovation and sustainability win-wins in the future.

What's next for you and your team?

We've made some great progress recently which we shared with our customers in our inaugural Performance Building Solutions & Corian® Design Sustainability Update and we have much more to do. With our vision set and strategy articulated, we are working to further activate and nurture the sustainability DNA in our organization to accelerate progress against our goals and cultivate a broader ownership of sustainability throughout the organization. We also need to drive capability development around sustainability, helping our team better understand what it looks like to innovate for the circular economy or how to apply green chemistry to develop a solution that is safer by design, for example. Already today we have some pretty cool projects in the pipeline that are aimed to advance all our innovation sustainability goals, and I can't wait until we are able to share more about each of them!





Goal

Delivering solutions for global challenges

Align 100% of our innovation portfolio to meaningfully advance the UN SDGs and create value for our customers

2021 key accomplishments

- Advanced the value creation potential and speed to market for our sustainability innovation platform and operations projects based on direct customer feedback and insights on climate, circularity, safer by design, water stewardship, and responsible procurement
- Created an employee toolkit including ESG highlights, case studies, and improved disclosure capability to better engage and support solutions to customer sustainability needs
- Continued to accelerate culture change and build critical science-based competencies such as lifecycle assessment (LCA), circular design, and green chemistry, to advance and quantify the sustainability impact of our innovations for good
- Several 2021 award-winning innovations including, B-free™ technology for water treatment systems, a new building solutions Froth-Pak™ foam formulation that achieves 99% reduction in global warming potential, and BETAFORCE™ 2800 adhesive product for vehicle electrification

Advancing sustainable innovation

In 2021, we continued to improve our agility and discipline to drive sustainable innovation outcomes across our innovation platforms, businesses, and global value chains. Part of the work involved advancing critical science-based competencies such as lifecycle assessment (LCA) through strategic external partnerships and customer engagement. The capability to assess, innovate, and communicate the sustainability benefits of our products across our innovation platforms is important for our external stakeholders and our own innovation teams. In addition, we worked to embed tools and processes that advance sustainable innovation at all levels of our organization, so that each of our unique businesses have the insight and ability to develop impactful sustainability strategies that address the specific challenges facing their customers and markets. In 2022, we intend to bring innovation insights and assessments together in a portfolio sustainability assessment (PSA) process that will enable DuPont to better track progress against our sustainable innovation 2030 goals.

Insight from strategic customer engagement

In 2021, we completed multiple focused customer engagements with direct and end use customers to accelerate our learning, widen the opportunity space to create value and refine our sustainable innovation priorities. We used the same set of environmental, social and governance (ESG) issues from our materiality assessment to gain insight from customers on their most important and valuable innovation challenges. The

insights come from over 30 leading sustainability-driven customers representing multiple end markets including automotive, semiconductors, water, protection, consumer electronics, industrial and more.

Overall, the results confirmed that our 2030 Sustainability Goals are as important to our customers as they are to our DuPont operations, communities, and employees. In addition to the climate-adaptive solutions DuPont provides to various end markets, in 2021 we joined RE100, completed a Virtual Power Purchase Agreement (VPPA) to add renewable energy to the North American grid, and made specific business-level commitments to procure renewable electricity. In 2021, our Interconnect Solutions (ICS) business, which is part of the Electronics & Industrial (E&I) business, set a business ambition of Zero by 2030, with the goal of reaching carbon neutral operations for the global ICS business segment by 2030. As of September 2021, the ICS business achieved the equivalent of 95 percent of global operations powered with renewable electricity.

Innovation for good case studies

DuPont innovations continue to positively impact the world, helping our customers and society tackle strategic global challenges. The following case studies exemplify our spirit of innovation and our science-based approach to innovate for good.

For more case studies visit our [report website](#).

Case study

Climate innovation enabling renewable energy

The largest source of GHG emissions from human activity in the United States is the burning of fossil fuels for electricity, heat and transportation. Electricity production generates the second-largest share of GHG emissions, accounting for 25% of total annual emissions. As the world seeks to power everything from smartphones to electric vehicles with lithium-ion batteries, traditional lithium brine extraction processes have presented environmental challenges—from the heavy use of chemicals to large requirements for water. In 2021, DuPont Water Solutions began a collaboration with Vulcan Energy Resources, a lithium and renewable energy project developer, to test and scale up Direct Lithium Extraction technologies for Vulcan's world-first Zero Carbon Lithium® extraction process. We will leverage our portfolio of Direct Lithium Extraction products and process solutions to help Vulcan Energy produce battery-quality lithium hydroxide from its geothermal brine with minimal environmental disruption. DuPont Water Solutions has several other projects in different stages of development to make the mining, development, and recycling of global lithium resources more sustainable.

In addition to our work to enable lithium-ion batteries, DuPont has a long history of enabling solar energy generation. Harnessing abundantly available solar energy to generate electricity is an important tool in reducing the GHG emissions that contribute to global climate change. With solar installations increasing around the world, total global solar capacity has reached over 700 gigawatts. DuPont™ Tedlar® materials provide critical, life-extending protection to photovoltaic modules, safeguarding the solar panel and enabling long-term system performance for 30 years or more.



Case study

Innovation enabling reliable 5G connectivity and high-performance computing

High frequency 5G devices and infrastructure are the foundation of today's connected world. High frequency connectivity is a critical enabler of UN SDGs related to work, quality education, public safety, health, and well-being. DuPont innovations are at the center of enabling high frequency connectivity including electromagnetic interference shielding products that prevent cross-talk and antenna materials that receive and transmit high frequency, high bandwidth signals.

Mobile device antennas made with DuPont's Pyralux® polyimide laminate solutions tackle the dual challenges of delivering high signal fidelity at high frequencies (>6GHz) while significantly improving manufacturing yields, reducing industrial waste and lowering cost to make 5G phones more affordable. Versus traditional antenna materials, the superior, relative performance of the DuPont Pyralux® improves as frequencies increase, which is important as telecom providers move from first generation 5G technologies operating at 6GHz to next generation 5G technologies operating at frequencies of 28GHz (mmWave) and above. Additionally, DuPont engineers and scientists continue to innovate the Pyralux® product line for increased sustainability, such as transitioning to recycled copper foil to lower footprint, while ensuring that high frequency connectivity needs for work, school, and safety will be met now and well into the future.

DuPont Semiconductor Technology innovations are fundamental to delivering the advanced node and advanced architectures of today's cutting-edge logic and memory devices, enabling them to be 5 times more power efficient than just 7 years ago. DuPont CMP pads and slurries ensure ultra-low defect wafers (flatness and uniformity) while photoresists, advanced cleans, etchants, and metallization products deliver fine line features and packaging materials that protect and enable heat flow out of chipsets. DuPont's materials also enable the shrink (miniaturization), stack, and heterogenous integration strategies that chip manufacturers need to take Moore's Law to the next level—delivering more computing power while consuming less power per bit, at a cost that makes the benefits of the digital technologies more accessible to all.

Case study

Water innovation for more effective and sustainable desalination

Globally, more than [300 million](#) people now get at least some of their water from desalination plants. Some of the largest challenges to further expanding desalination efforts are the cost-intensive plant operation and the hazardous saltwater brine created from the chemicals and salt that remain after the reverse osmosis process. In 2021, DuPont Water Solutions was awarded a three-year grant from PUB, Singapore's National Water Agency on behalf of Singapore National Research Foundation, to determine how [Desalitech™ Closed Circuit Reverse Osmosis](#) (CCRO) technology can make their purification and reuse of brackish water and seawater more energy efficient, flexible, and reliable. In general, CCRO offers 90-98% water recovery with reduced energy usage and superior biofouling resistance.

DuPont Water Solutions won the Innovation of the Year award at the 2021 Appliance & Electronics World Expo for TapTec™, a high-flux RO membrane that improved water permeability by ~30% by balancing the element's active area efficiency and size

DuPont Water Solutions is also the first and only supplier to offer dry-tested seawater reverse osmosis (SWRO) membranes. "Dry" elements increase membrane shelf life, offer more flexible storage options, and require fewer chemicals. These dry elements are lighter weight delivering shipping-related GHG emissions savings equivalent to 7 million auto miles driven for a typical large-scale desalination plant installation. We're also working with Waterise on a [completely new approach to desalination](#), using subsea desalination technology, which use the natural hydrostatic pressure found at the depths of the sea to run the process, reducing the energy requirements by 40%. Subsea desalination also requires 80% less coastal land than terrestrial plants, requires fewer pretreatment chemicals, and eliminates the discharge of concentrated brine into coastal waters.



Desalination plants around the world depend on durable DuPont™ reverse osmosis and ultrafiltration membranes.



Goal

Enabling a circular economy

GRI 301-103

Integrate circular economy principles into our business models considering life cycle impacts in the markets we serve

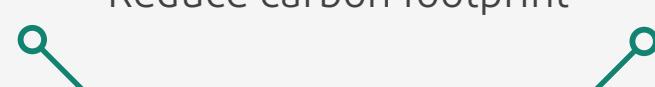
2021 key accomplishments

- Reduced carbon footprints of our products, for example Delrin® Renewable Attributed R&D 100 award winner
- Reduced waste in our operations and along the value chain by diverting 1,230 metric tons of material from landfill and upcycling into higher value applications—a 51% increase over prior year
- 71% of our sites have 4R (reduce, reuse, recycle & recover) programs

Maximizing the circularity of a product throughout its lifecycle is quite complex, with different considerations at each stage and for each market where a material is used. The road to a truly circular economy will require unprecedented processes and collaboration to understand and overcome the barriers to adopting circular techniques. Industry-standard methodologies are still being formed requiring customers, suppliers, and others in the ecosystem to connect and create tailored solutions to meet the needs of each product and industry.

Progress against our goal of Enabling a Circular Economy is integral to advancing our Delivering Solutions to Global Challenges, Acting on Climate, Leading Water Stewardship, and Safer by Design goals. Through our technical expertise, we seek to discover and commercialize new ways to divert waste, scrap, or unused materials from landfill and transform or repurpose waste into higher-value applications for truly circular processes. DuPont's portfolio already includes many technologies developed specifically to reuse material—one of the fundamentals of a circular economy. We continue to pursue waste reduction solutions, new beneficial uses of waste, and recycling options for our customers and our own operations.

In 2021, we established a market engagement campaign to understand our customers' critical sustainable innovation needs, calling out circularity as a key focus of inquiry. Feedback confirmed that enhancing circularity is one of our customers' top concerns, and that "circularity" has different focus areas, challenges, and solutions, depending on the market segment. We used this input to address three circularity challenges which will be incorporated into our innovation, operations, and new business models in 2022 to ensure we prioritize the best solutions to meet key global markets' evolving needs. We will partner with others along the value chain to refine methodologies and solutions to embed circular economy principles into our processes. These three circularity challenges are:

-  Reduce carbon footprint
-  Reduce waste in our operations and across our value chains
-  Design for circularity with our customers

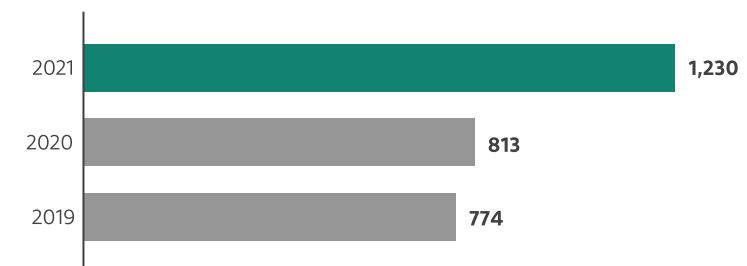
DuPont second life materials

GRI 301-3

DuPont Second Life Materials (2LM) has unique capabilities to explore, incubate, and accelerate the transition of our businesses from linear to circular models. DuPont's innovative materials often retain their inherent performance properties and benefits even after initial use. To leverage these attributes, the 2LM team works closely across our businesses and customers to identify opportunities to develop and deliver technical solutions that simultaneously reduce waste to landfill at the end of life and realize financial benefits. Additionally, we worked to refine our processes, capabilities, and scope to expand our impact and implement more circular business models going forward. This should lead to additional growth from new and adjacent applications in the years to come.

In 2021, 2LM partnered with various businesses to divert approximately 1,230 metric tons of material from landfill and upcycle it into new applications and markets. This represents a 51% increase vs. 2020. The chart below demonstrates how 2LM prevents waste by redirecting scrap materials into new products.

Second life materials scrap diverted from landfill (metric tons)¹



¹ The scrap that Second Life Materials has diverted from landfill and upcycled is above and beyond the 4R production waste programs mentioned in the next section

Striving for zero waste

GRI 306-103, 306-1, 306-2

Throughout DuPont, we share a vision to attain "zero waste" operations. We are working to define and implement solutions for each of our sites—not only inside our plants, but also across the complete lifecycle of the products we make. And by working closely with our partners, we're already achieving early promising results.

By 2030, we aim to have 4R (Reduce, Reuse, Repurpose, Recycle) waste management and reduction programs at all of our sites. Prioritizing sites on the basis of waste volume, hazard, and reclaim value, we identified our top 10 sites and began developing specific milestones for reducing hazardous waste at these sites. In 2021, 71% of our sites had 4R programs in place. We plan to extend to non-hazardous waste improvements in 2022 and will examine the feasibility of replicating programs that show early success across our other operations.

Our waste reduction efforts build on years of continuous improvement driven by the ISO 14001 certification process, by our strategic examination of commercial 4R opportunities, and by external and internal standards. One such standard, the DuPont Waste Management Facility Selection standard, defines our practices related to the handling and disposal of process-related waste.

 We've made a global commitment to implement Operation Clean Sweep blue (OCS blue) to prevent the discharge of plastics into marine and freshwater environments. Read more about our OCS blue commitment in our [Leading Water Stewardship section](#).

Case study

Healthcare circular economy

The healthcare industry requires a broad spectrum of materials to manufacture packaging solutions for medical device, diagnostic, and pharmaceutical products. Reduction of packaging waste is an increasingly important topic for the industry as it seeks to achieve a circular economy. In 2021, DuPont partnered with one of our medical product manufacturers to design a Tyvek® packaging solution that addresses industry and consumer needs while having a measurable, positive impact on our shared sustainability goals. The customer wanted to optimize the design and packaging of their IV sets, which are used to deliver different liquid infusion therapies, including nutrients, pain management, anesthesia, and more.

The infusion sets presented unique challenges for the packaging engineering team due to the varied structure of the components included in the kits—soft, long, tubing and alternatively rigid and potentially sharp components, all need to be encapsulated in one flexible, light-weight package. After extensive evaluation and testing, the team found that a combination of DuPont™ Tyvek® 1059B and formable coextruded nylon film provided the right balance of strength, durability, and manufacturability.

The new package design and materials selection enabled up to 33% reduction in packaging surface area while maintaining performance. These changes also realized up to 30% more production throughput due to more packages per pallet load, with no compromise to the sterile integrity of the product. Increased packing density also reduced transportation and distribution costs.

Sustainability across the lifecycle

By using Tyvek®, there are opportunities at every stage of a product's lifecycle to improve sustainability



Materials selection and packaging design

A novel, compact design utilizing uncoated Tyvek®1059B with a nylon bottom web enables device integrity and peace of mind by providing best-in-class puncture resistance, abrasion resistance and clean peel.

Production and handling

30% higher production and sterilization throughput through higher processing speeds, shorter changeover times and the ability to fit more units per pallet.

Distribution

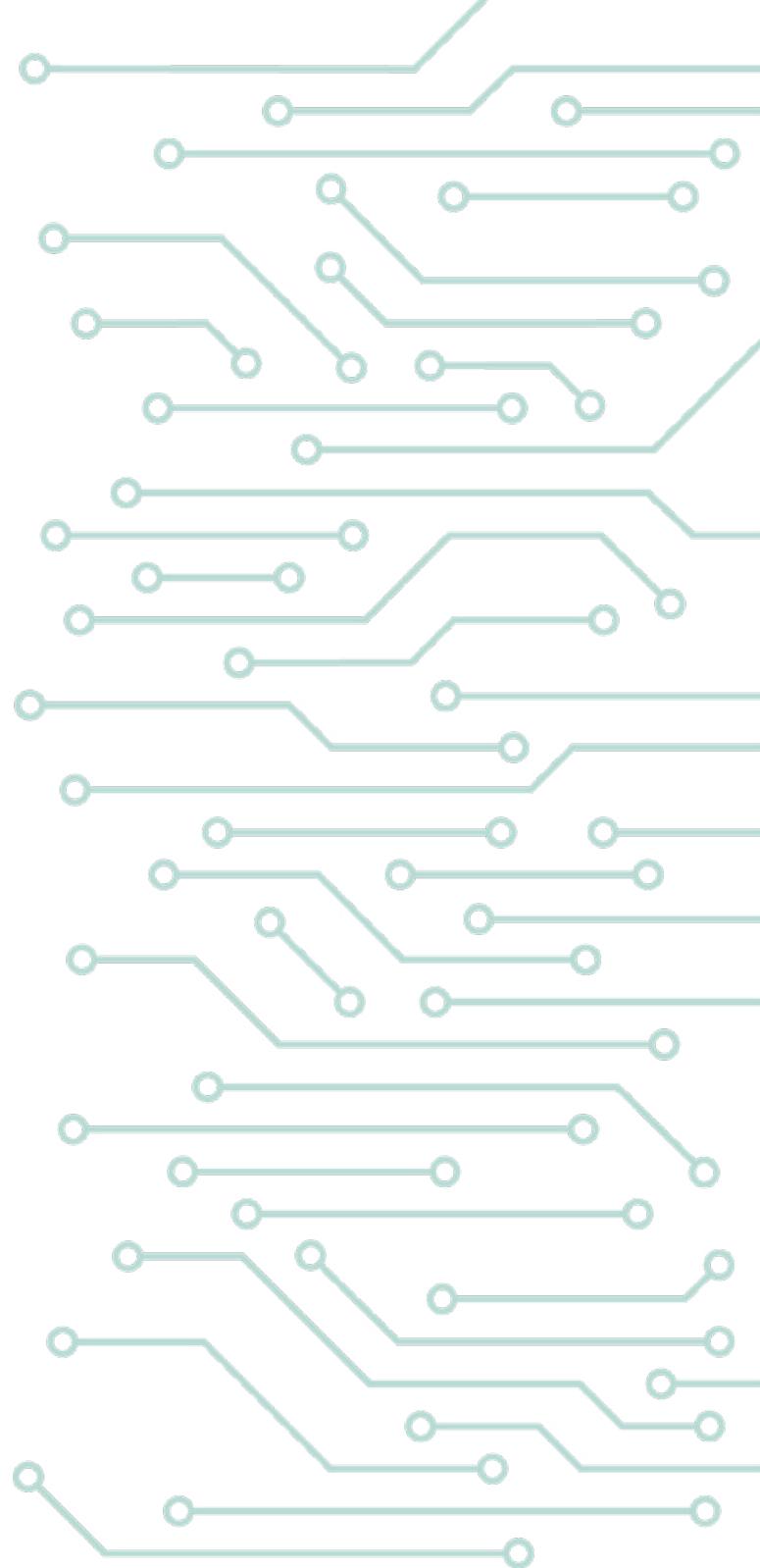
Increased packing density resulted in lower transportation and distribution costs while successfully meeting transportation and distribution testing requirements.

Product end use

Healthcare workers receive smaller amounts of packaging, while receiving the same product quality and performance.

Waste reduction

A compact design with more robust materials reduces primary as well as secondary packaging, minimizing the volume of post-industrial and post-consumer waste.



Waste data

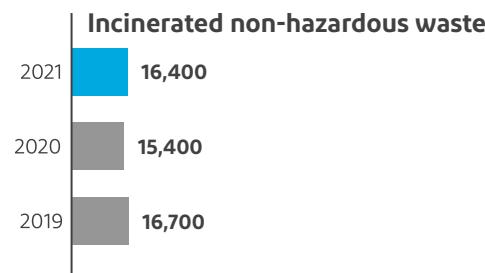
GRI 306-3, GRI 306-4, GRI 306-5, SASB RT-CH-150a.1



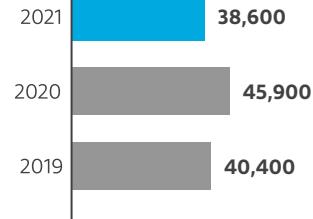
2021 total waste by type (metric tons)¹

217,000	Non-hazardous waste disposal
72,000	Hazardous waste disposal
89,300	Beneficial use of waste

Non-hazardous waste disposal by type (metric tons)¹



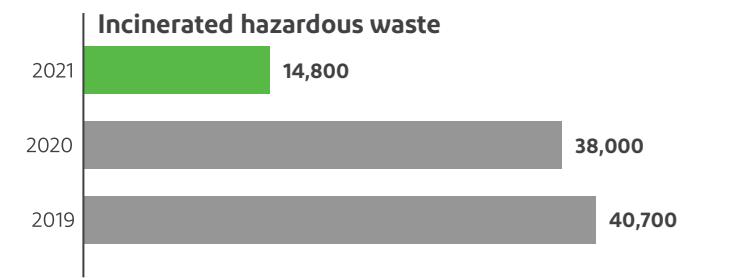
Landfilled non-hazardous waste



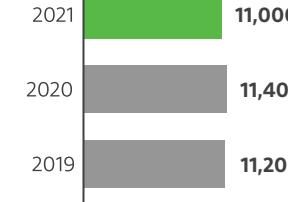
Other disposal methods



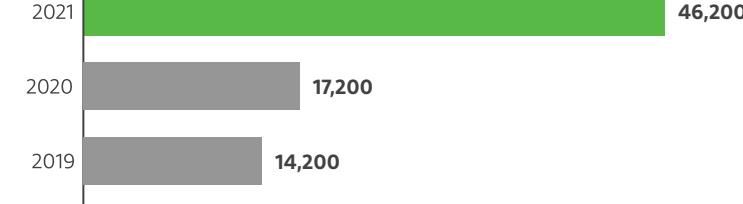
Hazardous waste disposal by type (metric tons)^{1,2}



Landfilled hazardous waste

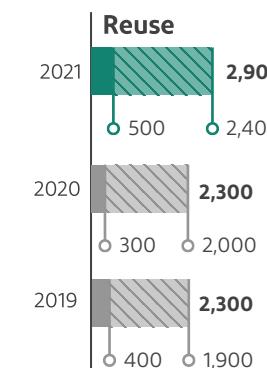


Other disposal methods

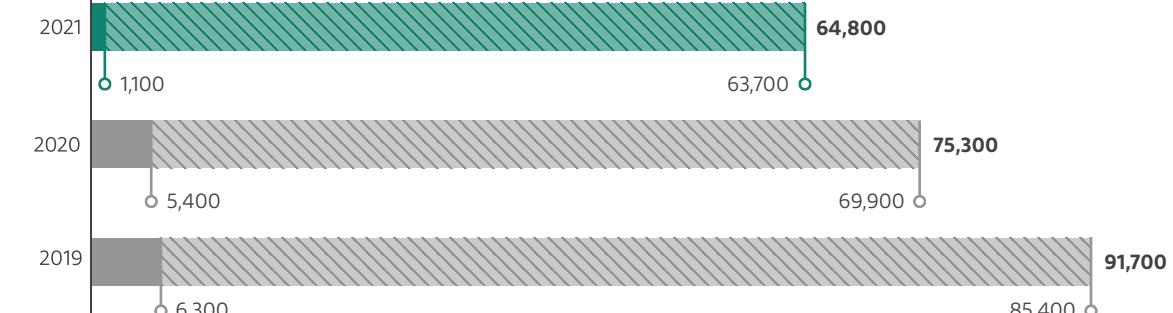


Beneficial use of waste by type (metric tons)

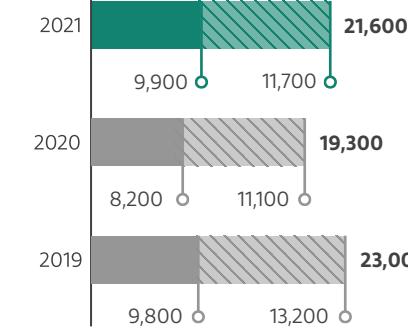
Hazardous waste Non-hazardous waste



Recycling, reclamation, and recovery



Energy recovery



¹ Incinerated waste only includes hazardous/non-hazardous waste that was not burned for recovery. Incinerated waste that was burned for energy recovery is reported as beneficial use of waste—energy recovery.

² A portion of hazardous waste shifted from incineration to biotreatment in 2021 and is reflected in other disposal method chart.



Goal

Innovating safer by design

GRI 416-103, SASB RT-CH-410b.2

Design 100% of our products and processes using sustainability criteria including the principles of green chemistry

2021 key accomplishments

- Updated Product Stewardship and Regulatory chemical management policy to align with dynamic external changes in Substances of Concern, to expand scope to include existing and future product portfolio risk assessments, with outcomes of increased transparency and actions to avoid, mitigate, or eliminate risk
- Increased action to avoid substances of concern in new product developments and to pursue additional approaches to eliminate substances of concern from existing products
- Fostered a culture of Innovating Safer by Design through broader employee engagement and targeted global training of innovators

Safer and more sustainable, by design

Our Product Stewardship commitment drives us to ensure that the products we bring to the market are safe for use across their life cycle, compliant, risk-managed, trusted, and contribute to a more sustainable society.

We are taking steps to build on, extend and evolve our industry-leading product stewardship program to further increase product safety, transparency, and sustainability. We are expanding and formalizing our corporate and business-level chemical management processes, incorporating green chemistry principles into our innovation culture, and leveraging value chain partnerships to increase product sustainability outside of our own operations.

We recognize the importance of working with our customers and suppliers to understand their needs so that our products are safe and more sustainable through every phase of the value chain, from sourcing raw materials through end of useful life.

Our rigorous and comprehensive Product Stewardship and Regulatory (PS&R) Management System is at the core of our commitment to product safety and risk management and is a critical part of our new product innovation process. Every DuPont business uses the PS&R Management System globally to assess and manage potential risks associated with their products and to regularly identify opportunities for improvements throughout the product life cycle.

Business and Corporate leadership annually review the adequacy and effectiveness of the PS&R Management System and make changes to enhance and improve stewardship performance throughout the organization.

The ACC Responsible Care® Product Safety Code is integrated into our PS&R Management System. Consistent with our commitment to Responsible Care®, DuPont businesses routinely audit PS&R Management Systems to ensure effectiveness and alignment with the ACC Product Safety Code. As an added level of assurance, we conduct third-party audits of a sampling of our businesses, US chemical manufacturing sites, and headquarters every three years to verify that our Responsible Care® program continues to meet or exceed the ACC's requirements. In 2021, a third party audited our product stewardship program and found it to be in conformance with ACC Product Safety requirements. We will conduct the next external audit in 2024.

Product stewardship reviews

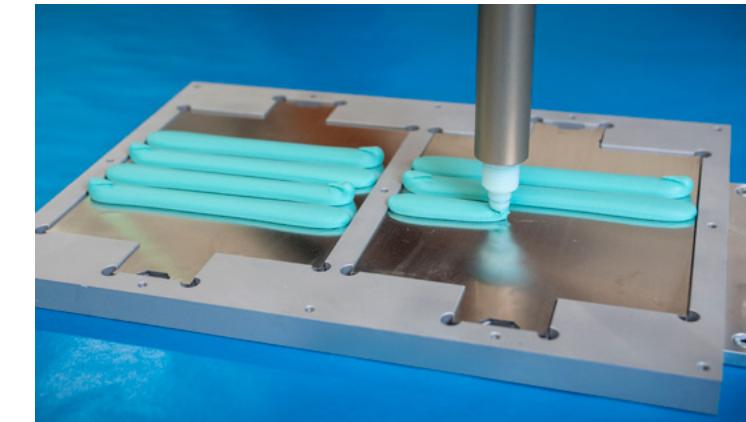
GRI 102-11, 416-1, 416-2

As part of our PS&R management system, all new and existing products and services undergo product stewardship reviews that include detailed health, safety, and environmental impact assessments. We conduct product stewardship reviews to assess and manage risk prior to commercialization and conduct additional reviews at a frequency commensurate with overall product risk. The process also requires businesses to conduct product stewardship reviews when significant product changes occur, which may include new product use or application areas, manufacturing asset changes, regulatory changes, or other new product information.

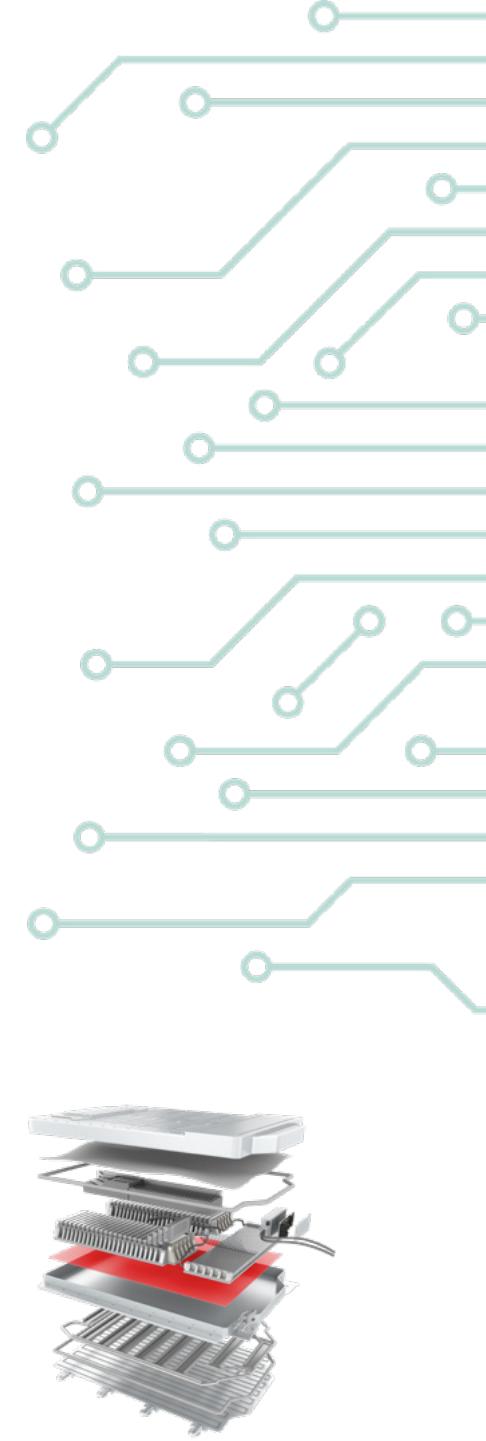
In 2021, we began delivering several innovative solutions that demonstrate our commitment and journey to safer and more sustainable products. For example, the DuPont Mobility & Materials business has developed and commercialized primer-free BETASEAL™ glass and plastic bonding systems that help significantly reduce the use of solvents at customer assembly or repair facilities. Additionally, we offer phthalate-free BETASEAL™ glass and plastic bonding sealers that help avoid the use of phthalate plasticizers. For EVs, our all-new DuPont™ BETATECH™ thermal interface material is designed to allow easy removal of the expensive battery modules, enabling repair, reuse, repurpose, or ultimately recycling.

Our global commitment to PS&R principles drives timely and extensive reviews, with prompt and diligent follow-up to any findings.

Worldwide training for all PS&R personnel and mandatory adherence to PS&R management system standards ensure a detailed stewardship assessment of all new products prior to commercialization. More than 1,400 product stewardship reviews were completed during calendar year 2021. From these, one non-compliance incident associated with product health, safety, or transparency regulations was identified and resolved.



DuPont™ BETATECH™ thermal interface material being robotically dispensed.



Highlighted above, BETATECH™ thermal interface material is used in electric vehicle battery applications to better manage heat.

Advancing our chemical management processes

We actively monitor the rapidly evolving chemicals regulatory landscape together with feedback and insight from our customers, investor-oriented rating agencies, and society to shape our chemicals management processes.

For years, DuPont chemists, toxicologists, and PS&R professionals have used METanomics Information System (METIS), an integrated database and robust chemical screening tool that provides easy access to chemical and global regulatory information including key physical property and important toxicology data. METIS also allows DuPont researchers to identify and take steps to avoid Substances of Concern (SoC) and drive smarter selection of chemicals during development of new applications, new formulations, and new products while also providing the critically needed data so appropriate risks and stewardship reviews can occur.

In 2021, we implemented a robust corporate chemical management policy to better integrate METIS information into how we manage SoC. Combining internal and external views of science-based and societally perceived risk factors, we created an aggregated risk assessment framework to evaluate our portfolio. This framework allows us to assess each product across three main dimensions of risk—right to operate, product de-selection, and potential exposure to humans or the environment—to assess impact and likelihood of risk throughout the entire lifecycle of the products we market. By contextualizing market-, customer- and regulatory-specific risk factors with toxicology data, we provide our scientists with actionable information to carefully avoid or eliminate risk.

We integrated the Chemical Management Policy into the new product development processes as a decision-making tool and a way to further evolve the innovation culture across all DuPont businesses. This corporate-level policy works in conjunction with business-level policies like the Chemical Selection and Use Policy implemented in 2021 by our Electronics and Industrial (E&I) segment, which enforces cross-functional collaboration to assess current or available product design options and investigate safer alternatives, with the goal of improving the sustainability of E&I products and processes. We implemented the SoC Framework with DuPont employees involved in stewardship reviews and the design of new products through training sessions, web-based resources, and a roll-out for the new corporate policy governing the framework. We aspire to avoid, reduce, or eliminate SoC in our products and processes to further improve the safety, transparency, and sustainability of our innovation portfolio.

Consistent with our chemical stewardship commitments, we launched the [DuPont Chemical Awareness toolkit \(CAT\)](#) free of charge in 2021. The Chemical Awareness toolkit provides rapid access to chemical information for product stewards, risk assessors, toxicologists, chemists, microbiologists, engineers, and other researchers. It includes screening tools that provide chemical information including toxicological hazards, environmental fate, persistence & bioaccumulation, occupational exposure limits, government regulations, and public perception.

Aligned with our PFAS commitments, we pursued an aggressive multi-year effort to qualify multiple fluorine-free foams with the specific materials used in our operations, as part of our effort to eliminate the purchase and use of firefighting foams made with PFAS. The result was the replacement of both fixed and portable fire protection systems with fluorine-free alternatives. DuPont continues to

collaborate with foam manufacturers and local authorities to qualify the new fluorine-free foams for regulatory approved use and plans to implement them as they become commercially available in each country. As of December 2021, we successfully removed and replaced Aqueous Film Forming Foam (AFFF) containing PFAS with fluorine-free firefighting foam across operations under our control, where legally allowed.

Additionally, as part of our PFAS commitments, DuPont pledged \$6 million in unrestricted research funding (\$2 million/year over 3 years) to the National Science Foundation (NSF) to fund innovative PFAS remediation research. The NSF program called ERASE PFAS which started in 2020 has funded nine research programs that focus on the fundamental studies and the development of next generation, innovative technologies to remediate PFAS in the environment.



DuPont™ Tedlar® materials provide critical, life-extending protection to photovoltaic modules.



Curating a culture of safer by design

To embed our safer by design priorities into our innovation culture, we partnered with Beyond Benign to design a suite of educational tools, including a six-part multi-media training course on the 12 Principles of Green Chemistry. We piloted the Green Chemistry Course with select employees in 2021 and intend to expand to all employees via our company-wide virtual learning system in 2022. We also developed the DuPont Sustainability Intelligence Plaza, a web-based tool where DuPont employees can access the latest sustainability trends, regulations, news, and reports.

Additionally, one business uses a custom Sustainability Guidance Tool which evaluates elements of product sustainability early in the product design and development process across the portfolio. This tool addresses questions such as toxicity, value chain process safety, greenhouse gas emissions, and raw materials choices. The tool also evaluates the potential for the commercialized product to support measures to address global challenges, including the needs of citizens in emerging economies. The tool enables more sustainable choices in product development and design.

Product transparency and labeling

GRI 417-103, 417-1, SASB RT-CH-410b.1

Recognizing increasing needs for product information and transparency globally, DuPont's PS&R management system requires compliance with global and local Safety Data Sheet (SDS) and labeling information requirements. SDS and label compliance management are critical components of product safety. Every DuPont product has an SDS that provides essential information on chemical and physical

characteristics, toxicology, safe handling, and spill and emergency response measures and contact numbers where the product is sold. We regularly review, update, and audit DuPont Safety Data Sheets and product labels to ensure compliance with relevant global and local regulatory and legislative requirements. We also offer further compliance-driven communications and resources on our [website](#).

Recognizing that stakeholder requests for product transparency go beyond the Safety Data Sheet, we continue to improve our ability to provide transparency documentation, including sustainability and transparency declarations, certifications, and analyses, for products in our portfolio. For example, to support customer sustainability inquiries, our Performance Building Solutions business developed a program to proactively provide documentation and information about our operations and products. In 2021, we implemented a strategy to assess customer and market needs and created a process to ensure documentation requirements are integrated into the R&D and Marketing commercialization process as early as possible for our Building Materials products.

In summary, our Product Stewardship team is responsible for the management of a product throughout its life cycle focusing on the health, safety, and environmental issues at each phase. This includes the development of safety data sheets and labels (indicating hazard and use information) in addition to the publication of information such as Product Use, Storage, and Handling bulletins. Preparing these communications involve formalized procedures utilizing information regarding raw material sources, material composition, safe use of a product, as well as proper disposal. All significant product categories are covered by these processes.

Connected for progress

Protect people and the planet

Our sustainability strategy seeks to advance the protection of people, the environment and one of the world's most precious resources, water. Beyond goals, these are core values for our company that all employees experience from day one throughout their career. We expanded and strengthened these core values—linking them to a sustainability mindset across our company to accelerate innovation, improvement, and further reduce risk.



Our sustainability strategy

Our company

Innovate for good

Protect people and the planet

Empower people to thrive

Ethics, respect, and responsibility

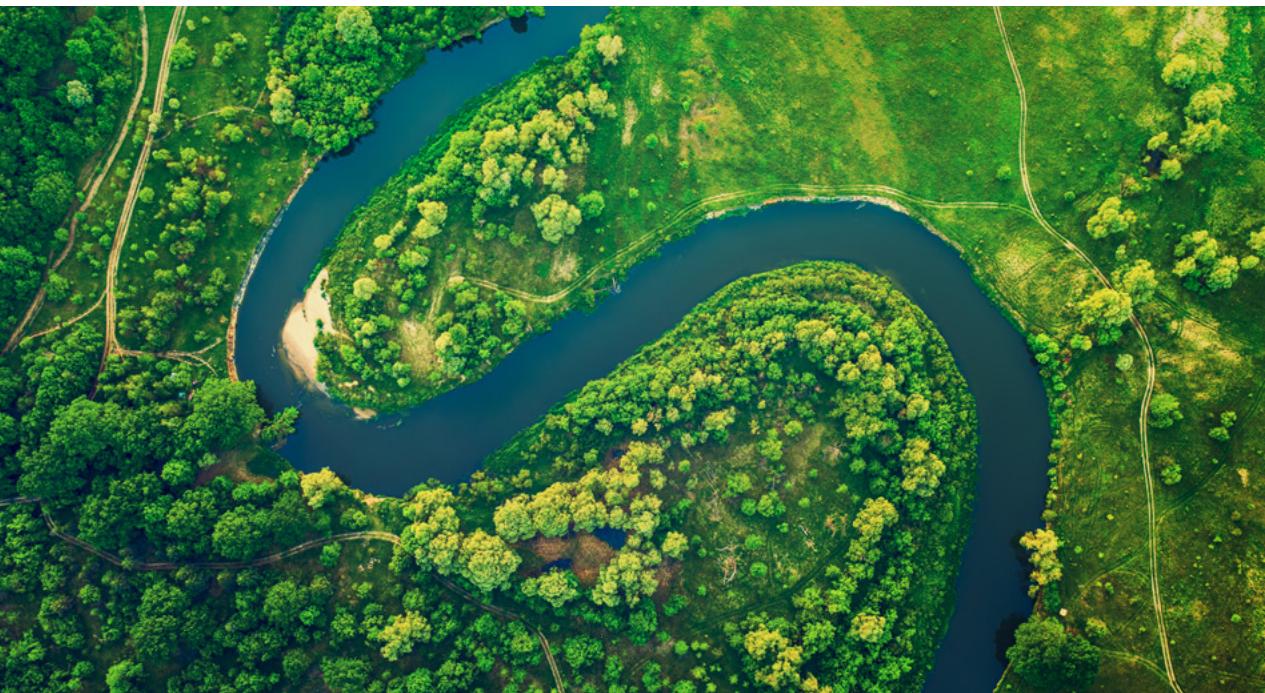
About this report

Appendix

Overview

In this section, we highlight significant progress toward our Acting on Climate goal, including an assessment of our scope 3 emissions, first VPPA purchase and implementation of a project that will significantly reduce GHGs across many of our sites. We advanced our 2030 Leading Water Stewardship goal by joining the Water Resilience Coalition and signing the CEO Water Mandate as well as introducing new products and tools to help others with their water stewardship efforts. And, while 2021 continued to present global pandemic and other challenges, we were able to deliver safety performance in the top 25% of ACC companies. We're proud of our progress and committed across all levels of our company to continuous learning and improvement.

For more Protect people and the planet case studies visit our [website](#).



Q&A



Robert Gray, DuPont Climate Strategist

What is your vision of sustainability for DuPont?

I want DuPont to be the partner of choice for our customers by meeting or exceeding our 2030 sustainability goals. We have come a long way and I see increasing connectivity to creating value for our customers through our own sustainable actions. I am excited about the potential for collaboration along the value chain and this will be critical for success in Scope 3. It's clear that organizations that embrace sustainability will be more successful than those that aren't going forward.

DuPont has strong core values; how do they enhance and advance our sustainability goals?

Environment, health, safety, and respect for people have long been part of our company's core values so the linkage with our sustainability goals is natural and well understood by our employees, customers, and other stakeholders. I believe this consistency lends credibility and will strengthen and accelerate our performance.

What are you most proud of in 2021?

I am proud of the progress we've made in both solidifying our plan to meet our 2030 climate goals and results we are beginning to see. What seemed aspirational at first, now has clear progress and pathways to long term success with key decisions and choices well defined. And we have leadership support to make it happen.

What excites you about the future?

More than ever, I believe tackling climate change is achievable. It requires education, innovation, and fortitude—but it is achievable and that is good news for all! I also believe that DuPont is thinking creatively, beyond our 2030 goals to how we can make the world even better. That aligns with our company purpose and makes my job both compelling and rewarding.



Goal

Acting on climate

GRI 302-103, GRI 305-103, SASB RT-CH-110a.2

Reduce greenhouse gas (GHG) emissions 30% including sourcing 60% of electricity from renewable energy by 2030, and deliver carbon neutral operations by 2050

2021 key accomplishments

- Decreased our Scope 1 and 2 GHG emissions by 10% vs prior year and are on track to meet our 2030 GHG reduction goal
- Enabled our customers to lower their carbon footprint with new product offerings
- Increased sourcing of renewable energy RECs in 2021 to 15% and signed a long-term renewable energy agreement for ~25% of DuPont's total electricity starting in 2023
- Completed Scope 3 inventory and identified priority value chain reduction opportunities



2019 baseline

3,688,000

metric tons of carbon dioxide equivalent (MT CO₂e)
of GHG emissions and 6.5% renewable electricity
use including RECs¹

¹ 2019 baseline includes Scope 1 and 2 market-based
emissions only.

Joining global leaders to act on climate

Climate change requires urgent action, bold commitments, innovation and a multi-faceted, collaborative approach. As a longstanding technology leader, DuPont plays an important role in global efforts to combat climate change through innovation and advocacy. We use our expertise and industry presence to develop innovative low-carbon and energy-efficient solutions that help industries decarbonize. We advocate for market-based consistent, predictable policies and regulations that foster climate innovation and investment.

In 2021, DuPont joined [RE100](#), a global initiative that brings together 320 of the world's leading businesses committed to sourcing 100% renewable electricity in their global operations by 2050. Our commitment amplifies collective efforts to address market and policy barriers to sourcing renewable energy. In 2020, we joined the [CEO Climate Dialogue](#), a collaboration between large companies and NGOs working together to advance effective climate legislation in the United States. We're a member of the [Alliance to Save Energy](#) as well as other organizations that advocate for clean mobility, energy efficient buildings, and renewable fuel. We are also members of both the World Business Council for Sustainable Development (WBCSD) and the World Research Institute (WRI) and engage both organizations on climate strategy.

See our full list of memberships and initiatives in the [Appendix](#).

Innovating for a low-carbon economy

We're actively pursuing opportunities to reduce GHG emissions along the value chains of many of our processes and products. Aligned with our innovation platforms, our climate innovation focuses on three major areas of impact: advancing low-carbon mobility, lowering embodied carbon in buildings, and enabling renewable energy.

Advancing low-carbon mobility

DuPont provides solutions that enable vehicle electrification and expansion of the electronic vehicle (EV) market, including thermal management, battery assembly, and enhanced connectivity. Higher-energy-density batteries and smaller, more powerful e-motors capable of ultra-fast charging create thermal management challenges for EV safety, longevity, and efficiency. Solutions like our BETAFORCE™ TC thermal conductive adhesives and BETATECH™ thermal interface materials enable crash-durable assembly, enhanced thermal stability, and uniform thermal conductivity from the battery cells to the EV cooling system. Those features allow our automotive customers to design safer, durable, fast-charging batteries with a higher energy density, while lowering the cost of material input and production.

Energy storage and hydrogen fuel cell technology will play important roles in enabling large-scale and long-term storage of centralized renewable energy. DuPont Mobility & Materials¹ Zytel®, Zytel® PA, and Hytrel® materials have the resistance, stability, conductivity, and tolerance to compose the subsystems of fuel cell EVs.

¹ The Mobility & Materials segment is included in this report reflecting our 2021 portfolio. On February 18, 2022, DuPont announced that it entered into definitive agreements to divest a majority of its Mobility & Materials segment, excluding certain Advanced Solutions and Performance Resins businesses, to Celanese Corporation.



DuPont Kapton® FCRC wire insulation and DuPont Nomex® slot liner insulation enable India's electric railway.

DuPont Interconnect Solutions plays a critical role in India's rail electrification as the sole supplier of wire insulation for their electric locomotive traction motors. The advanced traction motor design boosts India Rail's hauling capacity by 50% and cuts energy use and GHG emissions.

India's railways are responsible for 4% of the country's total greenhouse gas emissions. The government plans to have India's railways routes fully electrified by 2023 and fully powered by renewable sources by 2030. As a result of this shift, 6.8 million tons of CO₂ will be eliminated annually. An enabling innovation behind these sustainability gains, DuPont Kapton® FCRC is the latest generation of corona resistant polyimide insulating films that have been functionalized to handle the fast voltage switching associated with variable frequency drives.

Kapton® FCRC wire insulation coupled with DuPont's Nomex® slot liner insulation is the standard for high efficiency traction motor insulation systems for demanding, high temperature rail applications.





Low GWP Froth-Pak™ Spray Foam received the 2021 American Chemistry Council's Sustainability Leadership Award in the Environmental Protection category for its contributions to a low-carbon economy. It also received a 2021 Adhesive and Sealant Council (ASC) Innovation award.

Lowering embodied carbon in buildings

To enhance our efforts to develop low-embodied carbon products, we continuously evaluate the sustainability profiles of our innovation projects and apply LCA methodology to guide project decisions.

Our Styrofoam™ Brand insulation products have played a critical role in improving energy efficiency in buildings for over 50 years. Styrofoam™ Brand XPS Insulation products are approximately 98% gas and 2% solid by volume, with the gas formula traditionally including hydrofluorocarbons (HFCs). Some HFCs have high global warming potentials (GWPs) and can contribute to climate change.

DuPont innovation has enabled a viable low-GWP solution to reduce the embodied carbon of our Styrofoam™ Brand XPS Foam Insulation products while still delivering the same thermal performance, moisture resistance, durability, and

ease of use expected by our customers. Converting to the low GWP Styrofoam™ Brand XPS Insulation results in a substantial 94% reduction in carbon footprint for this product line. In support of this innovation, we launched the beyondblue.dupont.com website, which highlights our GWP phase-down program and shares product transparency documentation for these products.

Similarly, we delivered an award-winning Low GWP Froth-Pak™ Spray Foam. This newly enhanced formulation utilizes a blowing agent package that achieves a reduction in GWP of more than 99% as compared to blowing agents used in past formulations, while maintaining product insulation and sealing performance.

A few other examples of our climate innovations enabling renewable energy can be found in the Delivering Solutions for Global Challenges section of this report.

Managing our climate footprint

To achieve our Acting on Climate goals of a 30% GHG reduction over ten years and carbon neutrality by 2050, we're implementing an integrated strategy to address all sources of GHG emissions, including efforts to create low-carbon industrial processes, source low-carbon and renewable energy, and reduce our overall energy use.

Zero Scope 1 coal-based emissions

DuPont has zero Scope 1 emissions from coal combustion across our operations. And, we reduced our coal-based steam generation by 95% on an annualized basis, with the remaining 5% from third party utilities.

Low-carbon industrial processes

The primary mechanism for driving down our Scope 1 GHG emissions is to reduce the carbon intensity of our industrial processes. In 2021 we focused on large opportunities with our Styrofoam™ Brand Insulation and Froth-Pak™ blowing agent conversion. We started the Styrofoam™ Brand Insulation "Beyond Blue" conversion in 2021 in Canada and select states within the US as part of a phased asset conversion plan to fully convert to a low-GWP solution over the next few years. This effort represents a step change reduction in GHG emissions for our company while also helping our customers advance their climate goals.



Renewable energy

SASB RT-CH-130a.1

In 2021, we signed a long-term virtual power purchase agreement (VPPA) with a subsidiary of NextEra Energy Resources, LLC. The VPPA will deliver the equivalent of 135 megawatts of new wind power capacity to the North American electrical grid, which is approximately 528,000 megawatt hours of renewable electricity annually. This amount of clean energy is equivalent to avoiding the carbon emissions from more than 81,000 passenger cars driven each year, or the annual electricity consumption of nearly 70,000 homes. We are defining next steps for how we can continue to bring additional renewable energy to the grid while lowering our operational footprint.

We also purchase renewable energy credits (RECs) to offset our emissions from electricity until our VPPA is fully functional. The Performance Building Solutions business began purchasing RECs in 2016 and as of 2021, the equivalent of 100% of the electricity used to make their products in our North American operations comes from renewable energy sources. Also, as of 2021, the equivalent of 95% percent of global operations for our Interconnect Solutions business are powered with renewable electricity.

In 2021, 15% of our electricity was procured from renewable sources or through the purchase of RECs and 10 DuPont manufacturing sites were powered by 100% renewable electricity through the purchase of RECs and other methods.

Energy efficiency initiatives

GRI 302-4, GRI 305-5

We continue to implement energy efficiency projects through the Bold Energy Plan, a long-standing DuPont program that leverages a global, cross-business team of Site Energy Champions to improve energy efficiency and reduce GHG emissions in our facilities. In 2021, 76 energy-savings projects saved 73,000 MWh in energy and reduced Scope 1

and 2 emissions by about 9,600 MT CO₂e. Of these projects, 47 were new in 2021.

In 2021 for example, we realized benefits from a Bold Energy Project to improve our Kevlar® solvent recovery process. This process uses a series of distillation columns to purify process solvent for reuse. In 2020, we changed the way we cool the product from one of the columns so that we could recapture heat that was previously being wasted. We now use that recaptured heat to reduce the energy consumption of the distillation column and in the process, we reduce GHG emissions of the Kevlar® process by over 3300 MT CO₂e annually. This initiative recently won the 2022 ACC Energy Efficiency Exceptional Merit award.

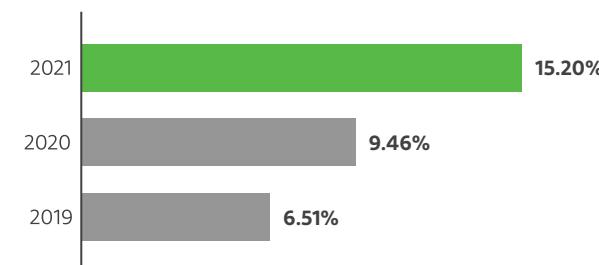
We also integrate climate change priorities in the way we run our plants. For example, the Delrin® operation at the Washington Works site in West Virginia was awarded the ACC Responsible Care® Award in 2021 for Energy Efficiency, for the second year in a row. In pursuit of energy savings, the site team made a discovery to improve process control, increasing productivity, providing greater process stability, and fewer equipment cleanouts. Additionally, a second project with the focus of reducing carbon emissions, installed a more efficient chiller unit which operates on half the electricity of the previous model and uses innovative low GWP refrigerants. This initiative was recently recognized with a 2022 ACC Energy Efficiency Merit Award. The combined emission reduction estimate for these two improvements is 4,700 tCO₂e annually.

Two other projects in our Bold Energy Plan also received ACC Energy Efficiency Merit Awards in 2022—one at our Parlin, NJ site and the second at our Engineering Science Laboratory in Wilmington, DE.

The DuPont Water & Protection (W&P) segment launched a business-wide Operations Transformation project to ensure that each site takes an integrated approach to achieving corporate and business climate goals. Every W&P site

already has, or will soon have, a Site Sustainability Leader who is responsible for creating plans to reduce energy use and emissions while considering the site's future needs. DuPont E&I also mobilized a network of Site Energy Leaders responsible for identifying opportunities to reduce energy use and cut GHG emissions. E&I will set site-specific goals, provide training on energy reduction tools, and leverage expertise across the E&I businesses.

Renewable electricity use (percent of total electricity use)¹



¹ This includes our use of renewable energy credits



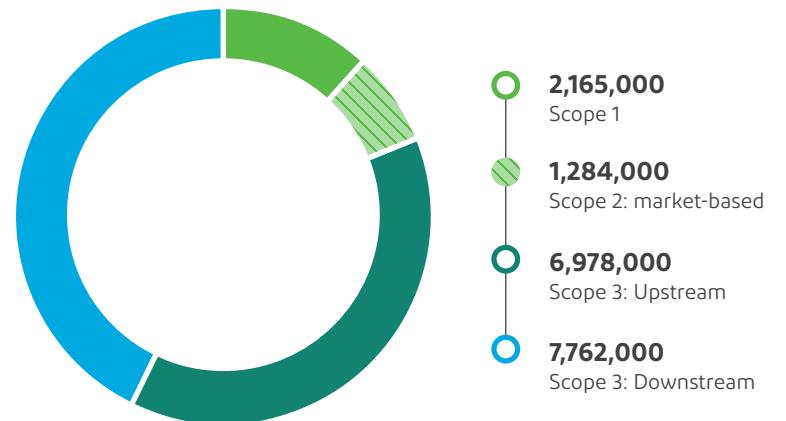
2020 emissions by Scope 3 categories (MT CO₂e)^{1,2}

Category	MT CO ₂ e	Percent of Scope 3
Upstream		
Category 1: purchased goods and services	5,488,000	37.2%
Category 2: capital goods	103,000	0.7%
Category 3: fuel and energy related activities	545,000	3.7%
Category 4: upstream transportation & distribution	728,000	4.9%
Category 5: waste	65,000	0.4%
Category 6: business travel	18,000	0.1%
Category 7: employee commuting	29,000	0.2%
Category 8: upstream leased assets	2,000	0.0%
Downstream		
Category 9: downstream transportation & distribution	30,000	0.2%
Category 10: processing of sold products	1,211,000	8.2%
Category 11: use of sold products	15,000	0.1%
Category 12: end of life of sold products	6,451,000	43.8%
Category 15: investments	55,000	0.4%
Total Scope 3	14,740,000	100%

1 Emissions from downstream leased assets and franchises were not applicable and therefore not included in our Scope 3 emissions.

2 2020 Data does not include former DuPont Nutrition & Bioscience business.

2020 Scope 1, 2, and 3 emissions (percent of total emissions MT CO₂e)¹



1 2020 Data does not include former DuPont Nutrition & Bioscience business.

Evaluating Scope 3 emissions along our value chains

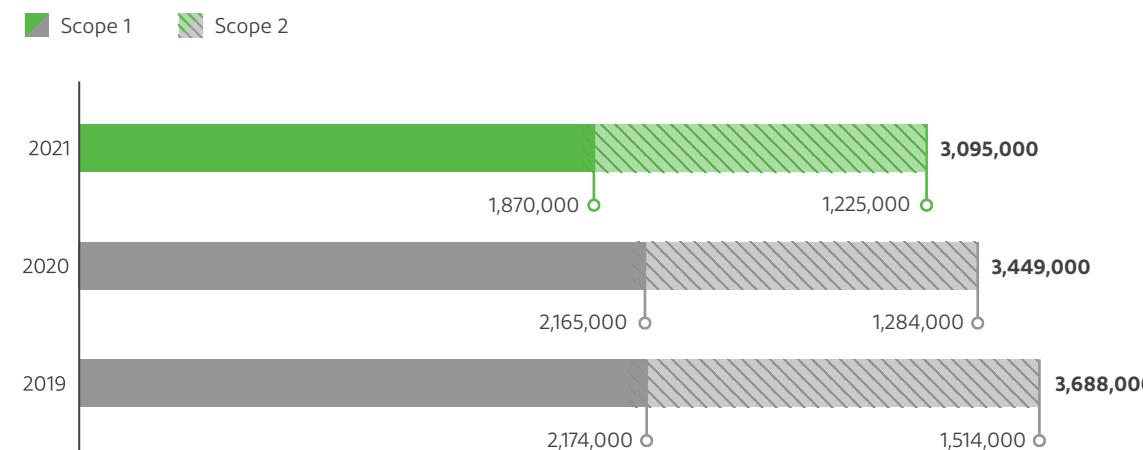
GRI 305-3

In 2021 we accelerated our effort to define the environmental footprint across our value chains to prioritize areas of improvement and innovation. Scope 3 emissions cover a variety of activities across DuPont's supply chain, business operations, products, and end-of-life treatment of products. In alignment with best practices, we calculated our upstream and downstream Scope 3 emissions according to the GHG Protocol Scope 3 Standard (Corporate Value Chain Accounting and Reporting Standard).

While the GHG Protocol Scope 3 standard recognizes the importance of intermediate products that have a variety of downstream applications, it also acknowledges the

2019–2021 Scope 1 and 2 (market-based) emissions (MT CO₂e)

GRI 305-1 and GRI 305-2, SASB RT-CH-110a.1



complexity of calculating each of the downstream applications; and thus, allows these emissions to be excluded from the GHG inventory. Despite the complexity, we made it a priority to estimate all our downstream emissions including those associated with processing, use and end-of-life of our sold products. With this information we are building a roadmap of priority actions to reduce Scope 3 emissions and will address these in future reports.

In 2020, Scope 3 GHGs were 14.7 million metric tonnes CO₂e representing about 80% of DuPont total corporate (scope 1 + scope 2 + scope 3) GHGs. The table and figure above show the share of emission by Scope 3 category. Purchased goods & services (includes all upstream emissions from the goods and services purchased by DuPont in 2020) and end-of-life (total GHGs from the disposal of products sold by DuPont in 2020) were the main contributors to these emissions.





Goal

Leading water stewardship

GRI 303-103

Enable millions of people access to clean water through advancing water technology and enacting strategic partnerships. Implement holistic water strategies across all facilities, prioritizing manufacturing plants and communities in high-risk watersheds.

2021 key accomplishments

- Developed and launched new Water Solutions products to help our customers solve more of their complex water challenges including working with several municipal customers on critical water treatment expansions and upgrades that have improved drinking water access and quality for more than five million people since 2019
- Partnered with Water.org to impact more than 100,000 lives, joined the Water Resilience Coalition, and signed the CEO Water Mandate
- Worked with Economist Impact to launch City Water Optimization Index tool to help cities benchmark factors to develop and maintain an optimized, ample water supply



Leading a vision toward a water optimized world

According to the United Nations, water scarcity is expected to displace anywhere from 24 to 700 million people worldwide by 2030. DuPont sees a clear path to a future where all 7.9 billion people on this planet have access to safe, clean drinking water every day, while industry also has the necessary water to make the products, food, and energy on which we rely. In this future, no water is wasted because we capitalize on the circular nature of water by recovering valuable raw materials from wastewater.

We are working to create this future—where water is accessible, abundant, adaptable, and affordable for all and even water scarce regions can achieve water resiliency. The DuPont Water Solutions business provides state-of-the-art membrane science, ion exchange solutions, and wastewater treatment technologies. These materials and solutions help make drinking water safer and cleaner for homes and communities; enable industries and markets to operate more effectively, efficiently, and sustainably; and make water-scarcity challenges more manageable, wherever

they arise. Together with other private sector companies, community-impact organizations, and research institutions we help forge a sustainable, energy efficient path towards a water-optimized world.

Through our technologies and partnerships, we support millions of people all over the world with access to safe, clean water. Since 2019, DuPont has worked with several of its municipal customers on critical water treatment expansions and upgrades that have improved drinking water access and quality for more than five million people.

In philanthropic partnership with communities, nongovernmental organizations and others, we worked to bring safe water to some of the most underserved populations with little to no access to safe water. In some cases, we funded microfinance opportunities to help provide families with access to safe water and sanitation. And in other cases, we donated technology, expertise and financial support toward the building of water purification projects that provide ongoing and sustainable water resources to a community. With closer access to safe, clean water, people not only benefit from improved health, but also improved access to education and economic opportunity. Since 2019, the mix of these investments and water purification projects has provided nearly 150,000 people around the world with access to safe, clean water. We are committed to continued collaboration with both customers and partners toward the vision that all people on this planet have access to safe, clean drinking water every day.

 In 2021, we partnered with Water.org to bring a year of safe water to people in India, Indonesia, Bangladesh, the Philippines, Cambodia, Kenya, Tanzania, Uganda, Mexico, Brazil, and Peru through Water.org's WaterCredit program.

Partnering for a secure water future

In 2021, we joined the [Water Resilience Coalition](#) and signed the [CEO Water Mandate](#) as part of our efforts to meet our 2030 Water Stewardship goals. Signing the Water Resilience Coalition pledge means DuPont joins an ambitious group of over 30 companies and organizations committed to reducing water stress by 2050 in some of the most challenged water basins around the world and advancing net-positive water impact through partnerships and collective efforts. By endorsing the Mandate, we commit to continuous improvement in six core areas of water stewardship: direct operations, supply chain and watershed management, collective action, public policy, community engagement, and transparency.

A critical first step in any effort to optimize water resourcing is robust infrastructure planning. In 2021, DuPont worked with Economist Impact to create the inaugural [City Water Optimization Index](#), a tool that creates a common framework for benchmarking factors that contribute to developing and maintaining an optimized, ample water supply. Its findings incorporate 47 quantitative and qualitative indicators that assess how well each city's policies and infrastructure are safeguarding its water supply, treatment, and distribution networks. With climate change increasingly challenging our water supplies and projected urban population growth, this Index offers a powerful tool for decision makers around the world to measure how prepared their cities are to deliver safe, reliable, and sustainable access to water.



Innovating to solve global water challenges

DuPont innovates and manufactures sustainable water management solutions enabling energy efficient water purification, re-use and recycling with mineral recovery, sustainable desalination processes, and groundwater access in urban, industrial, and rural settings. Through a series of acquisitions and market expansions, [DuPont Water Solutions](#) has cultivated an innovation portfolio that can be used together or individually to solve complex water and sustainability challenges—from bringing fresh and clean drinking water to millions of homes to minimizing the environmental impact of textile plants.

Sustainable water purification solutions

GRI 302-5

Reverse osmosis (RO) water treatment systems like our industry-leading FILMTEC™ product lines provide the finest level of pressurized crossflow filtration, but, as with all filtration membrane technology, can require a significant amount of cleaning to combat biofouling—microorganism growth on the filtration membranes within the system. Unchecked, biofouling causes significant operational and economic problems such as frequent interruption, damage to the membranes, additional chemical and energy use, and frequent cleaning-in-place of the RO membranes.

In 2021, we introduced DuPont™ B-Free™ technology, a solution that prevents the negative effects of biofouling when installed in new or existing systems. Applying the DuPont™ B-Free™ pretreatment can reduce required downtime by up to 50%, lower cleaning in place frequency by up to 75%, and extend the lifetime of the RO membrane elements by up to 200%. For each 10,000 m³/day of water treatment capacity, DuPont™ B-Free™ pretreatment

technology will enable yearly savings up to 25,000 kg of CO₂ emissions, 10,000 kg of chemicals, and 4,000 m³ of wastewater. In addition to the sustainability benefits, the reduced use of chemicals and servicing requirements make membranes with B-Free™ safer by design for operators.

Circular economy solutions to minimize water waste

Water reuse can create a world where water is not a scarce resource but a well-managed one, sustained by advances in separation and purification technologies that convert wastewater into potable water. In fact, 61% of the people surveyed globally for the [City Water Optimization Index](#) reported that they would be happy to drink reclaimed water.

Currently, increasing the capacity of wastewater treatment plants requires expensive retrofitting projects and significant increases to energy costs. Our [OxyMem](#) membrane aerated biofilm reactor (MABR) modules provide a drop-in solution that consumes carbon and nitrogen-based pollutants, reducing sludge by up to 50%. The MABR is also up to 75% more energy efficient than conventional fixed film and biofilm systems and does not require additional land or infrastructure assets.

DuPont™ B-Free™ pretreatment was awarded the [2021 Sustainability Initiative of the Year](#) and Sustainability Product of the Year by the Business Intelligence Group.

50 million

DuPont water technologies process about **50 million gallons of water every minute** around the world.



Used in conjunction with FILMTEC™ reverse osmosis (RO) membranes, B-Free™ products are helping DuPont's customers meet their sustainability goals by mitigating the challenges of biofouling and extending the life of the membranes to purify water.

Managing water at our sites

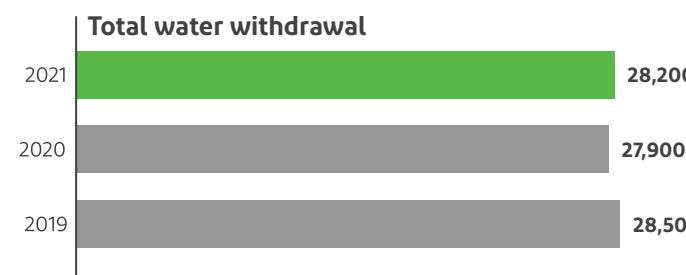
GRI 303-103, GRI 303-1, SASB RT-CH-140a.3

Across the company we use water from various sources. Some of that water is treated and returned to a local water body, while some is rendered in our manufacturing processes or used for other purposes such as employee health and hygiene. In 2019, we evaluated our global footprint to understand where and how our operations interact with local watersheds, especially those considered to be high risk. We used the WRI Aqueduct Water Risk Modeling Tool and WWF's Water Risk Tool to model varying water risk factors for all DuPont sites around the world.

We found that we have a limited footprint in high-risk watersheds. In 2021, less than 4% of our water withdrawal and 2% of our water consumption came from high-risk watersheds. We decided the most effective way to manage our water risk is through adoption of a phased approach of the Alliance for Water Stewardship International Water Stewardship Standard (AWS Standard) within our existing ISO 14001 environmental management system framework.

Water consumption and withdrawal (million gallons)¹

GRI 303-3, GRI 303-5, SASB RT-CH-140a.1



¹ Water consumption values have been adjusted beginning with the 2022 report to better align with the GRI Standards definition. We will continue to improve the accuracy of data produced by our systems over time.

This allows our site teams to align current environmental management systems with the priorities articulated in the AWS Standard.

In 2021, we initiated water usage assessments at key North America and EMEA sites and focused on aligning our water definitions with GRI standards. We will continue to strengthen our water use systems focusing on the most significant site impact opportunities in 2022.

As an example, our Greifenberg, Germany site produces *inge®* industry-leading multi-bore polyether sulfone ultrafiltration technology for the purification of water. The site also uses a full suite of DuPont products in their water and wastewater treatment system and solvent recovery process. DuPont's UF modules, ion exchange resins, and RO membranes are used to reliably maintain production and recover heat, water, and organic substances. We collect and re-use the thermal energy from the wastewater, and the treated water is then fed back into the membrane production system as part of a closed water cycle. This integrated system improves the recovery rate of used organic solvent in production, allowing decreases in both cost and raw material use in our operations.

Keeping plastic out of marine environments

In 2016, DuPont businesses signed onto Operation Clean Sweep (OCS), a voluntary program jointly administered by the American Chemistry Council and the Plastics Industry Association that aims for zero discharge of plastics into marine and freshwater environments. In 2021, we made a global, company-wide pledge to OCS blue, which goes beyond the current OCS program to implement best-in-industry plastic loss prevention practices. As an OCS blue member company, we are committed to enhanced plastic loss prevention management practices and training for employees. We will share and learn from best practices in loss prevention, and we will report annually the number and volume of any incidents of unrecovered plastic releases that are greater than 0.5 kg or 0.5 L per incident. From July to December 2021, the company had one unrecovered release of 18.7 kg of plastic resin to land from a transportation incident.

DuPont manufacturing sites around the world that make plastic resins will implement OCS blue. We formalized changes to our internal EHS incident reporting policies to ensure that all plastic releases are recorded in line with our commitment to the program. OCS blue elements have also been incorporated into DuPont's ISO 14001 environmental management system to institutionalize program requirements in perpetuity. Participation in OCS blue aligns with our overall sustainability goals and allows further transparency of our operational and reporting processes related to plastic releases to the environment.

