



# IN THE BUSINESS OF A BETTER PLANET

NORFOLK SOUTHERN 2022 ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORT



# ADVANCING SUSTAINABILITY

Norfolk Southern partners with our customers and stakeholders to help them decarbonize their supply chains, successfully moving sustainability forward at our company and across the globe.



Advancing sustainability holistically – within our businesses, across industries, and through government engagement – is critical to protecting the environment for future generations. No matter how ambitious our individual goals, sustainability is a shared responsibility.”

– Josh Raglin, Chief Sustainability Officer

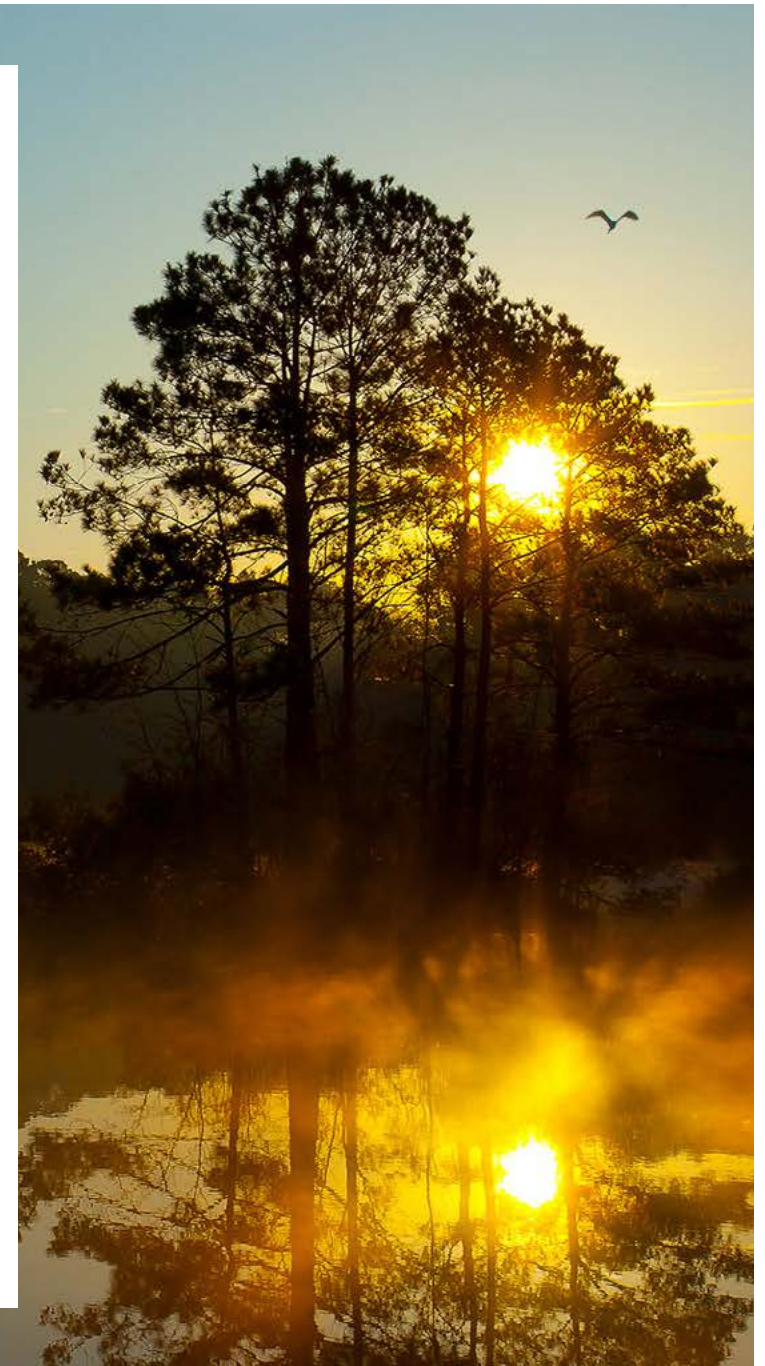
## CREATING SOLUTIONS TOGETHER



► Brosnan Forest Facilities Director Joel Wells leads tour group

With [Sustain SC](#), Norfolk Southern hosted its inaugural [Sustainability Summit](#) in South Carolina, welcoming state leaders and more than 30 companies to Brosnan Forest, our 14,400-acre ecological preserve.

We also hosted a chief mechanical officers meeting with leaders from every North American Class I railroad to share ideas, insights, and best practices to further decarbonize the rail industry.



## MESSAGE FROM OUR CEO



Norfolk Southern's exceptional team serves our customers and communities around the clock. We're a customer-centric, operations-driven company that keeps America's economy moving – and we take a lot of pride in what we do.

At Norfolk Southern, success means operating safely and sustainably, empowering people, and innovating for the future while providing reliable service. In this report, we'll share how our transformative efforts are driving real-world results and exciting new opportunities for our railroad. As a member of the Norfolk Southern team for nearly three decades, I'm honored to now lead this remarkable group as President and CEO.

We're committed to not only reducing our carbon footprint, but also helping others reduce their Scope 3 supply-chain emissions. As the most sustainable way to move freight over land, rail offers shippers considerable environmental and financial benefits, which we're leveraging to grow the low-carbon economy and add value for all our stakeholders.

We're also launching new tools such as an industry-leading carbon calculator to increase transparency in the shipping process, and to encourage more shippers to choose the sustainability of rail. When they make that choice, businesses are lowering emissions, easing road congestion, and reducing wear on our nation's publicly funded highway system.

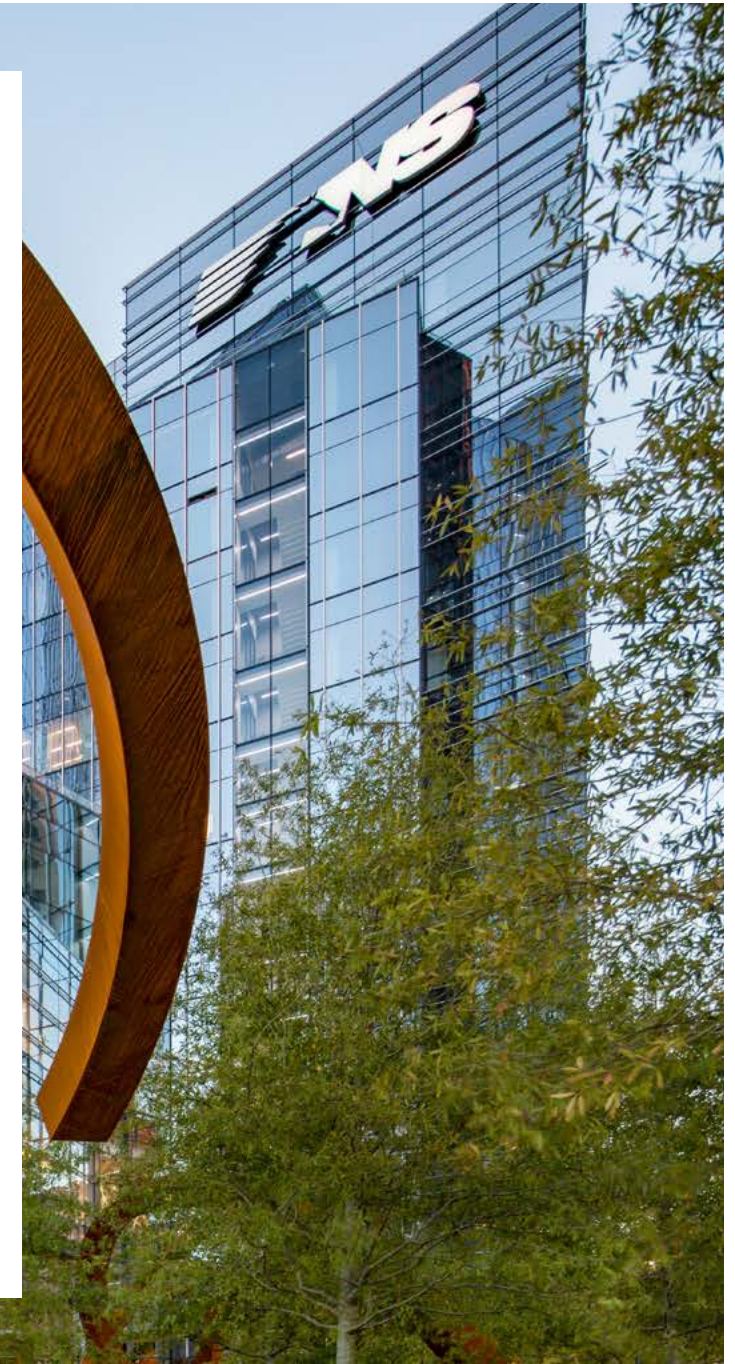
We've made great progress in our company's transformation. We're implementing innovative solutions and building the digital railroad. We're expanding our DEI initiatives, cultivating a safe, inclusive culture throughout our organization, and reaffirming our commitment to communities across our network. With much more to come, it's an exciting time for Norfolk Southern, and I'm humbled to serve alongside so many exceptional railroaders.

We value your input and thank you for your partnership.

Regards,

A handwritten signature in black ink that reads "Alan". The signature is fluid and cursive.

Alan H. Shaw  
President and CEO



# DRIVING THE ECONOMY

## Vital

- Serves more than 50% of the U.S. population and manufacturing base
- Operates 19,300 route miles across 22 states and the District of Columbia
- Delivered over \$127 billion in automotive vehicles, 3.4 million tons of household goods, and 5.9 million tons of food

## Efficient

- Reduces greenhouse gas emissions by 75% on average when moving freight by rail instead of truck
- Hauls one ton of freight over 460 miles on a single gallon of fuel
- Improved locomotive fuel efficiency by 7% (since 2019)
- Avoids 15 million metric tons of carbon emissions annually when customers choose rail

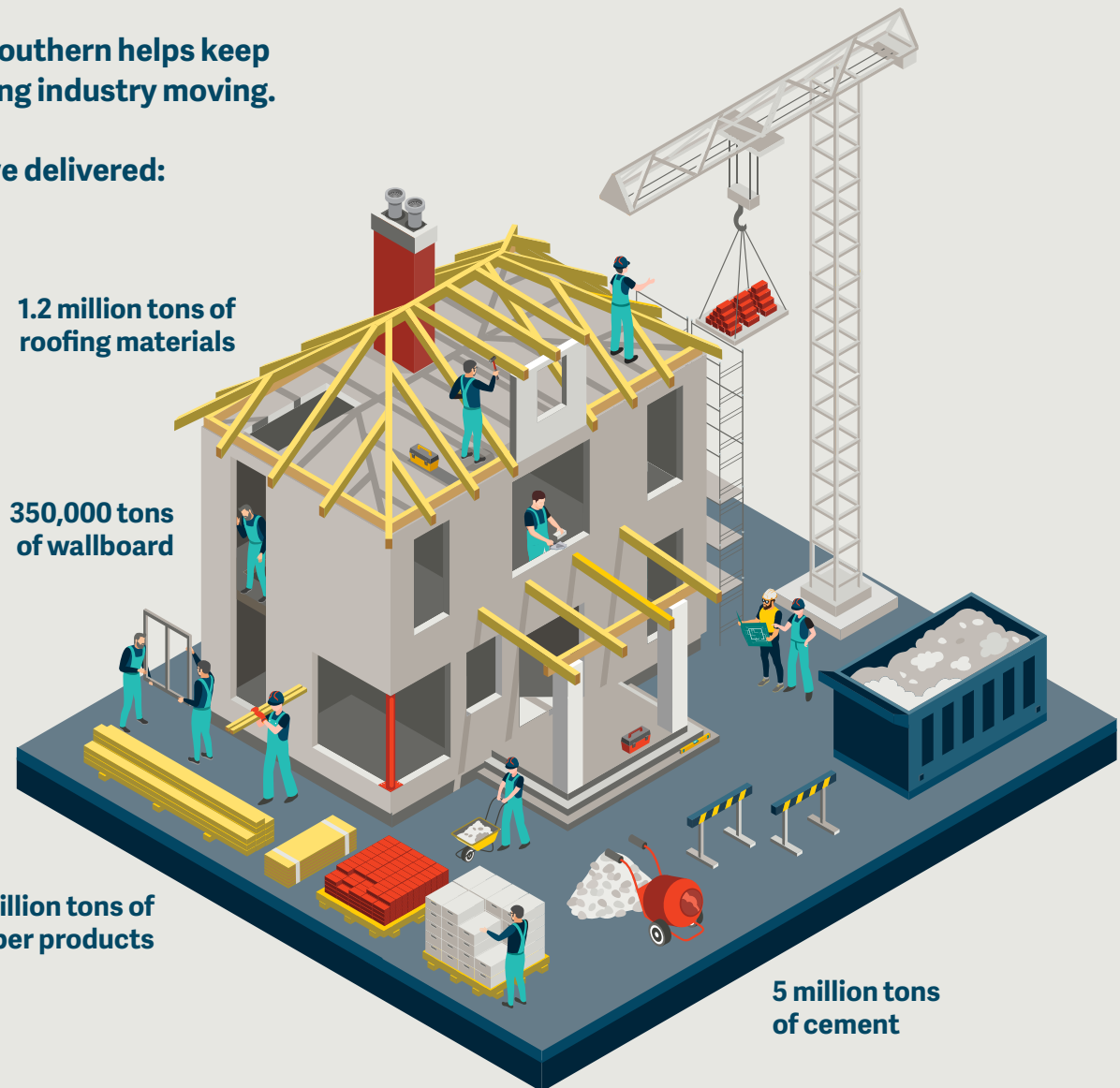
## Impactful

- Employs 18,000+ employees
- Provides \$2.4 billion in compensation and benefits
- Spends \$3.2 billion on goods and services in local economies

## ONE EXAMPLE: DELIVERING FOR RESIDENTIAL CONSTRUCTION

**Norfolk Southern helps keep the housing industry moving.**

**In 2021, we delivered:**



# INVESTMENTS

Norfolk Southern's investments promote safe and efficient operations, modernize our technology, and support economic growth in the communities we serve. Every dollar we invest in our equipment and infrastructure bolsters our business and strengthens the country's supply-chain network.

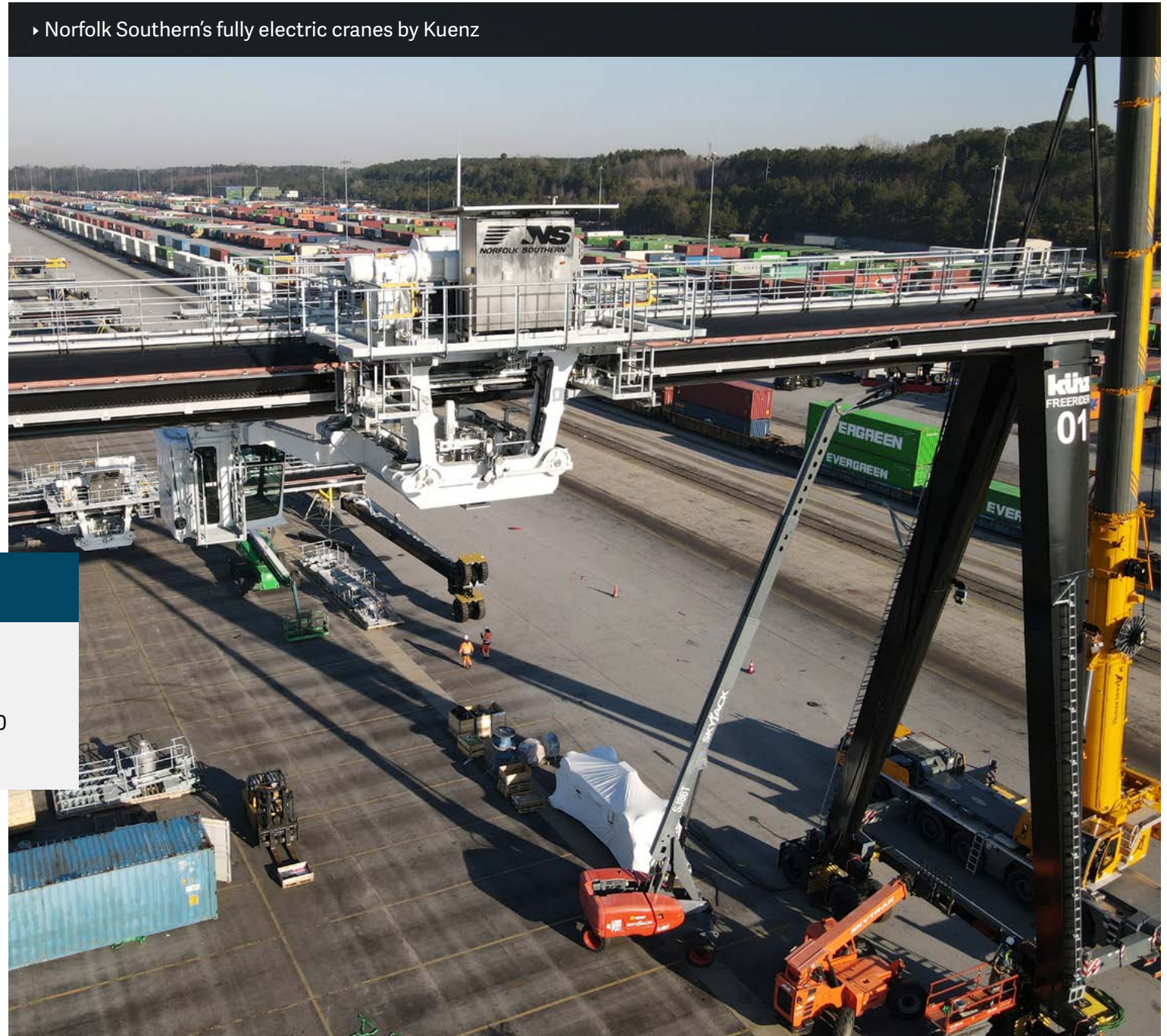
## In 2021, we:

- Funded \$1.5 billion in capital investments including locomotives, freight cars, tracks, and bridges
- Spent \$189 million with small and diverse suppliers
- Reinvested nearly 10% of our operating revenue – maintaining and strengthening our network

### SPOTLIGHT INVESTMENT

Installing [new electric cranes](#) at Norfolk Southern's Austell intermodal terminal outside Atlanta illustrates how capital investments spur capacity growth – moving more than 100,000 additional units per year – with reduced carbon emissions.

► Norfolk Southern's fully electric cranes by Kuenz



# DELIVERING THE LOW-CARBON ECONOMY

Norfolk Southern is making progress toward its science-based target of a 42% reduction in [Scope 1 and Scope 2 greenhouse gas emissions](#) intensity by 2034. We have already marked a 5% improvement over the past two years, keeping us on track to meet this target by:

- Modernizing more than 100 locomotives each year since 2016, with a total of 950 expected by 2025
- Outfitting 1,550 road locomotives (93% of active fleet) with energy-management technologies
- Adding distributed power systems to 120 additional locomotives
- Using data to identify and eliminate over 2,000 hours of idling per day, conserving more than 2.6 million gallons of fuel annually
- Continuing use of biofuel blends to lower our carbon intensity



► Our trains refueled less with carbon saving technologies

The [American Chemistry Council](#)

recognized our fuel efficiency results through the Responsible Care Efficiency Award for Locomotive Fuel Efficiency, with a special designation of exceptional merit.



Norfolk Southern was also awarded Environmental Finance's [2022 Green Bond of the Year](#) in the corporate category, recognizing our [\\$500 million green bond offering](#) which funded initiatives that help our customers reduce supply-chain emissions and bring us closer to our science-based target.

For Norfolk Southern's climate and customer initiatives, we earned a [CDP Climate Leadership Level](#) designation along with being included among its 2021 [Supplier Engagement Leaderboard](#).

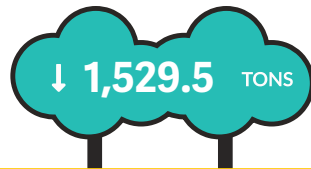


# DATA-DRIVEN DECISIONS

Customers need complete, transparent data to make informed decisions on shipping options. In 2022, Norfolk Southern released its industry-leading, [next-generation carbon calculator](#) built on:

- A sample size of over 7 million shipments
- The entire cycle of fuel burn inclusive of all rail operations
- 30 commodity types plus intermodal and 17 railcar types
- Over 75,000 cities from across the U.S. rail network

## EXAMPLE OF A CUSTOMER'S ANNUAL SAVINGS AND EQUIVALENTS GENERATED FROM THE CARBON CALCULATOR



Shipping with Norfolk Southern would **reduce your carbon footprint by approximately 1,529.5 metric tons with savings of \$38,238**, compared with shipping by truck.

Your reduction in carbon footprint is equal to...



150,246 gallons of diesel consumed per year



1,000 trucks removed from the highway per year



586,800 highway miles avoided per year



332 cars removed from the highway per year



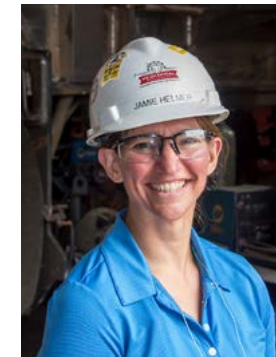
Energy consumed by 184 households per year



Metric tons of CO2 sequestered by 1,865 acres of U.S. forests per year

## Real-time Data

We pull data from many sources, synthesizing it in a single location. This allows us to pull fuel data up to every 15 minutes, including repositioning (empty fuel consumption) and idling, and is customizable by commodity, rail car, shipping container, and distance.



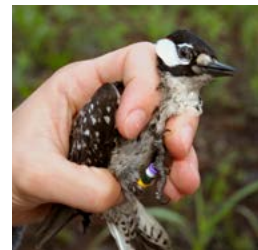
We are leveraging technology to examine fuel data right down to the individual train level. We look for any outliers in fuel use – both good and bad – to dig in and really understand

where we can further improve. Are the actions of a train engineer leading to greater fuel savings? Is there an equipment issue causing greater fuel burn? We use this data to make decisions, problem solve, and identify best practices.”

– Jamie Helmer, Director of Fuel Efficiency

# CULTIVATING BIODIVERSITY

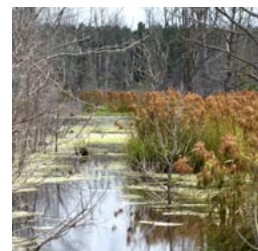
Norfolk Southern’s Brosnan Forest, a 14,400-acre ecological preserve in coastal South Carolina, is home to one of the most diverse ecosystems in North America. More than 7,000 acres of threatened longleaf pine forest provide an environment so biodiverse that it is comparable to the Amazon Rainforest, enabling the existence of hundreds of plant and animal species. Proactive efforts continue to further restore, propagate, and preserve this rich habitat.



Brosnan Forest maintains the largest and most researched population of endangered red-cockaded woodpeckers on a single tract of privately held land



A healthy longleaf pine forest can contain more than 300 species of groundcover plants per acre



Wetland and stream projects have restored 800 acres of wetlands, over 6 miles of stream habitat, and protected an additional 600 acres of upland habitat



## The Past Year at Brosnan Forest

- Announced our [third conservation easement](#) donated to the Lowcountry Land Trust, which protects more than 150,000 acres of ecologically significant land in South Carolina
- Restored 416 acres of longleaf pine habitat with plans to convert an additional 1,200 acres
- Provided in-kind support to Clemson University to conduct field work studying watersheds and delineating wetlands

## Resurgent Plant and Animal Life

Successful restoration of Brosnan Forest wetlands has led to a resurgence of species including wading birds, amphibians, invertebrates, and a diversity of plant species.

- The once-endangered wood stork is now found by the hundreds in these restored wetlands
- Grasses and sedges absent for over 70 years are now thriving





## MINIMIZING WASTE IN OUR SUPPLY CHAIN

### Delivering a Circular Economy

In 2021, we:

- Diverted more than half of our waste from landfills
- Reclaimed over 1.6 million gallons of used oil
- Tracked and managed more than 4,500 waste and recycling events from service providers
- Recycled 100% of rail we replaced, with 70% of our new rail manufactured from recycled material
- Recycled 100% of old crossties and 100% of steel

### Partnering to Modernize Locomotives

We extended our DC-to-AC [locomotive modernization program](#) and partnership with Wabtec, producing more reliable and fuel-efficient units at half the cost of purchasing new models, saving roughly 200 tons of carbon emissions versus producing a newly manufactured AC locomotive. Upon completion, Norfolk Southern expects to have the largest modernized fleet in North America, with each converted unit avoiding 500 tons of carbon emissions annually due to fuel savings.

### Leveraging Steel for Greater Sustainability

We [partnered](#) with U.S. Steel and The Greenbrier Companies on a new, more sustainable [steel gondola railcar](#) that will reduce carbon emissions and extend useful life. Using an innovative formula for high-strength, lighter-weight steel, each gondola's unloaded weight is reduced by up to 15,000 pounds, creating a stronger, lighter, and more energy-efficient product for the freight rail industry.

# OUR COMMITMENT TO SUSTAINABLE FACILITIES

## ACHIEVING LEED GOLD CERTIFICATION



This year, our corporate headquarters building in Midtown Atlanta was [awarded LEED® Gold Certification](#), making it one of only six LEED v4 BD+C Gold Certified buildings in Georgia. Notably, we earned all possible points under the water efficiency category.

As we looked for ways to make our new corporate headquarters even more sustainable, partnering with Dell Technologies through its [Plant a Tree program](#) aligned with our goals. Dell committed to plant more than 12,000 trees for the electronic devices we purchased, helping regrow and protect forest ecosystems and furthering our commitment to a better planet.

## Advances in Energy Efficiency

- Increased our total renewable energy usage in deregulated markets to approximately 26%, or 12% across our entire network
- Established a cross-functional, internal working group dedicated to identifying energy conservation opportunities to reduce and offset Scope 2 emissions
- Contracted with community solar programs in New York for 2,200 MWh per year, or more than 2 million kilowatts of electricity per hour – enough to power over 200 homes for an entire year



# WHAT SAFETY MEANS TO NORFOLK SOUTHERN

Norfolk Southern's vision is to be the safest, most customer-centric, and most successful transportation company in the world.

## Essential to excellence

Safety is good business. Our comprehensive safety management system aims to engage each employee across the corporation, providing a safe workplace where everyone contributes and supports our Foundation of Safety, participating in the Six Action Steps to safe service: Policy and Goals, Education, Communication, Recognition, Accountability, and Follow-up.

## A fully engaged team

Employees are guided by our Foundation of Safety, which includes our Core Values, four Fundamentals of Safety, and our Six Action Steps. That focus shows up through participation on our Local Safety and Service Committees and activities that support our Risk Reduction Program. Each employee has individual responsibility for identifying, eliminating, or safeguarding hazards, and a shared belief that each member of our company has a role in promoting safety on and off the job. This shared safety culture shows in reductions in our reportable and serious injury rates year over year.

## Continuous improvement

Norfolk Southern was the first North American Class I railroad to receive Federal Railroad Administration approval of a Risk Reduction Program. We refined and further strengthened our safety management system using risk reduction principles by finding ways to improve communication within and among departments and to increase employee involvement through specific operational safety goals and other means. We have incorporated Risk Reduction Program concepts into our hazard recognition, evaluation, mitigation, and elimination processes to further generate continuous improvements in safety.

## Beyond our tracks

Operation Awareness and Response (OAR) is Norfolk Southern's robust program for taking safety outside of our own operations. Through OAR, we train thousands of first responders every year so they can serve and protect their communities. Safety is more than training, though, and we take pride in maintaining close relationships with those first responders beyond a single event.



Safety is a critical part of service excellence; safety is who we are, and service is what we do."

– Helen Hart, AVP Safety and Environmental

## EMPLOYEE ENGAGEMENT



In 2021, we conducted our first company-wide survey to establish a baseline of our safety culture. We asked our employees across our business for their direct input on safety as it relates to themselves, their peers, and their supervisors. Those responses brought action.

- Creating our Safety Champion role
- Replacing the majority of brake sticks used in the field
- Improving the ordering of PPE

# INVESTING IN OUR PEOPLE

In early 2021, we updated our quarterly pulse engagement survey to more closely align with our strategic goals, focusing on four key areas: engagement, alignment, development, and inclusion. With initial strong scores across all four areas, we focused on finding opportunities for targeted, incremental gains to demonstrate investment in our people.



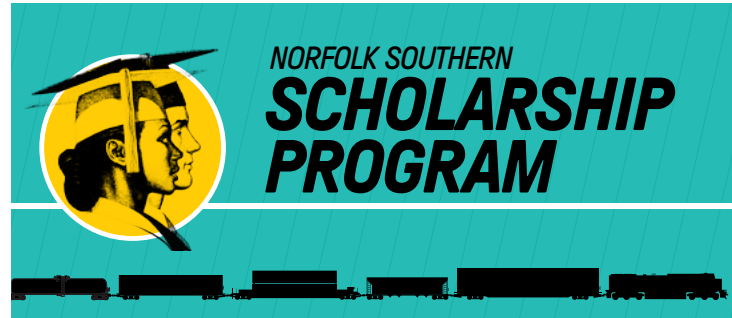
One opportunity involved development, so we launched OnTrack, Norfolk Southern's

commitment to equip leaders with the critical skills and behaviors needed to successfully lead their teams. OnTrack empowers managers to address complex business challenges while maintaining alignment with our business goals.

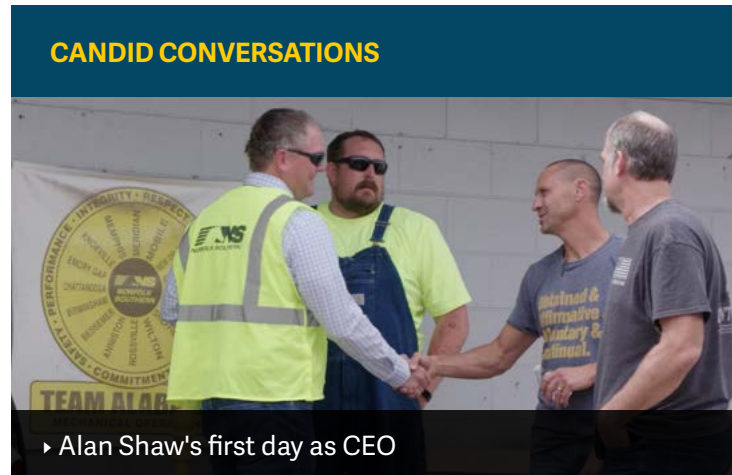


We also saw an opportunity to demonstrate our commitment to the holistic wellbeing of our employees – physical, mental, financial, and

social – particularly as we emerge from the pandemic. We will continue our efforts to increase awareness and use of the available wellbeing resources while adding several new ones to ensure we are meeting the needs of our employees.



Norfolk Southern also rolled out the Thoroughbred Scholars program. Each year, 100 scholarships of \$2,500 and three special scholarships of \$10,000, all renewable up to four years, will be provided to children of Norfolk Southern employees. The three special scholarships – STEM Scholar, HBCU Scholar, and Community Scholar – support strategic priorities around leadership development, Diversity, Equity, and Inclusion (DEI), and technology.



Commitment to our customers begins with a commitment to our people. Alan Shaw intentionally spent his first day as CEO in the field, meeting with our operations teams and thanking the crews for the work being done in service of our customers. Shaw had candid conversations about challenges facing the industry and how we can continuously improve, noting that our priority as an operations-driven company is providing service at a level our customers expect and deserve.

# DIVERSITY, EQUITY, AND INCLUSION



Together, we're building a culture that fosters respect for individuality, recognizes unique contributions, enables sharing of ideas, and respects one another's opinions."

– Jason Pettway, AVP Diversity, Equity, and Inclusion

Developing a corporate DEI strategic plan, establishing a team dedicated to operationalizing inclusion, and using nationwide benchmarking contribute to Norfolk Southern's commitment to creating a diverse, equitable, and inclusive organization. To underscore this commitment and work in progress, Alan Shaw signed the [CEO Action for Diversity & Inclusion pledge](#). This pledge is based on a shared belief that collaboration and bold action from the business community are vital to driving diversity and inclusion.

### Recent enhancements to Norfolk Southern's DEI efforts include:

- Expanded our Inclusion Leadership Council to include senior leaders from every business group across our company, further driving accountability for DEI throughout the organization
- Restructured, expanded, and strengthened the infrastructure of our employee resource groups
- Added oversight of human capital management to the Board of Directors' Compensation Committee's charter
- Partnered with nonprofits to expand and hone leadership skills while helping the nonprofits complete an organizational challenge or project
- Reviewed compensation practices for market competitiveness and equity, addressing unexplained pay gaps among employees not compensated based upon a collective bargaining agreement



▶ Norfolk Southern Employee Resource Groups

### 2021 BY THE NUMBERS



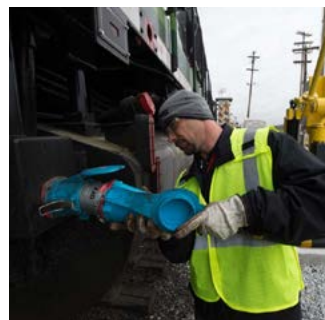
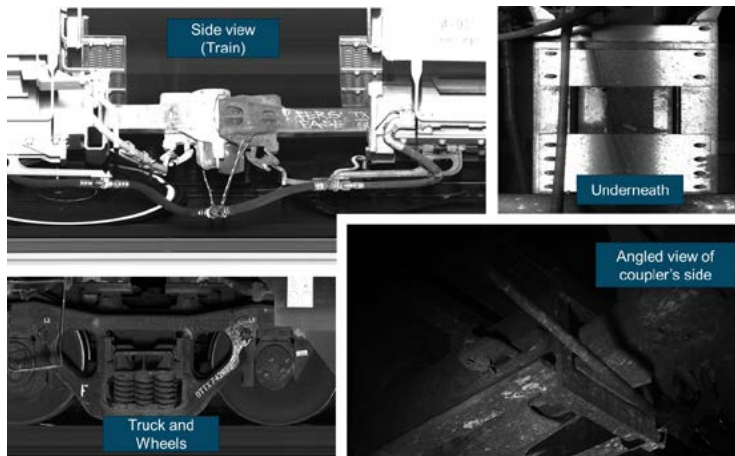
- 52% of trainee/intern hires are a racial minority and/or female
- 60% of executive vice presidents are female
- More than one-third of new manager hires are women
- 56% of new manager hires are a racial minority

# DRIVING DIGITAL RAIL FORWARD

Our diverse team of data scientists, developers, and IT professionals are using digital technology to build a safer, sustainable, and more reliable railroad. In the last year, we've taken our digital transformation to new heights, expanding opportunities for our company, customers, and communities.

## Digital Developments

Deployed fully automated, machine vision-equipped inspection corridors to detect signs and symptoms of pending failures before they occur

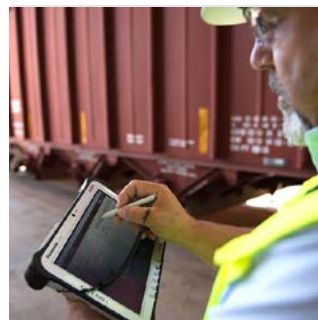


Leveraged real-time data gathered from the field through smart technology to further reduce fuel consumption across our locomotive fleet



Norfolk Southern is using technology to improve every aspect of our business. From operating trains safely and efficiently to added visibility for customers to building a more representative and inclusive workforce, technology is driving progress at our company.”

– Ann A. Adams, Executive Vice President and Chief Transformation Officer



Expanded our use of mobile applications and devices in field and yard operations, enhancing safety, transparency, compliance, and efficiency

## A PROUD PARTNER OF WOMEN IN TECHNOLOGY



► From left, Norfolk Southern’s Assistant Vice Presidents of Information Technology, Kim Lyman and Lynnanne Catron, and Vice President Information Technology Fred Ehlers at the annual [Women in Technology \(WIT\) Connect Fundraiser](#) in Atlanta, Georgia

In 2022, we grew our partnership with WIT, serving as a sponsor of the organization’s annual Connect Fundraiser to support opportunities that champion women throughout their education and career.

# CORPORATE GIVING AND COMMUNITY ENGAGEMENT

## Investing in Our Communities

### PRESERVING OUR HISTORY IN VIRGINIA AND GEORGIA



We donated the [complete collection of archives](#) from predecessor company Norfolk and Western Railway to the [Virginia Museum of History & Culture \(VMHC\)](#), along with \$750,000 to digitize, catalog, and preserve the collection in perpetuity.

Following the relocation of our corporate headquarters to Atlanta, we partnered with the [Atlanta History Center \(AHC\)](#) to [donate](#) the comprehensive historical archives of our predecessor company Southern Railway. The donation included \$500,000 to preserve the collection, making this rich history accessible to scholars, students, and railfans in a city where we have deep roots.

With both donations in Virginia and Georgia, funds were earmarked to create paid internship opportunities at VMHC and AHC for underrepresented communities over the next five years.



### VOLUNTEERING IN THE COMMUNITY



► Norfolk Southern volunteers clean up Chattahoochee River

### OUR COMMUNITY IMPACT GRANT PROGRAM

Awarded \$328,000 in community-based grants in 2021 through partnerships with local organizations that empower them with valuable resources and support from Norfolk Southern, such as money for a police department to purchase new life-saving or essential equipment.

### COMBATING FOOD INSECURITY

Awarded [\\$400,000 in grants](#) to 31 food banks across communities in which we operate as part of our longstanding commitment of giving to critical community organizations.



## ENGAGING POLICYMAKERS

We are an integral part of the communities across our network and our country's supply chain. We employ local citizens and provide freight rail service for businesses who drive the national and global economy. At Norfolk Southern, our government relations program seeks to educate and inform the people that make decisions that affect railroads and railroaders, customers, suppliers, and communities.

Our public policy advocacy efforts are focused on a wide range of issues that could impact the company, and our political contributions reflect a philosophy of productive bipartisan engagement. We generally support candidates, regardless of political party, whose positions on issues central to our business align with our interests.

We prioritize transparency across all our public affairs activities, providing regular reports on our political activities to our Board of Directors and disclosing all our political contributions on the Norfolk Southern [webpage](#). As a result of these efforts and more, Norfolk Southern was recognized as a "Trendsetter" in the 2021 Center for Political Accountability (CPA)-Zicklin Index of Political Accountability and Disclosure. CPA-Zicklin has recognized us for our corporate leadership in political disclosure since 2012.

Please see our website for more information about ["Where We Stand"](#) on some key policy issues that impact our business. While we may not agree with all of the positions of every industry, trade or policy organization in which we participate, or candidate to whom we contribute, Norfolk Southern believes continued engagement has the best opportunity to influence positions in a manner that aligns with the long-term interests of our stakeholders.





# DIVERSE AND INDEPENDENT GOVERNANCE

This year, as Norfolk Southern transitioned to a new CEO, our Board of Directors chose to appoint an Independent Chair, selecting Amy E. Miles for the position. Miles has served as chair since May 1, 2022, and as a director since 2014. She is the former CEO of Regal Entertainment Group, Inc., with previous experience at Deloitte & Touche and PricewaterhouseCoopers LLC. Guided by her

experience and expertise, our diverse [Board of Directors](#) is focused on ensuring accountability throughout our company. Together, they provide thorough oversight on behalf of our stakeholders. With an impressive understanding of multiple industries, they are well-equipped to navigate the risks and challenges faced by our company.

38% women and ethnically diverse board members



▶ Amy E. Miles



Amy's leadership as a senior executive, deep financial expertise, and service as a director at several companies makes her a natural fit to chair Norfolk Southern's Board of Directors."

– Steven F. Leer, former Independent Lead Director and current director on Norfolk Southern's Board of Directors

## Engaged Oversight

Norfolk Southern's Board of Directors is highly involved in every aspect of our company's governance, and has taken additional steps to assign key areas of responsibility to specific committees.



### Climate

Our Board receives regular reports on risk management efforts associated with climate-related threats as part of its efforts to ensure that our company's assets and long-term strategy are resilient to the impacts of climate change.



### Safety

Our Safety Committee reviews, monitors, and evaluates our compliance with safety programs and practices.



### Sustainability

Our Governance and Nominating Committee carefully monitors the progress of all company sustainability goals and initiatives.



### Human Capital Management

The Compensation Committee consistently reviews company strategies – including diversity, equity, and inclusion – to ensure a culture that values and respects every member of our team.



### Cyber Defense and Information Security

Leveraging significant industry experience from its members, the Finance and Risk Management Committee also guides Norfolk Southern's incident response management efforts.

# MATERIALITY ASSESSMENT

In 2021, Norfolk Southern assessed our environmental, social, and governance (ESG) issues through a comprehensive stakeholder engagement process called a materiality assessment. During the process, we identified current and emerging issues most relevant to our business, enabling us to:

- Further align our sustainability and corporate strategies
- Identify and prioritize business risks and opportunities
- Integrate key sustainability criteria into our decision-making process
- Improve our sustainability reporting efforts

## Stakeholder Engagement

Norfolk Southern used information from leading sustainability reporting frameworks such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board Rail Transportation sector to formulate our relevant issues and disclosure topics.

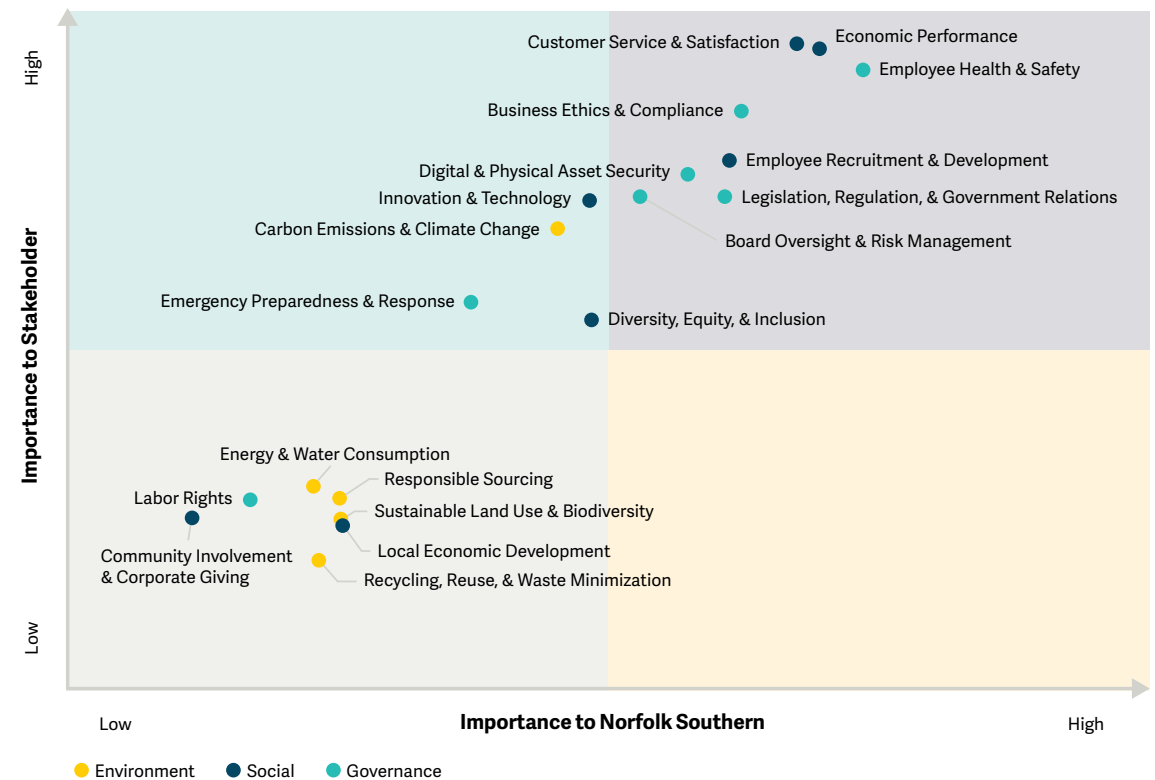
To ensure an inclusive and comprehensive assessment, we engaged several stakeholder groups, requesting feedback from five key groups: executive leadership team, employees, investors, customers, and suppliers. Our selection criteria focused primarily on participants' knowledge of the business, influence on our overall business objectives, and relationship with Norfolk Southern.

Investor stakeholders were chosen for their industry knowledge of ESG topics and stake in Norfolk Southern. A broad range of customers were invited to participate to provide adequate representation, with special consideration to their impact and influence on Norfolk Southern's business. Supplier participation was based on their importance for our business operations and continuity. Engagement methods included interviews with our executive leadership team and customers, while employees, investors, and suppliers were invited to complete our online ESG survey.

## Scoring Methodology

All participants were asked to score each ESG topic on a scale from 1 to 5, with 5 being the most important. Responses were weighted to identify the highest priorities for our business as represented in the matrix below.

## 2021 Norfolk Southern Materiality Assessment



Each topic continues to be evaluated for improvement, and Norfolk Southern will prioritize material topics which have garnered the highest interest from our collective stakeholders.

# DISCLOSURES

## About This Report

This report has been prepared in accordance with the Global Reporting Initiative Standards: Core option, and in alignment with the Sustainability Accounting Standards Board, and Task Force on Climate-related Financial Disclosures frameworks.

Information includes sustainability initiatives in 2021 and Q1/Q2 of 2022 and financial data spanning 2018 to 2021 for the operations of Norfolk Southern Corporation and its consolidated subsidiaries. Additional information on our ESG program is available on the Norfolk Southern website. Numbers shown in this report are approximate and may be rounded.

Materiality, as used in this report, differs from the definition used in the context of filings with the SEC. Issues deemed material for the purposes of our ESG strategies and disclosures may not be considered material for SEC reporting purposes.

## Sustainability and Climate Statement

At Norfolk Southern, our actions to reduce the environmental impact of our operations are rooted in our values, and our understanding of current climate science. We all want cleaner air and a healthier planet for ourselves and future generations, and this responsibility inspires us to integrate sustainability into our daily operations. We also recognize that significant scientific evidence points to the effect of greenhouse gas emissions on the global climate. As a leading provider of freight-rail service – the most sustainable mode of surface transportation – we have committed to do our part to reduce our carbon emissions by setting a science-

based target consistent with the Paris Agreement on climate change, pursuing innovative solutions, and providing our customers with unparalleled, energy-efficient service.

## Forward-looking Statements

This report contains forward-looking statements that may be identified by the use of words like “believe,” “expect,” “anticipate,” “estimate,” “plan,” “consider,” “project,” and similar references to the future. Forward-looking statements reflect our good-faith evaluation of information currently available. These forward-looking statements are subject to a number of risks and uncertainties, and our actual results may differ materially from those projected. Please refer to our annual and quarterly reports filed with the Securities and Exchange Commission (SEC) for a full discussion of those risks and uncertainties we view as most important. Forward-looking statements are not, and should not be relied upon as, a guarantee of future performance or results, nor will they necessarily prove to be accurate indications of the times at or by which any such performance or results will be achieved. As a result, actual outcomes and results may differ materially from those expressed in forward-looking statements. We undertake no obligation to update or revise forward-looking statements.

## Commitment to Human Rights

Norfolk Southern is committed to human rights as demonstrated in our human rights policy. Our commitment draws upon international standards including the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work and the United Nations (UN) Guiding Principles on Business and Human Rights.

## Climate Change Scenario Analysis

In alignment with our enterprise risk management process, Norfolk Southern performed a physical climate change scenario analysis to explore vulnerabilities and to address our response to climate-related risk. The physical risk scenario analysis focused on almost 450 of our critical assets in short-, medium-, and long-term scenarios. This includes a baseline of 2020, which extends to 2100 at five-year intervals and looks at a historical baseline view (average of 1986-2005). The analysis was conducted for Representative Concentration Pathways (RCPs) 2.6, 4.5, and 8.5 along eight different climate perils using Jupiter Intelligence ClimateScore Global program. Norfolk Southern reports annually on the climate-related risks and opportunities we face in our publicly available CDP response.



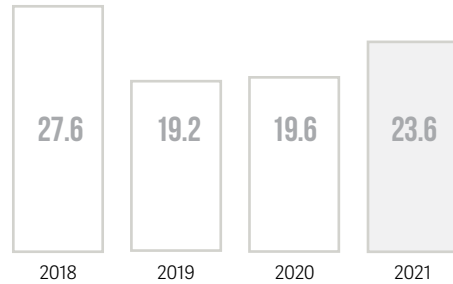
# DATA SCORECARD

NORFOLK SOUTHERN 2022 ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORT



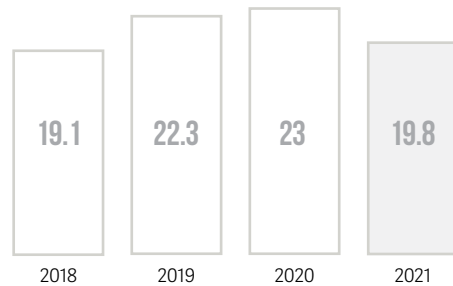
**TERMINAL DWELL\* ↑ 20%**

in average hours 2021 vs. 2020



**TRAIN SPEED\*\* ↓ 13%**

in average mph 2021 vs. 2020



**CAPITAL INVESTMENT**

snapshot of Norfolk Southern track roadway additions and replacements over the past four years to support safe and efficient operations and growth

	2018	2019	2020	2021
Track miles of rail installed	416	449	418	458
Miles of track surfaced	4,594	5,012	4,785	4,225
Crossties installed (millions)	2.2	2.4	1.8	2.0

**SUPPLY-CHAIN SPEND**

	2018	2019	2020	2021
Approved suppliers	7,233	7,633	7,837	8,206
Small and diverse suppliers	261	255	216	204
Spend with minority vendors	\$169M	\$126M	\$166M	\$189M
<b>Total</b>	<b>\$3.8B</b>	<b>\$3.8B</b>	<b>\$2.9B</b>	<b>\$3.2B</b>

\* Terminal dwell, a measure of rail yard efficiencies, is the amount of time rail cars spend in a terminal before departing on an outbound train for customer delivery.

\*\* Train speed is an indicator of network velocity and fluidity, key to turning assets faster, moving more freight with fewer locomotives and rail cars, and adding network capacity to support customers' growth.

**NORFOLK SOUTHERN CORPORATION AND SUBSIDIARIES ECONOMIC CONTRIBUTIONS TO THE STATES, INCLUDING D.C., SERVED BY NORFOLK SOUTHERN CORPORATION 2021**

(\$ in thousands)

State	Total Number of Employees Paid (A)	Total Payroll (A)	Total State and Local Taxes (B)	*Total Purchases & Other Payments (C)	<i>includes taxes</i> Total Purchases & Other Payments (C)	Miles of Road Operated 12/31/2021
ALABAMA	1,300	\$ 93,747	\$ 27,326	60,8424	\$ 88,168	1,304
DELAWARE	52	3,725	272	2,251	2,523	82
DISTRICT OF COLUMBIA	6	445	1	19,062	19,063	19
FLORIDA	189	13,691	2,217	58,186	60,403	148
GEORGIA	4,668	445,889	38,003	495,090	533,093	1,706
ILLINOIS	1,105	78,247	29,835	990,250	1,020,085	1,261
INDIANA	1,909	146,369	22,759	116,323	139,082	1,440
IOWA	10	577	233	2,116	2,349	43
KENTUCKY	826	53,491	15,104	108,420	123,524	429
LOUISIANA	68	4,591	5,771	4,028	9,799	76
MARYLAND	74	4,851	3,418	39,636	43,054	259
MICHIGAN	524	39,270	1,619	64,464	66,083	488
MISSISSIPPI	212	13,259	12,224	26,173	38,397	211

(A) Employment based on W-2's state of residence. Payroll figures are not included in purchases column.

(B) Taxes include state income, property, sales and use, franchise, and other miscellaneous taxes.

(C) Total purchases includes any payments that were processed through NS' voucher A/P system (including capital items, rolling stock, joint facility, employee claims, legal fees, etc.) based on payment remittance address. Payroll and tax payments are not included.

\*Excludes payments such as: Payments made to healthcare vendors; insurance payments to United Health Care, averaging \$25M per month; Vanguard contributions

NOTE: Excludes employees in the Shared Asset Area but includes all nonoperating companies

**NORFOLK SOUTHERN CORPORATION AND SUBSIDIARIES ECONOMIC CONTRIBUTIONS TO THE STATES, INCLUDING D.C., SERVED BY NORFOLK SOUTHERN CORPORATION 2021**

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MISSOURI	408	\$ 29,339	\$ 10,562	88,740	99,302	409
NEW JERSEY	132	9,700	7,126	95,226	102,352	902
NEW YORK	364	25,944	13,980	65,089	79,069	840
NORTH CAROLINA	942	65,123	10,152	276,579	286,731	1,187
OHIO	2,623	184,299	17,212	448,302	465,514	1,906
PENNSYLVANIA	3,180	230,058	25,273	913,142	938,415	2,419
SOUTH CAROLINA	555	42,993	9,632	48,651	58,283	762
TENNESSEE	1,261	86,074	23,046	65,865	88,911	828
VIRGINIA	2,477	184,477	38,517	85,855	124,372	1,990
WEST VIRGINIA	592	40,475	17,305	17,525	34,830	618
ALL OTHER	93	4,852	1,051	815,574	816,625	4
<b>Total</b>	<b>23,570</b>	<b>\$ 1,801,486</b>	<b>\$ 332,637</b>	<b>4,907,389</b>	<b>\$ 5,240,026</b>	<b>19,331</b>

(A) Employment based on W-2's state of residence. Payroll figures are not included in purchases column.

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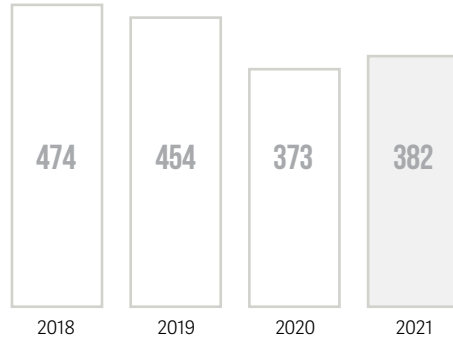
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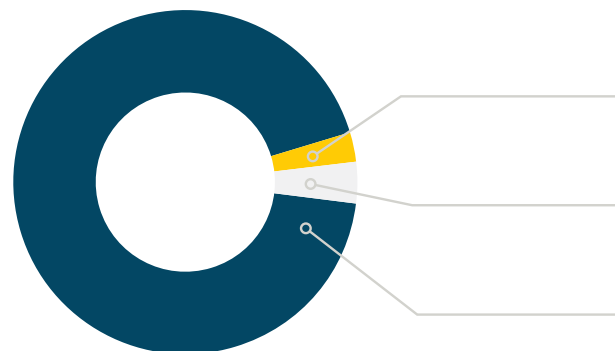
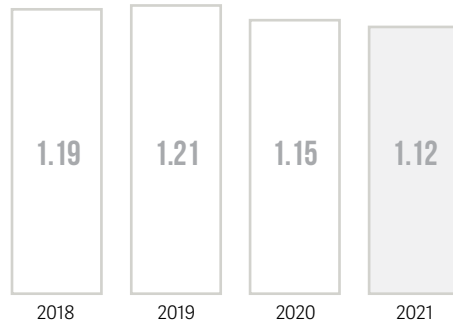
**LOCOMOTIVE DIESEL FUEL USE**

in million gallons



**FUEL EFFICIENCY**

gallons of diesel consumed per 1,000 gross ton-miles improved 7% since 2019



**2021 EMISSIONS**

CO<sub>2</sub> equivalents in metric tons

	SCOPE 1*	SCOPE 2	SCOPE 3
CO <sub>2</sub>	4,126,770	147,100	89,991
CH <sub>4</sub>	8,698	301	51
N <sub>2</sub> O	30,340	505	559
CO <sub>2</sub> e			1,015,516***
<b>Total</b>	<b>4,165,808</b>	<b>147,906</b>	<b>1,106,117**</b>

\* Scope 1 emissions exclude 47,797 tons of direct CO<sub>2</sub> emissions from the use of biofuels.

\*\* Emissions in Scope 3 above account for employee business travel, waste generated in operations, upstream leased assets, upstream transportation and distribution, purchased goods and services, capital goods, and fuel- and energy-related activities not covered in Scope 1. The total emissions for Scope 3 are not included here.

\*\*\* 73,712 metric tons CO<sub>2</sub>e are emissions related to waste generated in operations. The total CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions breakdown for this category is not available because emissions for waste constitute only methane emissions and emission factors for waste are not broken down per GHG type. 941,803 metric tons CO<sub>2</sub>e are emissions related to the well to tank (upstream) portion of Scope 1 fuel use and a breakdown for this category is not available because emission factors are provided in kg of CO<sub>2</sub>e per liter and therefore a breakdown per GHG type is unavailable.



**STATIONARY SOURCES: 3%**  
**144,214 METRIC TONS**  
 Fuel oil, kerosene, natural gas, propane, non-vehicle diesel



**PURCHASED ELECTRICITY: 3%**  
**147,906 METRIC TONS**

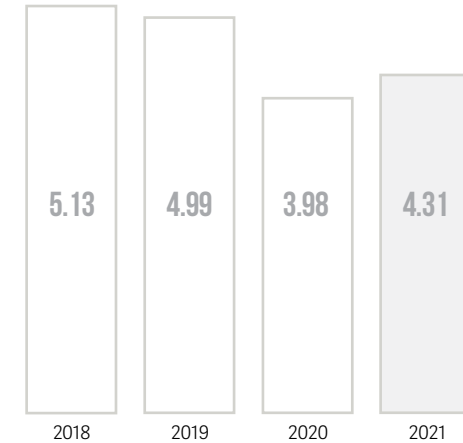


**MOBILE SOURCES: 94%**  
**4.07 MILLION METRIC TONS**  
 Locomotive diesel, fleet and non-fleet vehicle fuel, jet fuel

**ABSOLUTE GHG EMISSIONS**

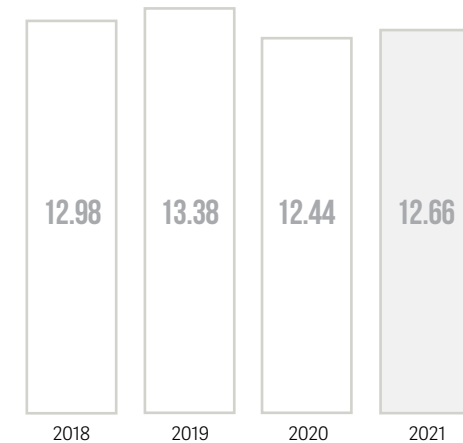
total Scope 1/Scope 2

CO<sub>2</sub> equivalents in million metric tons



**GHG EMISSIONS INTENSITY**

CO<sub>2</sub> equivalents per million gross ton-miles in metric tons improved 5% since our 2019 base year. Values exclude emissions from biofuels.





**2021 WASTE SCORECARD**

Summary*	Tons**	Materials reused or recycled	Tons**
Waste generated	264,680	Crossties for energy	56,693
Waste to landfill	128,075	Mixed scrap metal/steel	45,970
Waste diverted	136,604	Reclaimed used oil/grease	5,668
RCRA hazardous waste***	83	Recycled trash/cardboard	294
Total waste diverted from landfill	52%		
Battery recycling	Tons**	Other recovered materials	Tons**
Lead acid	43	Fluorescent light bulbs	4
Nickel-cadmium	41	Solvent recovery/paint recycle	877
GNB absolyte	146		
Other	2		

\* NS hired an independent consultant to collect and quality-check waste stream data.

\*\* Numbers are rounded to the nearest ton.

\*\*\* Resource Conservation and Recovery Act wastes are managed by NS according to applicable federal and state laws governing hazardous waste.

**ENERGY SCORECARD**

2021	362.8 million kilowatt hours
2020	421.3 million kilowatt hours
2019	442.4 million kilowatt hours
2018	414.9 million kilowatt hours

2021 vs. 2020  
**14% decrease**  
 in kilowatt hours

**ELECTRICITY COST**

2021	\$40.5 million
2020	\$40.5 million
2019	\$40.5 million
2018	\$41.5 million

**EMPLOYEE SAFETY SNAPSHOT** (Safety data numbers as of June 1, 2022)

	2018	2019	2020	2021	YoY change 2020 to 2021
Reportable injuries*	349	356	292	223	23.6% ↓
Employees who lost work days due to injury	251	232	194	104	46.4% ↓
Reportable injury ratio per 200,000 employee-hours	1.37	1.51	1.50	1.24	17.3% ↓
Work-related fatalities	0	2	1	1	-
Fatality rate**	0	.01	.01	.01	-

\* Three most frequent: strain, bruise/contusion, and sprain.

\*\* Measured by number of fatalities divided by total employees.

**SERIOUS INJURIES**

	2018	2019	2020	2021	YoY change 2020 to 2021
Serious injury count*	60	50	40	24	40% ↓
Ratio	0.24	0.21	0.21	0.13	-

\* A serious injury involves death, or one of the following injury types resulting in seven or more lost days: amputation, concussion, dislocation, fracture, internal injury, laceration, one-time exposure to fumes or chemicals, burns, electric shock, rupture/tear, crushing injury.

**FRA TRAIN ACCIDENTS**

	2018	2019	2020	2021
Total number	255	289	262	262
Incidents per million train miles	2.76	3.30	3.61	3.78

**HIGHWAY-RAIL GRADE-CROSSING INCIDENTS**

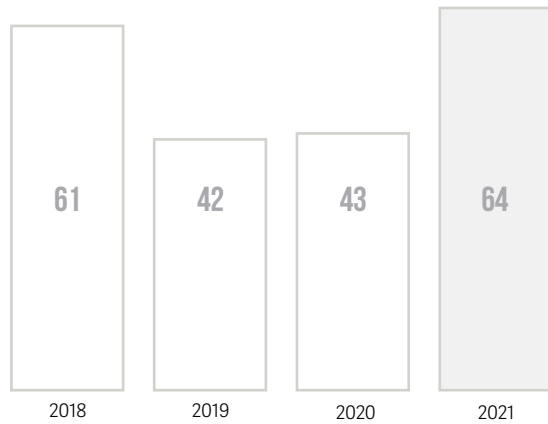
	2018	2019	2020	2021
Injuries	109	112	100	84
Fatalities	31	32	27	25
Highway-rail incidents	365	358	301	358
Incidents per million train miles	3.95	4.09	4.14	5.17

**TRESPASSER INCIDENTS**

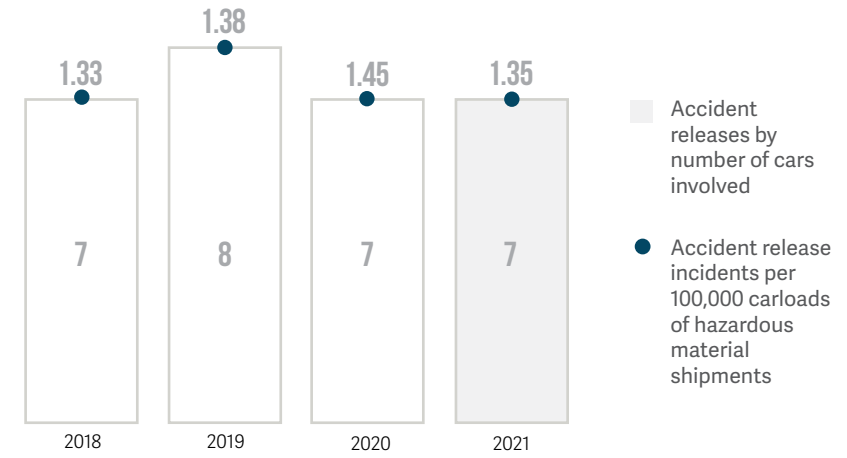
	2018	2019	2020	2021
Injuries	69	71	61	59
Fatalities	52	75	51	64
Incidents per million train miles	1.3	1.66	1.54	1.78

### TOTAL REPORTABLE HAZMAT INCIDENTS

includes accident and nonaccident releases

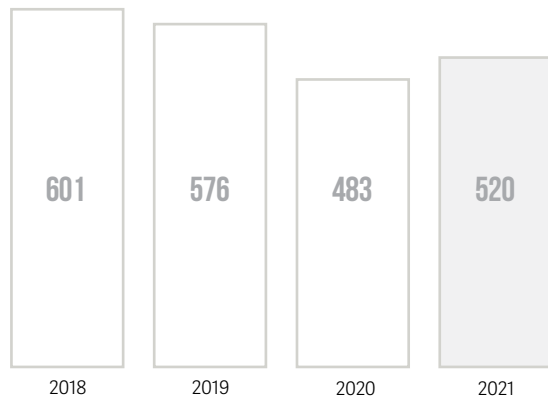


### HAZMAT ACCIDENT RELEASES

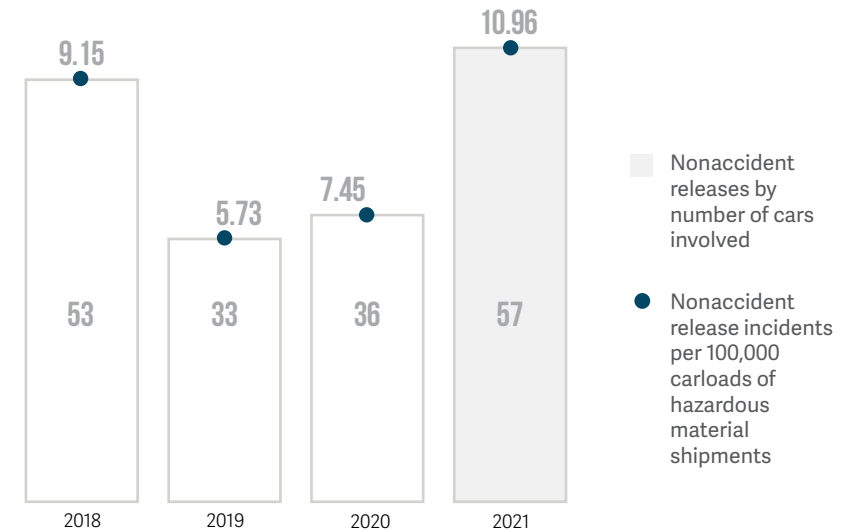


### CARLOADS OF REGULATED HAZARDOUS MATERIAL

carloads in thousands



### HAZMAT NONACCIDENT RELEASES



**WORKFORCE DEMOGRAPHICS** as of 12/31/2021

Craft (unionized) workforce			Management workforce			Senior management		
Female	582	4.1%	Female	816	21.3%	Female	7	27%
Male	13,485	95.9%	Male	3,024	78.8%	Male	19	73%
<b>Total</b>	<b>14,067</b>	<b>100%</b>	<b>Total</b>	<b>3,840</b>	<b>100%</b>	<b>Total</b>	<b>26</b>	<b>100%</b>
Age under 30	1,002	7.1%	Age under 30	403	10.5%	Age under 30	-	-
30 to 50	8,665	61.6%	30 to 50	2,418	63.0%	30 to 50	5	19%
Over 50	4,400	31.3%	Over 50	1,019	26.5%	Over 50	21	81%
<b>Total</b>	<b>14,067</b>	<b>100%</b>	<b>Total</b>	<b>3,840</b>	<b>100%</b>	<b>Total</b>	<b>26</b>	<b>100%</b>
White	11,655	82.9%	White	2,745	71.5%	White	24	92%
Black or African American	1,911	13.6%	Black or African American	721	18.8%	Black or African American	2	8%
Hispanic/Latino	252	1.8%	Hispanic/Latino	116	3.0%	Hispanic/Latino	-	-
Asian	37	0.3%	Asian	159	4.1%	Asian	-	-
Other	212	1.5%	Other	99	2.6%	Other	-	-
<b>Total</b>	<b>14,067</b>	<b>100%</b>	<b>Total</b>	<b>3,840</b>	<b>100%</b>	<b>Total</b>	<b>26</b>	<b>100%</b>

In addition to the workforce demographics disclosed above, we are publishing our 2021 EEO-1 report, available [here](#), for transparency, and to demonstrate our continued commitment toward advancing diversity, equity, and inclusion. The EEO-1 report is an annual mandatory submission provided to the U.S. Equal Employment Opportunity Commission; however, it uses specific job categories that are not necessarily tailored to our company's unique organizational structure. As such, we encourage you to review the employment data disclosed in the tables above, which provides a more specific and informative breakdown of our workforce.

**VETERAN INFORMATION** as of 12/31/2021

Workforce	2,288	12%	New hire	133	10%
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**2021 NEW HIRES** as of 12/31/2021

Craft (unionized) workforce		
Female	36	4.0%
Male	867	96.0%
<b>Total</b>	<b>903</b>	<b>100%</b>
Age under 30	404	44.7%
30 to 50	443	49.1%
Over 50	56	6.2%
<b>Total</b>	<b>903</b>	<b>100%</b>
White	517	57.3%
Black or African American	226	25.0%
Hispanic/Latino	22	2.4%
Asian	25	2.8%
Other	113	12.5%
<b>Total</b>	<b>903</b>	<b>100%</b>

Management workforce		
Female	122	34%
Male	237	66%
<b>Total</b>	<b>359</b>	<b>100%</b>
Age under 30	155	43.2%
30 to 50	149	41.5%
Over 50	55	15.3%
<b>Total</b>	<b>359</b>	<b>100%</b>
White	158	44.0%
Black or African American	76	21.2%
Hispanic/Latino	25	7.0%
Asian	40	11.1%
Other	60	16.7%
<b>Total</b>	<b>359</b>	<b>100%</b>

**2021 EMPLOYEES WHO LEFT\*** as of 12/31/2021

Craft (unionized) workforce		
Female	140	5.1%
Male	2,615	94.9%
<b>Total</b>	<b>2,755</b>	<b>100%</b>
Age under 30	593	21.5%
30 to 50	1,474	53.5%
Over 50	688	25.0%
<b>Total</b>	<b>2,755</b>	<b>100%</b>
White	2,133	77.4%
Black or African American	426	15.5%
Hispanic/Latino	54	2.0%
Asian	32	1.2%
Other	110	4.0%
<b>Total</b>	<b>2,755</b>	<b>100%</b>

Management workforce		
Female	145	26%
Male	412	74%
<b>Total</b>	<b>557</b>	<b>100%</b>
Age under 30	149	26.8%
30 to 50	233	41.8%
Over 50	175	31.4%
<b>Total</b>	<b>557</b>	<b>100%</b>
White	382	68.6%
Black or African American	87	15.6%
Hispanic/Latino	19	3.4%
Asian	31	5.6%
Other	38	6.8%
<b>Total</b>	<b>557</b>	<b>100%</b>

\*Includes employees who were discharged, resigned, left due to disability or workforce reduction, and retired.

**FOUNDATION & CORPORATE GIVING**

		2018	2019	2020	2021
Total Foundation	\$	6,340,683	6,214,249	5,376,000	3,678,008
Total corporate giving	\$	2,491,094	2,452,866	2,396,100	3,242,180
Hampton Roads community gift	\$			5,000,000	
Children's Hospital of The King's Daughters gift	\$			1,000,000	1,000,000
<b>Total</b>	<b>\$</b>	<b>8,831,777</b>	<b>8,667,115</b>	<b>13,772,100</b>	<b>7,920,188</b>

# GLOBAL REPORTING INITIATIVE (GRI) CONTENT INDEX

GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION
<b>GRI 102: GENERAL DISCLOSURES</b>	Organization Profile	
	102-1: Name of organization	Norfolk Southern Corporation
	102-2: Activities and services	2021 Annual Report – Financial Highlights
	102-3: Location of headquarters	Atlanta, GA
	102-4: Location of operations	2021 Annual Report – Form 10-K (p. K3 – K4)
	102-5: Ownership and legal form	Norfolk Southern is a publicly traded company, incorporated in Virginia. Norfolk Southern’s common stock is listed on the New York Stock Exchange and the official trading symbol is “NSC.”
	102-6: Markets served	2021 Annual Report – Form 10-K (p. K3 – K6)
	102-7: Scale of the organization	Driving the Economy; ESG Data Scorecard; and 2021 Annual Report - Form 10-K (p. K5 – K8)
	102-8: Information on employees and other workers	ESG Data Scorecard
	102-9: Supply chain	Circularity and Our Partners and ESG Data Scorecard
	102-10: Significant changes to the organization and its supply chain	2021 Annual Report (p. 1 – 4)
	102-11: Precautionary Principle or approach	Sustainability and Climate Statement
102-12: External initiatives	<a href="#">The Thoroughbred Code of Ethics</a> applies to all employees, officers, and directors of Norfolk Southern Corporation and its consolidated subsidiaries (excluding Norfolk and Portsmouth Belt Line Railroad Company). The Code may also apply to other people who are working on Norfolk Southern’s behalf or at our direction.	



GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION
<b>GRI 102: GENERAL DISCLOSURES</b>	<b>Strategy</b>	
	102-14: Statement from senior decision maker	Message from our CEO
	102-15: Key impacts, risks, and opportunities	TCFD Content Index; 2021 Annual Report – Form 10-K (p. K11 – K14); and 2022 CDP Response
	<b>Ethics &amp; Integrity</b>	
	102-16: Values, principles, standards, and norms of behavior	<a href="#">Norfolk Southern Vision &amp; Values</a>
	102-17: Mechanisms for advice and concerns about ethics	<a href="#">The Thoroughbred Code of Ethics</a> (p. 11) and Ethics & Compliance Hotline
	<b>Governance</b>	
	102-18: Governance structure	Diverse and Independent Governance and 2022 Proxy Statement (p. 16 – 19)
	102-19: Delegating authority	Diverse and Independent Governance and 2022 Proxy Statement (p. 16 – 19)
	102-20: Executive-level responsibility for economic, environmental, and social topics	Diverse and Independent Governance, 2022 Proxy Statement (p. 22), and 2022 CDP Response (questions 1.2, 1.2a)
102-21: Consulting stakeholders on economic, environmental, and social topics	2022 Proxy Statement (p. 17)	
102-22: Composition of the highest governance body and its committees	2022 Proxy Statement (p. 8 – 22)	

GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION
<b>GRI 102: GENERAL DISCLOSURES</b>	102-23: Chair of the highest governance body	2022 Proxy Statement (p. 2 – 16)
	102-24: Nominating and selecting the highest governance body	2022 Proxy Statement (p. 8 – 22) and <a href="#">Corporate Governance Guidelines</a>
	102-25: Conflicts of Interest	<a href="#">The Thoroughbred Code of Ethics</a> (p. 32) and 2022 Proxy Statement (p. 16, 19, 20, 36)
	102-26: Role of highest governance body in setting purpose, values, and strategy	<a href="#">Engaged Governance and Oversight</a> , 2022 Proxy Statement (p. 8 – 22), and <a href="#">Charter of the Governance and Nominating Committee</a>
	102-27: Collective knowledge of highest governance body	2022 Proxy Statement (p. 14, 17)
	102-28: Evaluating the highest governance body's performance	2022 Proxy Statement (p. 16 – 17) and <a href="#">Corporate Governance Guidelines</a>
	102-29: Identifying and managing economic, environmental, and social impacts	<a href="#">Protecting Our Enterprise</a> , 2022 Proxy Statement (p. 5 – 7, 13), <a href="#">Charter of the Governance and Nominating Committee</a> , and 2021 CDP Response
	102-30: Effectiveness of risk management processes	2022 Proxy Statement (p. 18)
	102-31: Review of economic, environmental, and social topics	2022 CDP Response
	102-32: Highest governance body's role in sustainability reporting	This sustainability report was reviewed by the Company's Executive Leadership Team and provided to the Governance and Nominating Committee of the Board of Directors before publication.
102-33: Communicating critical concerns	Per Corporate Governance Guidelines, interested parties who wish to contact the outside directors can do so by contacting the Lead Director c/o Corporate Secretary, Norfolk Southern Corporation.	

GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION	
GRI 102: GENERAL DISCLOSURES	102-35: Remuneration policies	2022 Proxy Statement (p. 38 – 46) and <a href="#">Charter of the Compensation Committee</a>	
	102-36: Process for determining remuneration	2022 Proxy Statement (p. 37 – 46) and <a href="#">Charter of the Compensation Committee</a>	
	102-37: Stakeholders’ involvement in remuneration	2022 Proxy Statement (p. 28 – 30)	
	102-38: Annual total compensation ratio	2022 Proxy Statement (p. 64)	
	102-39: Percentage increase in annual total compensation ratio	2022 Proxy Statement (p. 64)	
	<b>Stakeholder Engagement</b>		
	102-40: List of stakeholder groups	Circularity and Our Partners, Investing in Our People, Informing Policymakers, Diverse and Independent Governance, 2022 Proxy Statement (p. 5, 17) and 2021 Annual Report (p. 3)	
	102-41: Collective bargaining agreements	2021 Annual Report (p. 19, 23, 30, 76)	
	<b>Reporting Practices</b>		
	102-45: Entities included in the consolidated financial statements	2021 Annual Report	
102-46: Defining report content and topic boundaries	Materiality Assessment		
102-50: Reporting period	About this Report		
102-51: Date of most recent report	About this Report		
102-52: Reporting cycle	About this Report		

GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION
GRI 102: GENERAL DISCLOSURES	102-53: Contact point for questions regarding the report	About this Report
	102-54: Claims of reporting in accordance with the GRI Standards	About this Report
	102-55: GRI content index	GRI Content Index
	102-56: External assurance	Assurance
<b>Economic Performance (201)</b>		
GRI 200: ECONOMIC	201-1: Direct economic value generated and distributed	2021 Annual Report – Financial Highlights and ESG Data Scorecard
	201-2: Financial implications and other risks and opportunities due to climate change	2021 Annual Report (p. 24) and 2022 CDP Response
	<b>Tax Transparency (207)</b>	
	207-4: Country-by-country reporting	2021 Annual Report – Financial Highlights and ESG Data Scorecard
<b>Energy (302)</b>		
GRI 300: ENVIRONMENT	302-1: Energy use by source	ESG Data Scorecard and 2022 CDP Response
	302-3: Energy intensity ratio	ESG Data Scorecard and 2022 CDP Response
	302-4: Reductions of energy consumption	Delivering the Low-carbon Economy, Data-driven Decisions for Carbon Reduction, Our Commitment to Sustainable Facilities, ESG Data Scorecard, and 2022 CDP Response
	<b>Biodiversity (304)</b>	
	304-3: Habitats protected or restored	Cultivating Biodiversity

GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION
<b>GRI 300: ENVIRONMENT</b>	Emissions (305)	
	305-1: Direct GHG emissions (Scope 1)	ESG Data Scorecard and 2022 CDP Response
	305-2: Indirect GHG emissions (Scope 2)	ESG Data Scorecard and 2022 CDP Response
	305-3: Indirect GHG emissions (Scope 3)	ESG Data Scorecard and 2022 CDP Response
	305-4: GHG emissions intensity ratio	ESG Data Scorecard and 2022 CDP Response
	305-5: GHG reductions realized	Delivering the Low-carbon Economy, Data-driven Decisions for Carbon Reduction, ESG Data Scorecard, and 2022 CDP Response
	Waste (306)	
	306-3: Waste generated	ESG Data Scorecard
	306-4: Waste diverted from disposal	ESG Data Scorecard
	306-5: Waste directed to disposal	ESG Data Scorecard
<b>GRI 400: SOCIAL</b>	Employment (401)	
	401-1: New employee hires	ESG Data Scorecard
	Occupational Health and Safety (403)	
	403-3: Occupational health services	What Safety Means to Norfolk Southern
	403-7: Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	What Safety Means to Norfolk Southern and <a href="#">Norfolk Southern Safety</a>
403-9: Work-related injuries	ESG Data Scorecard	

GRI STANDARD	DISCLOSURE #	RESPONSE / INFORMATION LOCATION
GRI 400: SOCIAL	Diversity and Equal Opportunity (405)	
	405-1: Diversity of employees	Diversity, Equality, Inclusion and ESG Data Scorecard
	Local Communities (413)	
	413-1: Operations with local community engagement, impact assessments, and development programs	What Safety Means to Norfolk Southern, ESG Data Scorecard, and <a href="#">Operations Awareness and Response Program</a>
	413-2: Operations with significant actual and potential negative impacts on local communities	What Safety Means to Norfolk Southern, ESG Data Scorecard, and <a href="#">Operations Awareness and Response Program</a>
	Customer Privacy (418)	
418-1: Substantiated complaints concerning breaches of customer privacy and losses of customer data	Protecting Our Enterprise. No material customer data breaches were recorded in 2021.	

# SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB) CONTENT INDEX

## SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

TOPIC	ACCOUNTING METRIC	RESPONSE / INFORMATION LOCATION
GREENHOUSE GAS EMISSIONS	TR-RA-110a.1 Gross global Scope 1 emissions	ESG Data Scorecard
	TR-RA-110a.2 Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, reduction targets, and an analysis of performance against those targets	Delivering the Low-carbon Economy, Data-driven Decisions for Carbon Reduction, and 2022 CDP Response
	TR-RA-110a.3 Total fuel consumed, percentage renewable	ESG Data Scorecard
AIR QUALITY	TR-RA-120a.1 Air emissions of the following pollutants: (1) NOx (excluding N2O) and (2) particulate matter (PM10)	(1) t NOx = 35,882 metric tons (2) t PM10 = 840 metric tons
EMPLOYEE HEALTH AND SAFETY	TR-RA-320a.1 (1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	ESG Data Scorecard
COMPETITIVE BEHAVIOR	TR-RA-520a.1 Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Norfolk Southern wasn't subject to any monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations in 2021.

TOPIC	ACCOUNTING METRIC	RESPONSE / INFORMATION LOCATION
ACCIDENT AND SAFETY MANAGEMENT	TR-RA-540a.1 Number of accidents and incidents	ESG Data Scorecard
	TR-RA-540a.2 Number of (1) accident releases and (2) nonaccident releases (NARs)	ESG Data Scorecard
	TR-RA-540a.3 Number of Federal Railroad Administration (FRA) Recommended Violation Defects	ESG Data Scorecard
	TR-RA-540a.4 Frequency of internal railway integrity inspections	2 inspections per week (The FRA requires twice-weekly inspections, with at least one calendar-day interval between inspections if the track has carried passenger trains, or more than 10 million gross tons of traffic during the preceding calendar year. Norfolk Southern inspects all track at the FRA regulatory levels based on million gross ton-miles and class of track operated.)

ACTIVITY METRICS

ACTIVITY METRIC	RESPONSE / INFORMATION LOCATION
TR-RO-000.A Number of carloads transported	2021 Annual Report – Form 10-K (p. K5 – K6)
TR-RO-000.B Number of intermodal units transported	2021 Annual Report – Form 10-K (p. K5)
TR-RO-000.C Track miles	ESG Data Scorecard and 2021 Annual Report – Form 10-K (p. K5)
TR-RO-000.D Revenue ton miles (RTMs)	2021 Annual Report – Form 10-K (p. K5)
TR-RO-000.E Number of employees	ESG Data Scorecard



# TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURE (TCFD) INDEX




RECOMMENDED DISCLOSURES	RESPONSE / INFORMATION LOCATION
<b>1. Governance</b>	
A. Describe the board’s oversight of climate-related risks and opportunities.	Diverse and Independent Governance, 2022 Proxy Statement (p. 8-22), <a href="#">Charter of the Governance and Nominating Committee</a> , and 2022 CDP Response (C1.1)
B. Describe management’s role in assessing and managing climate-related risks and opportunities.	Diverse and Independent Governance, 2022 Proxy Statement (p. 5, 18), <a href="#">Charter of the Governance and Nominating Committee</a> , and 2022 CDP Response (C1.2)
<b>2. Strategy</b>	
A. Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term.	Materiality Assessment, 2022 CDP Response (C2.1, C2.2, C2.3, C2.4, and C2.4a)
B. Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy and financial planning.	Diverse and Independent Governance, Materiality Assessment, 2022 Proxy Statement (p. 5, 18), <a href="#">Charter of the Governance and Nominating Committee</a> , and 2022 CDP Response (C2.4a,C3.1, C3.3, and C3.4)
C. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2C or lower scenario.	Delivering the Low-carbon Economy, Data-driven Decisions for Carbon Reduction, and 2022 CDP Response (C3.2)
<b>3. Risk Management</b>	
A. Describe the organization’s processes for identifying and assessing climate-related risks.	Materiality Assessment, 2022 CDP Response (C2.1, C2.1a, and C2.2, C2.2a, C2.3, C2.3a)
B. Describe the organization’s processes for managing climate-related risks.	2022 CDP Response (C2.1 and C2.2, C2.3a)

RECOMMENDED DISCLOSURES	RESPONSE / INFORMATION LOCATION
<b>3. Risk Management (continued)</b>	
C. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	2022 CDP Response (C2.1 and C2.2)
<b>4. Metrics and Targets</b>	
A. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Delivering the Low-carbon Economy, Data-driven Decisions for Carbon Reduction, and 2022 CDP Response (C4.1, C4.1b and C9.1)
B. Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	ESG Data Scorecard and 2022 CDP Response (C6.1, C6.3 and C6.5)
C. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Delivering the Low-carbon Economy, Data-driven Decisions for Carbon Reduction, and 2022 CDP Response (C4.1 and C4.1b)

**SUSTAINABLE DEVELOPMENT GOALS**

**ALIGNMENT**

The United Nations' 17 Sustainable Development Goals (UN SDGs) is the global framework for driving progress toward a more sustainable future. Norfolk Southern is contributing to this urgent call to action throughout our business operations and activities as noted below.

	<ul style="list-style-type: none"> <li>• End poverty in all its forms everywhere</li> </ul>	<p>Annual Report ESG Report - Corporate Giving and Community Engagement</p>
	<ul style="list-style-type: none"> <li>• End hunger, achieve food security and improve nutrition and promote sustainable agriculture</li> </ul>	<p>ESG Report - Corporate Giving and Community Engagement</p>
	<ul style="list-style-type: none"> <li>• Ensure healthy lives and promote well-being for all at all ages</li> </ul>	<p>Total Rewards - Benefits Page The Thoroughbred Code of Ethics ESG Report - What Safety Means to Norfolk Southern ESG Report - Delivering the Low-carbon Economy ESG Report - Data-Driven Decisions for Carbon Reductions ESG Report - Circularity and Our Partners ESG Report - Data Scorecard</p>
	<ul style="list-style-type: none"> <li>• Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all</li> </ul>	<p>ESG Report - Corporate Giving and Community Engagement ESG Report - Investing in Our People ESG Report - Data Scorecard</p>
	<ul style="list-style-type: none"> <li>• Achieve gender equality and empower all women and girls</li> </ul>	<p>The Thoroughbred Code of Ethics Proxy Statement Annual Report Total Rewards - Benefits Page ESG Report - Diversity, Equity, and Inclusion ESG Report - Diverse and Independent Governance ESG Report - Data Scorecard</p>
	<ul style="list-style-type: none"> <li>• Ensure availability and sustainable management of water and sanitation for all</li> </ul>	<p>ESG Report - Cultivating Biodiversity ESG Report - Circularity and Our Partners ESG Report - Data Scorecard</p>

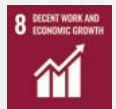
**SUSTAINABLE DEVELOPMENT GOALS** (continued)

**ALIGNMENT**



- Ensure access to affordable, reliable, sustainable and modern energy for all

CDP Response  
 ESG Report - Delivering the Low-carbon Economy  
 ESG Report - Data-Driven Decisions for Carbon Reductions  
 ESG Report - Data Scorecard



- Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

The Thoroughbred Code of Ethics  
 Annual Report  
 Proxy Statement  
 CDP Response  
 Total Rewards - Benefits Page  
 ESG Report - What Safety Means to Norfolk Southern  
 ESG Report - Investing in Our People  
 ESG Report - Circularity and Our Partners  
 ESG Report - Data Scorecard



- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Annual Report  
 ESG Report - Advancing Sustainability  
 ESG Report - Investments  
 ESG Report - Driving Digital Rail Forward  
 ESG Report - Data Scorecard



- Reduce inequality within and among countries

Annual Report  
 Proxy Statement  
 The Thoroughbred Code of Ethics  
 ESG Report - Diversity, Equity and Inclusion  
 ESG Report - Materiality Assessment  
 ESG Report - Data Scorecard








- Make cities and human settlements inclusive, safe, resilient and sustainable

Annual Report  
 The Thoroughbred Code of Ethics  
 ESG Report - Circularity and Our Partners  
 ESG Report - Corporate Giving and Community Engagement  
 ESG Report - Data Scorecard



- Ensure sustainable consumption and production patterns

CDP Response  
 Operation Awareness & Response  
 ESG Report - Circularity and Our Partners  
 ESG Report - Corporate Giving and Community Engagement  
 ESG Report - Data Scorecard

SUSTAINABLE DEVELOPMENT GOALS (continued)	ALIGNMENT
 <ul style="list-style-type: none"> <li>• Take urgent action to combat climate change and its impacts</li> </ul>	<p>Annual Report                      CDP Response                      The Thoroughbred Code of Ethics                      ESG Report - Delivering the Low-Carbon Economy                      ESG Report - Data-Driven Decisions for Carbon Reductions                      ESG Report - Data Scorecard</p>
 <ul style="list-style-type: none"> <li>• Conserve and sustainably use the oceans, seas and marine resources for sustainable development</li> </ul>	<p>CDP Response                      ESG Report - Cultivating Biodiversity                      ESG Report - Data Scorecard</p>
 <ul style="list-style-type: none"> <li>• Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss</li> </ul>	<p>CDP Response                      ESG Report - Advancing Sustainability                      ESG Report - Cultivating Biodiversity                      ESG Report - Data Scorecard</p>
 <ul style="list-style-type: none"> <li>• Promote peaceful and inclusive societies for sustainable development provide access to justice for all and build effective, accountable and inclusive institutions at all levels</li> </ul>	<p>The Thoroughbred Code of Ethics                      Political Activity and Political Contributions                      Annual Report                      Proxy Statement                      ESG Report - Diverse and Independent Governance                      ESG Report - What Safety Means to Norfolk Southern                      ESG Report - Data Scorecard</p>
 <ul style="list-style-type: none"> <li>• Strengthen the means for implementation and revitalize the Global Partnership for Sustainable Development</li> </ul>	<p>Annual Report                      Proxy Statement                      ESG Report - Data Scorecard</p>



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