



# Forging a Better Tomorrow

NORFOLK SOUTHERN ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORT  
6 | 30 | 2023



# Forging a Better Tomorrow

For over 15 years, Norfolk Southern has been a corporate leader in sustainability. In 2007, we named the industry's first Chief Sustainability Officer and a year later published our inaugural sustainability report. To further our environmental commitment, in 2021 we established a science-based target to reduce greenhouse gas emissions intensity 42% by 2034.

*This past year we took the next steps in our sustainability journey, including:*

- Committing to developing and announcing a Climate Transition Plan by the end of 2023 to help guide us in meeting our science-based target
- Building upon the safety enhancements we made following the East Palestine derailment, including implementing a six-point safety plan and retaining a best-in-class consultant with Navy nuclear experience to conduct an independent safety review
- Further enhancing quality of life improvements for our employees following our announcement on becoming the first Class 1 railroad to provide paid sick leave to 100% of its craft workforce
- Executing a new strategic plan based on safe, reliable and resilient service, smart, sustainable growth, and continuous productivity improvements

That is why this year's report theme is "Forging a Better Tomorrow." By working together with our partners, we can create a more sustainable world, a brighter future for our employees, and help our customers achieve their goals. It takes tenacity, time, and effort – and we are all in.

## Report Introduction

A Message from Our CEO	3
East Palestine Incident & Responsive Efforts	4
Materiality Assessment	6

## Environmental Pillar

Carbon Emissions & Climate Change	8
Energy & Water Consumption	11
Responsible Sourcing & Circularity	12
Sustainable Land Use & Biodiversity	13

## Social Pillar

Employee Health & Safety	16
Craft Workforce Engagement	17
Emergency Preparedness & Response	18
Employee Recruitment & Development	19
Diversity, Equity, & Inclusion	20
Economic Performance	22
Local Impact	23
Corporate Giving & Community Engagement	24
Innovation & Technology	25

## Governance Pillar

Board Oversight & Risk Management	27
Business Ethics & Compliance	29
Legislation, Regulation, and Government Relations	30

## Disclosures Appendix

Reporting Frameworks	31
Norfolk Southern Data Tables	32



# A Message from Our CEO

I'm proud to be a Norfolk Southern railroader. I joined the company more than 29 years ago, and if you ask me what I appreciate the most about Norfolk Southern, the answer is simple: The people. They have heart, drive, and compassion. I see it every day, in the seemingly small ways and in the big ways.



**We care about each other, our customers, our partners, the communities we serve, and the planet we call home. That's who we are, in everything we do, and our decisions reflect our values.**

The shock and sadness we felt after the Norfolk Southern train derailment in East Palestine, Ohio, on February 3, 2023, rippled throughout our company. We are deeply sorry and remain committed to making things right for everyone affected by the incident.

We're working to make sure our response is one we can be proud of five years from now, and ten years from now. That means doing more than less: more financial resources, more time, and more personal commitment to helping East Palestine, the environment, and the surrounding communities recover and thrive. We are cleaning the site safely and thoroughly; testing the air, water, and soil; helping families whose lives were disrupted; and making long-term investments in the community. Every day, we work to earn the trust of the people who live in that area, ensuring we deliver on our promises.

*We are a safe railroad, and we can do better. When a difficult event occurs, especially like the one in East Palestine, it is an opportunity for us to learn and grow. Our long-term approach to our response in East Palestine is aligned with our new strategic direction:*

- We are charting a new course in the industry, intent on driving long-term value through our balanced approach to service, productivity, and growth.
- We are strengthening our safety culture, with a deep commitment to improving ourselves by investing in technology and resources to make our employees, communities, and first responders safer.

- We are investing in our people, with a renewed focus on engaging our craft workforce.
- We are committed to safely delivering reliable and resilient service so our customers can continue to build Norfolk Southern into their supply chains, taking advantage of rail's sustainability.
- We are building a customer-centric, operations-driven service organization, collaborating with our customers, and competing on operational excellence.

I believe this is a better way forward for Norfolk Southern, and you'll see why in this report. You'll read about a company committed to protecting, supporting, and valuing our people, the communities we serve, and our customers. You'll see that reflected in our engagement with our craft colleagues, the progress we've made in East Palestine, and our drive to continually leverage rail's efficiency and sustainability. You'll also note our commitment to strong governance and risk management practices. We've made tremendous achievements on these fronts, and we will continually look to make progress. Of course, none of this can be achieved without an incredible team of people to champion our vision for stronger communities, and a better planet.

Norfolk Southern values trust, and keeps its promises, and we're only able to do that through patience, perseverance, and perspective. We see the bigger picture, and we are forging a better tomorrow together.

Thank you for your partnership.

Regards,

**Alan H. Shaw, President and CEO**

# East Palestine Incident & Responsive Efforts

On February 3, 2023, a Norfolk Southern train derailed in East Palestine, Ohio, including 11 cars containing hazardous materials. Norfolk Southern representatives were onsite quickly to take responsive action to ensure the safety of residents in close coordination with local, state, and federal officials. We will continue to work with these officials and others to conduct environmental monitoring and carry out near- and longer-term clean-up activities. We understand our role in ensuring that the environmental response is handled thoroughly and responsibly, with sensitivity to the natural resources that have been impacted.

We have a responsibility to make it right, and we are fully committed to doing what it takes to see East Palestine recover and thrive. We have worked closely with the National Transportation Safety Board (NTSB) and other authorities to determine the cause of the derailment and are working with affected communities every day to address the long-term effects. Our ongoing efforts are focused on the following three key areas, which reflect Norfolk Southern’s Environmental, Social and Governance (ESG) structure and approach to sustainability more broadly:



## Environmental remediation and testing (as of June 30):



**78,000+**  
tons of waste  
soil shipped  
off site



**22M+**  
gallons of  
impacted water  
recovered



**5,200 feet**  
of impacted waterways flushed



**100+**  
air purifiers  
distributed



**684**  
drinking water  
wells tested



**17M gallons**  
of clean water bypassed, eliminating the need for more than 600 frac tanks and 4,000 vac truck trips

**Community support:**

As of June 30, we have helped more than 10,000 families through our Family Assistance Center located in East Palestine and committed more than \$62.5 million in community support, including:

**\$25M**

for upgrades and improvements to the East Palestine City Park, including a new aquatic center, three new playgrounds, upgraded baseball fields, a new amphitheater, and more

**\$7.5M in financial assistance**

to reimburse Pennsylvania emergency responders and health and environmental agencies

**\$3M+**

in reimbursements and support to the East Palestine Fire Department for equipment used in the response

**\$1M**

fund established for community leaders to identify and direct, in their opinion, where donations can make the most impact

**\$1M**

fund to support the immediate needs of the community, overseen by a Norfolk Southern craft railroader who lives in East Palestine and has been appointed to serve as a community liaison

Norfolk Southern is committed to learning from this accident and working with public officials and the industry to make railroads even safer

**Safety and governance efforts:**

- We are cooperating fully as the NTSB continues its investigation into the cause of the accident and are not waiting for the results to take immediate steps to enhance safety
- We [announced](#) a six-point safety plan on March 6 to immediately enhance the safety of our operations, including making our network of early warning sensors stronger, partnering with other railroads to review best practices, and working to strengthen our safety culture by [joining](#) the Federal Railroad Administration's (FRA) Confidential Close Call Reporting System, which encourages railroaders to speak up if they see something that is unsafe
- We [appointed](#) Atkins Nuclear Secured (ANS), a leading design, engineering, and project management consultancy, on May 25 to conduct an independent review of our safety culture and safety-related training programs, employee engagement, oversight, and communications, with subsequent improvements to be implemented thereafter in phases
- We anticipate publishing an additional report to discuss the East Palestine derailment and our responsive efforts in greater detail

More information can be found at [nsmakingitright.com](https://nsmakingitright.com)

# Materiality Assessment

In late 2021, Norfolk Southern conducted a materiality assessment to identify current and emerging ESG issues most relevant to our business. Completing the materiality assessment was a major step in our sustainability journey, enabling us to align our ESG priorities and activities, ensuring that we are engaging with and being responsive to all of our key stakeholder groups across broader sustainability topics. It also provides an accountability framework to ensure continuous improvement and that sustainability considerations are incorporated into our decisions at every level.

In turn, we have structured our Forging a Better Tomorrow report to align with the ESG priorities we identified through our materiality assessment.

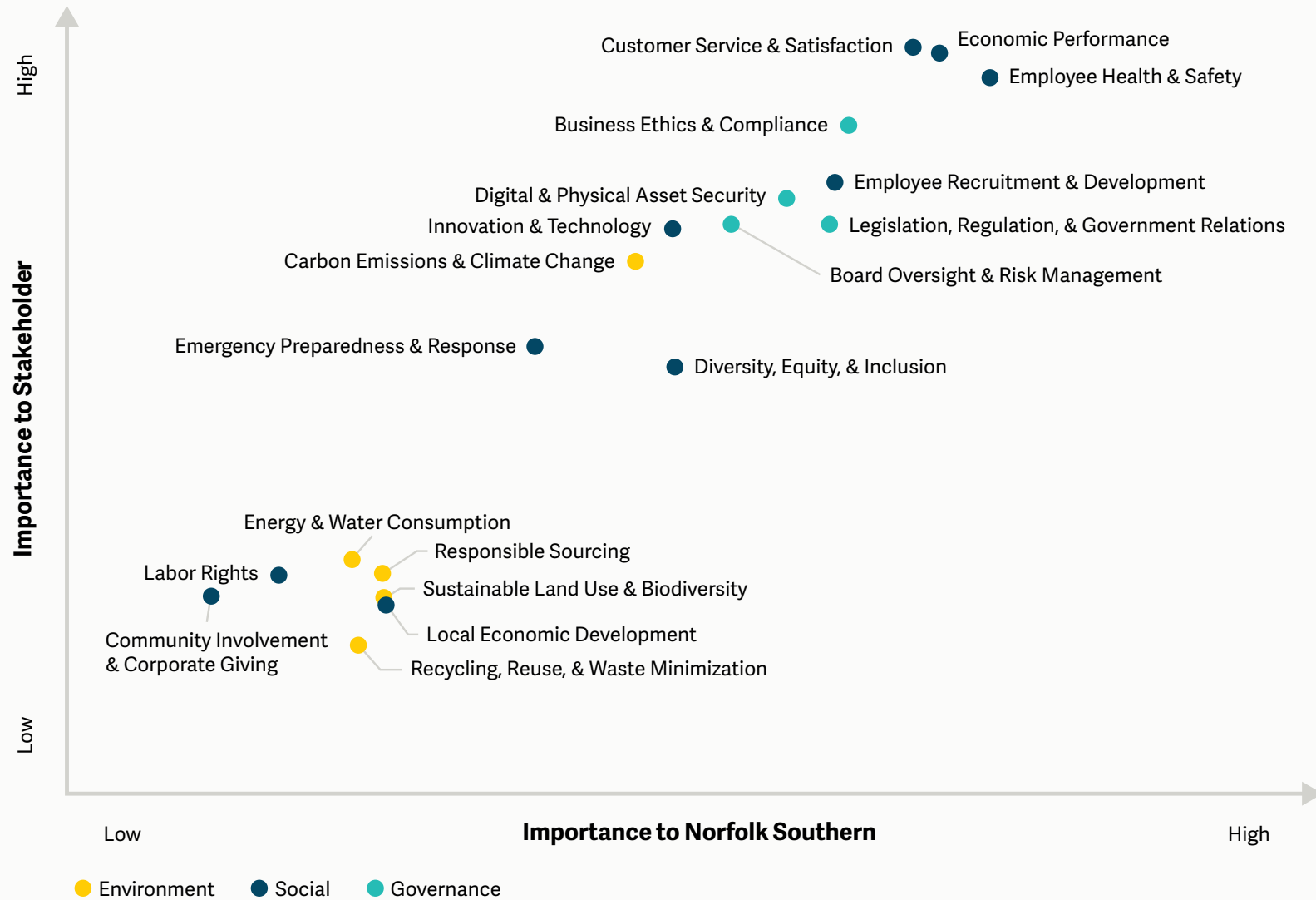
## STAKEHOLDER ENGAGEMENT

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 ESG topics.

To ensure an inclusive and comprehensive assessment, we requested feedback from five key stakeholder groups: executive leadership team, employees, investors, customers, and suppliers. 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 to the left.





# *Environmental Pillar*

Conserving natural resources and reducing our impact on the environment is a critical part of Norfolk Southern's ESG approach. Our Environmental Policy Council has responsibility to review corporate environmental policies including looking at environmental and sustainability initiatives, trends, and data provided by the various departments. At Norfolk Southern, we are committed to bold action and innovative approaches that not only move our company forward on its sustainability journey but invite our customers and partners to work with us to build a better planet.

## **HIGHLIGHTS IN THIS AREA INCLUDE:**

- **Completion of a Transition Scenario Analysis and our forthcoming Climate Transition Plan**
- **Robust locomotive modernization activities**
- **Efforts to help our customers decarbonize their supply chains through our Carbon Calculator and Rail Emissions Report tools**

# Carbon Emissions & Climate Change

Reducing carbon emissions is a strategic component of our environmental strategy.

The ability to help customers reduce their own carbon emissions is a major strength of rail – freight rail's carbon footprint is up to seven times more efficient than trucking.

In 2021, we announced [our science-based target](#) to achieve a 42% reduction in scope 1 and 2 greenhouse gas emissions intensity by 2034 from a 2019 base year. We have made a 6% reduction thus far and continue to make steady progress toward that goal through a number of decarbonization initiatives.

## TRANSITION SCENARIO ANALYSIS

In early 2023, Norfolk Southern assessed risks and opportunities related to a transition to a low-carbon economy per the Task Force on Climate-Related Financial Disclosure (TCFD) framework. These risks include current and emerging regulations, legal exposure, transition to a low-emission technology, market changes, and reputational risks. Alternatively, transition opportunities include benefits from shifts in customer demand for low carbon transportation, the transition to low carbon emissions operations and services, and participation in carbon markets.

Norfolk Southern pursued a bottom-up transition risk and opportunity analysis that engaged a cross-section of internal stakeholders that understand the impact a transition risk or opportunity would have on our organization and our vulnerability or readiness to each risk or opportunity, respectively, given our business continuity plans and existing management methods. In alignment with this process, we are developing a Climate Transition Plan which we anticipate publishing by the end of the year.

## LOCOMOTIVE MODERNIZATIONS

Converting older [DC-traction locomotives to AC traction](#) is one major way to increase fuel efficiency and reduce carbon emissions. This initiative is the ultimate recycling project and involves taking older locomotives and stripping them down to the steel frame and outfitting them with new engines, traction motors, and the latest technology. AC traction motors are more efficient, have lower maintenance costs and higher tractive effort. Better traction means that we can pull more weight with fewer locomotives, further driving fuel efficiency. With the additional technology of distributed power, we can place the locomotives in other positions besides the front of the train, creating greater fuel efficiency as well as improved train handling.

Beyond the engine replacements, the new AC traction locomotives are also equipped with advanced sensors and energy management software. Analyzing that data can help Norfolk Southern reduce idle time and more. A complete modernization has the ability to improve fuel efficiency by up to 25%. This is a multi-year project that has seen the overhaul of about 100 locomotives per year since 2016 and is set to continue through 2025, with a total of 1,000 locomotives upgraded as a result.

## INTERMODAL CRANE REPLACEMENTS

[Replacing diesel-powered cranes](#) at intermodal terminals like Austell, Georgia with hybrid or full-electric models to reduce carbon emissions. The new cranes are also wider, taller and can stack more containers, creating additional efficiencies. The replacements are ongoing, and we expect 22 of 68 units will be replaced by the end of 2023. As each crane is replaced, the emissions emitted are reduced by 75% per year on average. Each hybrid unit will avoid around 22,000 gallons of diesel fuel and 225 metric tons of emissions annually – over a 20-year life cycle this means 440,000 gallons of fuel and 4,500 metric tons of emissions.





### MODAL SHIFT

More than a fourth of our customers have declared public goals for carbon emissions reduction – goals that we aim to support through a more sustainable supply chain. Norfolk Southern helps our customers avoid approximately 15 million metric tons of carbon emissions every year compared with shipping by highway, equivalent to saving approximately 1.5 billion gallons of truck diesel. Converting shipments from truck to rail can reduce emissions up to 90%, as rail is the most emission-efficient medium for transporting freight over land. That said, the average company still produces over 11 times more supply chain emissions than operational ones. This fact is a main driver of our next-generation [Carbon Calculator](#) that uses reliable data to produce accurate emission estimates, so companies see firsthand the climate advantages of shipping via rail.

As carbon offsetting requirements become more commonplace, tools like our industry-leading Carbon Calculator continue to be a valuable asset for our customers in understanding their climate impact and where they are getting savings to put against more carbon-intensive parts of the supply chain.

In May 2023, Norfolk Southern went a step further with the launch of our customer-focused [Rail Emissions Report](#). This customizable tool provides customers with comprehensive data on the positive environmental impact of shipping by rail, including total carbon dioxide emissions, fuel consumption, and train miles traveled. Additionally, the tool gives customers visibility into the full lifecycle and carbon footprint of moving a shipment across Norfolk Southern's 22-state rail network. With these insights, customers can make better informed decisions about transporting their goods and develop strategies to both reduce their emissions and meet decarbonization goals.

#### RAIL EMISSIONS REPORT EXAMPLE

Estimated Annual Savings:

22,972 metric tons of avoided emissions

78.7% of avoided emissions

0.49 metric tons of avoided emissions per rail shipment



2,256,557 avoided diesel gallons burned



14,289,237 avoided truck miles



46,447 trucks removed from the highway



4,994 cars removed from the highway



2,768 households' worth of energy consumed



28,014 acres of US forests' worth of sequestered tons of CO2

#### Automobile sustainability survey

Underscoring the importance of decarbonizing the supply chain in the automotive industry, a Norfolk Southern survey found that more than two-thirds of consumers believe rail is the most sustainable method for transporting cars from the manufacturer to the dealership. The [Automotive Buyer Benchmark survey](#), launched last year, also found that 68% of car buyers want automotive manufacturers to use the most sustainable methods possible when delivering finished vehicles, with rail being the preferred option.



#### EMPLOYEE SPOTLIGHT: Jamie Helmer

Jamie Helmer, our fuel efficiency director and member of the Advanced Control Team, is one of Norfolk Southern's brightest stars. Helmer has helped improve our locomotive fuel efficiency by 8% since 2019 - saving approximately 80 million gallons of fuel and avoiding

825,000 metric tons of greenhouse gas emissions. She was also integral to the development of our industry-best Carbon Calculator.

In recognition of her outstanding contributions to Norfolk Southern's sustainability efforts, Helmer was awarded the [2022 John H. Chafee Environmental Excellence Award](#) by the Association of American Railroads while also being included in Progressive Railroading's inaugural ["Women of Influence in Rail" eBook](#).

## RECOGNIZING ENVIRONMENTAL PERFORMANCE

We are thankful for the numerous sustainability recognitions that Norfolk Southern received over this past year including:

Responsible Care  
Energy Efficiency  
Award



Net Zero  
Leaders 2023



USA Today



America's Most  
Responsible  
Companies 2023



We also launched our [Thoroughbred Sustainability Partner Awards](#), a new annual opportunity to recognize our customers, suppliers, and other partners who are leaders in sustainability. The awards recognize achievements in three categories: Energy Efficiency, Innovation, and Environmental Stewardship. A cross-departmental team from Norfolk Southern reviewed applications for their measurable progress, and winners were selected based on their program's novelty, relevance, and impact.

2022 Thoroughbred Sustainability Partner Award winners include:

### Energy Efficiency

- Ford Motor Company
- J.B. Hunt Transport Services
- Marathon Petroleum
- Schneider National

### Innovation

- Georgia Ports Authority
- Loram Maintenance of Way
- The Port of Virginia
- UPS
- Wabtec

### Environmental Stewardship

- NARSTCO
- Outokumpu
- Paper Transport
- Progress Rail
- Subaru
- TRAC



# Energy & Water Consumption

We are committed to ensuring our facilities are both energy efficient and powered by renewable energy when possible.

In the past year, Norfolk Southern made considerable progress towards our long-term goal of increasing our renewable energy utility usage to **30% by 2030** – a feat that would save approximately 59,000 megawatt hours, which equates to a year’s worth of power for nearly 6,000 homes in the U.S.

Roughly 16,000 MWh of our electricity consumption was offset by renewable energy in 2022. This progress was fueled by [new community solar agreements](#) as well as existing Green-e certificate agreements that offset usage at our facilities in Altoona and Reading, Pennsylvania, with renewable energy.

Our corporate headquarters in Atlanta – one of only six buildings in Georgia to be LEED Gold version 4 certified – received a [Chrysalis Award](#) from USGBC Georgia for green innovation. It was also [recognized](#) by the American Chemistry Council for its energy efficiency, as it reclaimed, on average, 180,000 gallons of water per month.

Through this and other water conservation measures, we have **reduced overall water usage by 22%** over the past two years, saving over 91 million gallons.

Looking ahead, we plan to expand our efficiency initiatives even further by conducting audits of water and energy use at key sites.



Where there are opportunities, Norfolk Southern is prepared to commit to sustainability on the energy procurement side – whether that’s power from wind, solar, geothermal, biomass or hydro-electric.”

– Panos Kokkinos, Director Facilities Services





## Responsible Sourcing & Circularity

Norfolk Southern is committed to sustainability by being a responsible steward of the environment and helping to protect the communities where we operate and source materials. We strive to partner with companies that hold the same values through their demonstration of sustainable projects and policies.

Circularity is also a fundamental part of our sustainability efforts – recycling, reusing, and minimizing waste are some of the most important ways we can lessen our environmental impact.

*Some key highlights around our circularity efforts in 2022 include:*

- 100% of our wheelsets – for both locomotives and cars – continue to be 100% recycled
- 800 new high-strength steel mill gondolas from the [NS-Greenbrier-US Steel partnership](#) lightened the weight of railcars while maintaining their stability to increase cargo capacity
- Around 6,000 pounds of railcar weight were removed thanks to the new high-strength steel mill gondolas resulting in 3% more cargo capacity per railcar
- 100% of replaced rail was recycled and 70% of the rail we purchased in 2022 was made from recycled steel
- Over 80% of our retired information technology assets were recycled
- Our waste diversion rate was 60% which was an 8% improvement from 2021. This avoided over 139,000 tons of material being sent to landfills, including 66,000 tons of crossties, 37,000 tons of scrap metal, and 238 tons of batteries

# Sustainable Land Use & Biodiversity

## BROSNAN FOREST

As one of the most diverse ecosystems in North America, Norfolk Southern's Brosnan Forest is an [ecological treasure](#) featuring biodiversity comparable to the Amazon rainforest. The 14,400-acre nature preserve in coastal South Carolina has the largest population of endangered red-cockaded woodpeckers on private land and one of the country's largest remaining stands of longleaf pines.

This past year, we expanded upon our decades-long conservation efforts. To date, over 800 acres (about the area of Central Park in New York City) of wetlands and 5.7 miles of streams have been restored.

*This past year at Brosnan Forest, the following projects were completed:*



1,105 acres

of additional land [protected](#) through a conservation easement donated to the Lowcountry Land Trust

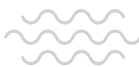


~3,000 acres

identified for potential watershed restoration opportunities



600+ acres of wetland restored, planting 308,000 native trees and shrubs



4 miles of stream channel restored



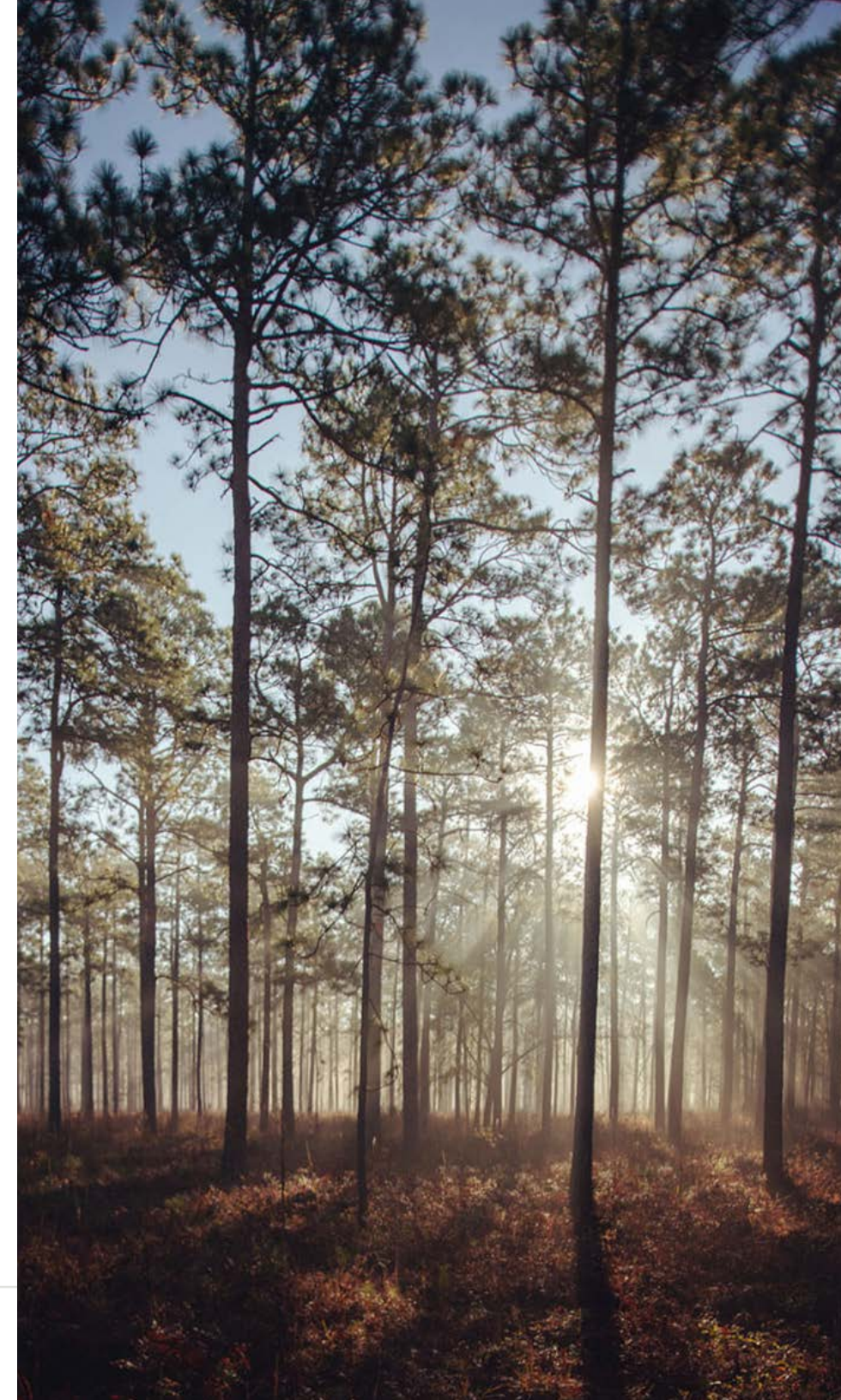
125 acres

of loblolly pine plantation converted back to native longleaf habitat, with 223 more acres planned for 2023

## OPERATION CLEAN SWEEP

In 2020, we [pledged](#) our support to Operation Clean Sweep, a program developed by the American Chemistry Council and the Plastics Industry Association to educate companies on preventing the release of microplastics into marine ecosystems. The goal is to eventually achieve zero loss of plastic resin into the environment.

For the past two years, we have completed annual site inspections at 18 bulk transfer facilities that make up the entire network of sites on the Norfolk Southern system that transload these products. The goal of these visits is to raise awareness and ensure best management practices occur. A new program to redirect virgin resin samples from the landfill was also launched at two locations and will expand to further railyards in 2023. Once mature, this program could divert thousands of pounds of microplastic materials from landfills.




### LAMBERT'S POINT LIVING SHORELINE


Lambert's Point in Norfolk, Virginia, is a critical marine terminal serving railroad operations. The nearby Elizabeth River shoreline had suffered significant and increasing rates of erosion, so, since late 2019, Norfolk Southern has partnered with the [Elizabeth River Project](#), a conservation nonprofit, to develop a [living shoreline](#) to stabilize the area. A living shoreline is a more environmentally friendly alternative to a hardened concrete structure in combatting erosion.

*This project not only enhanced the aesthetic appeal of the shoreline and contributed to the restoration of the river but provided crucial protection against flooding for the railroad land and infrastructure. The shore restoration was no small task, involving:*

 **2,300**  
cubic yards  
of sand

 **2,000**  
cubic yards  
of stone

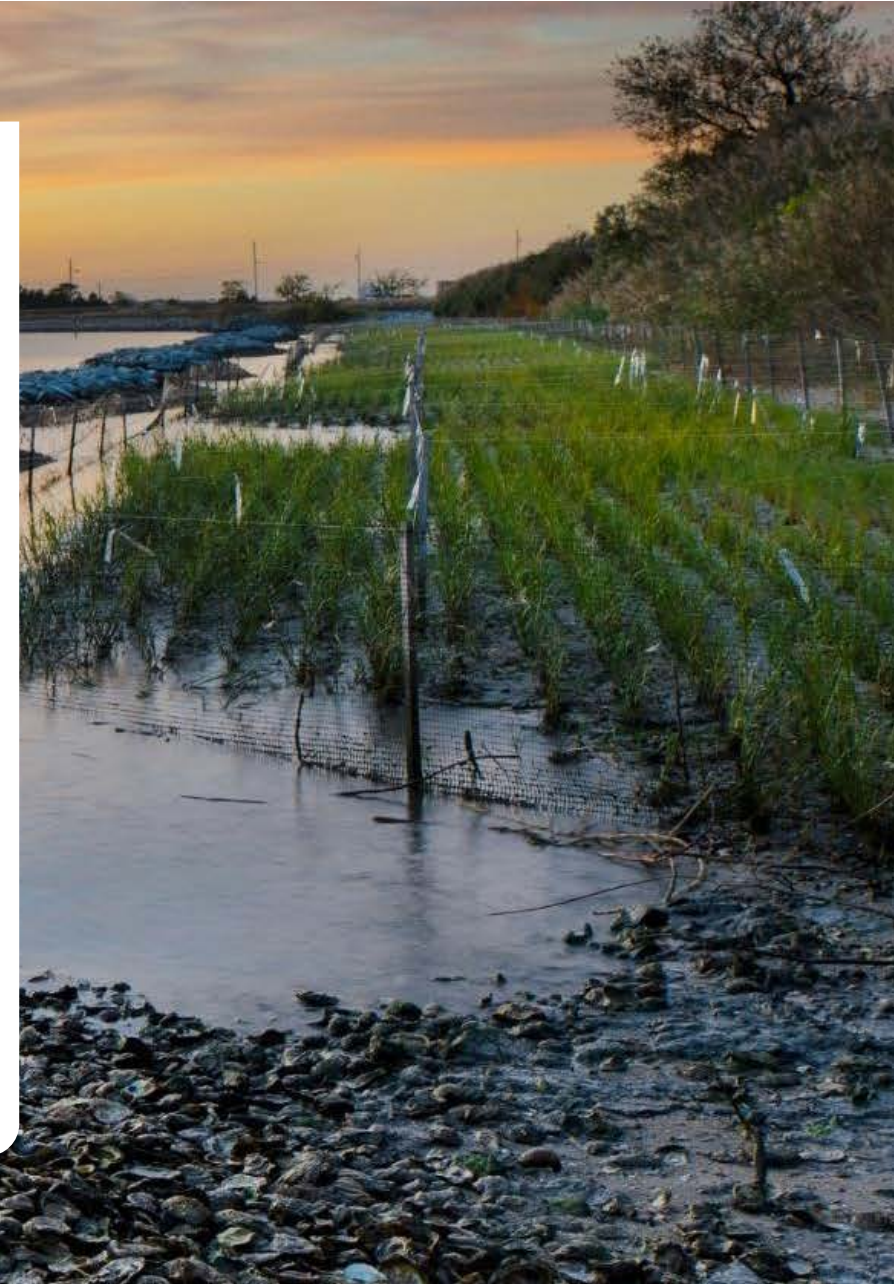
 **24,000**  
marsh plantings

 **90**  
cubic yards  
of oysters

One of the key elements of our shoreline restoration was using live oysters to clean and purify the river. In 2022, Norfolk Southern placed over 20,000 new oysters on site adjacent to the living shoreline. This oyster gardening project was completed in partnership with the Chesapeake Bay Foundation and Elizabeth River Project, two local non-profit organizations.

**A single adult oyster can process and filter up to 50 gallons of water per day, and this oyster restoration will yield filtration and water quality benefits of over 1 million gallons of water each day once the oysters are mature.**

The area now provides a habitat for fish, oysters, river otters, shore birds and other wildlife. Phase 2 of this project is set to kick off in late 2023 with a plan to create a 4-acre offshore oyster reef in addition to other improvements. Norfolk Southern is also committed to establishing an annual monitoring plan to track overall project performance and to document any ongoing maintenance needs.





# Social Pillar



At Norfolk Southern, our people and our communities are at the heart of what we do. Together, we are building a culture that enhances safety, champions diversity, and values inclusion. And we are working hard to ensure that our locomotives and freight cars do not just pass by, but that our activities bring value and prosperity to the customers and communities we serve.

## HIGHLIGHTS IN THIS AREA INCLUDE:

- Enhanced collaboration with our craft employees on safety and quality of life initiatives, including more predictable work schedules for our craft colleagues and becoming the first Class I railroad to provide paid sick leave benefits to its entire workforce
- Developing a six-point safety plan following the East Palestine derailment
- Our lowest employee injury rate in the past 10 years

# Employee Health & Safety

At Norfolk Southern, everything starts with safety. Our mission is to provide safe and reliable service to our customers and the communities we serve, as well as to protect the health and safety of our most valuable assets – our employees. This year, we improved our already-strong safety culture with enhancements to safety performance evaluation and risk analysis processes, including with respect to incident fact finding and root cause analysis as well as increased field audits. We’ve also put an increased focus on hazard awareness, which has helped our employees to recognize and mitigate risks, while remaining prepared to respond to incidents.

Communication is a critical part of Norfolk Southern’s safety culture, as evidenced by the [recent joint letter](#) from our CEO Alan Shaw and all 12 union leaders to our employees regarding our shared commitment to rail safety. This includes initiatives like Operation Lifesaver, where we work with local communities as well as employees, emphasizing the partnership between our unions and Norfolk Southern to improve safety and the wellbeing of our employees.

In June 2023, we held our [first-ever companywide Town Hall](#), where to celebrate our 41st anniversary and the start of National Safety Month, Alan Shaw—along with labor union leaders—talked about the importance of safety and what it means for Norfolk Southern and the rail industry.



Critical to safety communications are the ways in which information flows up and down the chain of command. To that end, Norfolk Southern’s Local Safety Service Committees (LSSCs) play a critical role ensuring that safety is communicated to employees at all levels. These committees, comprised of management and labor representatives from all craft employees at a terminal or hub, specifically focus on safety initiatives and outreach at the local level. There are currently 59 LSSCs across our network, driven by craft employees – our eyes and ears in the rail yards and along the lines, who work with communities to deliver safety information and identify potential problems.

### Other safety highlights include:

- Improving our Regional Manager Safety & Operating Practices performance assessments addressing both safety and efficiency
- Promoting increased awareness around highway grade crossings
- Increasing the overall scores of our annual safety survey
- Enhancing our health and safety audits and employee exposure assessments

### Best-in-class consultant

with experience from the Navy’s nuclear operations to conduct an independent safety review including union leaders and engagement with our craft employees

### Successful recertification

through the ACC’s Responsible Care Management System, for the 27th consecutive year

### Developing a new

Ballast Line Leadership Program for frontline supervisors



### EMPLOYEE Q&A:

#### John Fleps

Vice President of Safety

#### What is your role at Norfolk Southern?

I’m the new Vice President of Safety. My role is to enhance our safety culture, strengthen trust and collaboration with our employees, and foster universal respect for risks and hazards in the workplace.

#### How is our company enhancing its safety culture?

At Norfolk Southern, we are committed to investing in people, process, and technology to engineer out risk long term.

Safety is a team effort – it takes each member of the team looking out for themselves and each other to reach our ultimate goal, which is of course zero injuries or accidents. To get there takes attention to detail – doing the little things right every day to reap long-term rewards.

#### How are we moving safety culture forward in 2023?

I’m particularly excited about our engagement with Atkins Nuclear Secured, who will put a fresh set of eyes on how we do things. Getting that outside perspective will help validate the things we are doing right and will help us identify areas we need to address. As a civil engineer myself, I appreciate their focus on operational excellence, which will benefit both our safety and service cultures.



# Craft Workforce Engagement

Our employees are the heart of our company, and Norfolk Southern strives to continuously enhance the experience of our craft workforce in support of a customer-centric, operations-driven organization.

In 2022, we successfully reached national agreements with all 12 unions that resulted in a net 24% pay increase for our craft employees and maintained premium health care benefits.

Coming out of national negotiations, we continued our efforts to enhance the workplace experience for our hard-working craft railroaders by focusing on the issue most important to them: quality of life. To advance this issue, we engaged in extensive negotiations with our local labor representatives starting in early 2023. As a result of this partnership, by June 2023 Norfolk Southern had reached paid sick leave [agreements](#) with all 12 of its unions, providing every craft employee with access to this important benefit.

In June 2023, Norfolk Southern became the **first Class I railroad** to provide paid sick leave to 100% of its craft workforce.

When approaching quality of life for our conductors, who traditionally work some of the least predictable assignments, we went beyond paid sick leave and negotiated a comprehensive suite of new workplace benefits, including scheduled days off, greater certainty around weekly assignments, and more flexibility to enjoy vacation and other paid time off. As an innovator in this space, we had already implemented a similar suite of benefits for our engineers.

And for our unionized clerical employees, we also negotiated remote-work agreements, delivering measurable positive impact to availability and employee morale.

Finally, we have increased our efforts to collaborate with labor to continue strengthening our safety culture. We partnered with the leaders of 12 unions to issue a [joint letter](#), underscoring our shared goal of driving continuous improvement in rail safety. We remain highly engaged with national and local labor leaders to drive continuous improvement for this top priority.



# Emergency Preparedness & Response

Norfolk Southern takes emergency preparedness and response extremely seriously, and we strive to be good stewards of the railroad and the communities in which we operate and serve along our network. In all incidences, we respond promptly and work with first responders to protect life and property.

Last year, we trained over 5,000 first responders through our [Operation Awareness & Response \(OAR\)](#) program to safely respond to rail incidents. We were also honored to receive the National TRANSCAER Achievement Award for training first responders across the Norfolk Southern network. The award recognizes exceptional achievement in support of voluntary efforts by companies and others to help communities prepare for and safely respond to incidents involving transport of hazardous materials.

*Other significant activities include:*

- Our response to the East Palestine derailment, covered in greater detail in the [East Palestine Incident & Responsive Efforts section](#)
- Employed the Norfolk Southern Emergency Response Plan (ERP) and its environmental reference guide, “Our World, Our Choice,” to guide emergency response activities
- Maintained and managed a network of emergency response contractors across our network to provide necessary assistance in responding to emergency events
- Conducted quarterly tabletop and simulation exercises in accordance with Norfolk Southern’s oil spill and facility response plans
- Provided required High Hazard Flammable Train (HHFT) information (including number, route, and hazardous material description) to state emergency response agencies

Norfolk Southern also conducts targeted hazardous materials compliance checks at our railyards, working with customers and shippers to continue to drive down the number of non-derailment, accident or collision-

related releases (otherwise known as Non-Accident Releases or NARs) across the network and limit potential employee exposures. Of course, in 2023 the East Palestine derailment is at the core of our emergency response activities. The short-term and long-term remediation plans and procedures Norfolk Southern has in place are utilized daily as we continue to make it right for the community and the environment.

## OPERATION AWARENESS & RESPONSE (OAR) SAFETY TRAINING

Designed to enhance safety outside of our own operations, the OAR program continues to train first responders across our 22-state network, providing them with the information and resources they need to protect our communities. The OAR program also helps educate the public about the importance of the safe movement of hazardous materials by rail.

In 2023, we expanded our first responder training program’s scope by taking our Safety Train to increased stops around our network. The Safety Train is a dedicated locomotive we have used since 2015 that is specially equipped with classroom box cars and tank cars designed to provide first responders with hands-on training. In addition, we mobilized an interim Regional Training Center at Bellevue, Ohio with over 350 first responders trained to date. We will continue to work with first responders to deliver high quality training that helps ensure the best possible response to emergencies and overall preparedness.

## NEW REGIONAL SAFETY CENTER

While we are in the process of finalizing a location, Norfolk Southern has [plans](#) to build a state-of-the-art fire and emergency response training facility in Ohio that will provide high-quality training to first responders from Ohio, Pennsylvania, West Virginia, and the greater region. It will also strengthen coordination between railroads and first responders in the event of a future emergency response like the one in East Palestine.



# Employee Recruitment & Development

In 2022, we hired 5,125 people and led the industry in conductor recruiting by promoting employee referrals and increasing pay for conductor trainees.

During 2022, more than 50% of our management hires as well as over 40% of our hires overall were people of color.

Both of these figures exceed the industry average.

In 2022, Norfolk Southern ranked No. 2 out of over 8,000 transportation and logistics organizations in attracting talent from underrepresented groups at Handshake. In 2023, Norfolk Southern ranked No. 1 out of over 10,000 transportation and logistics organizations in attracting talent from underrepresented groups at Handshake, and received additional Handshake awards for being a top employer for women and early career talent.

We hosted university and college alumni events in our new headquarters in Atlanta that introduced more people to Norfolk Southern and railroading. We also renewed and continue to leverage the successful college, military, and veteran recruiting partnerships that we cultivated before the pandemic.

Our Talent Acquisition team also embarked on strategic partnerships with seven HBCUs, including the Atlanta University Center Consortium (AUCC), to support our recruitment efforts.

## CONTINUING EDUCATION

Investing in our people through training programs and cross-functional experiences is core to Norfolk Southern's long-term strategy as a customer-centric, operations-driven service organization focused on strengthening trust, communication, and collaboration.

Beginning in March 2023, we partnered with our Operations division to launch a leadership program for more than 1,000 front-line field supervisors who manage nearly 78% of our workforce. We also launched a new leadership and development training program for our individual contributors.

## EMPLOYEE ENGAGEMENT

We are committed to creating a culture where employees speak up – one where we listen and respond to their feedback. We solicit employee engagement feedback in a quarterly pulse survey, and in 2023, shifted to an engagement index that is tied to broad industry benchmarks. Following the ease of various pandemic-related restrictions, we joined our craft colleagues at locations across our network for monthly listening sessions. All of this has allowed us to better connect with employees and understand the challenges and opportunities on the front line.

## COMPENSATION & BENEFITS

In 2022, we engaged an independent national firm of compensation experts to conduct a statistical study of pay equity for all management employees to identify compensation gaps that may exist across gender, race, or ethnicity. This study validated our commitment to fair and equitable pay practices and resulted in our making targeted adjustments to eliminate any statistically significant differences across gender, race, or ethnicity.



We also revitalized our benefits and wellbeing programs to better serve the financial, physical, mental, and social needs of our employees. New and enhanced resources include increased paid parental leave for all management employees, improved adoption and surrogacy benefits for all employees, free subscriptions to Noom and Insight Timer, discounted gym memberships, exclusive offers from our credit union partner, and much more.

# Diversity, Equity, & Inclusion

At Norfolk Southern, our goal is to build a more diverse, equitable and inclusive workplace. In 2022, progress on our Diversity, Equity, and Inclusion (DEI) journey accelerated as we shifted from building awareness to increased action. We know that support from leadership will be key in advancing the company's DEI goals. CEO Alan Shaw signaled the company's DEI commitment by signing the CEO Action for Inclusion pledge. Going forward we will continue to listen to our employees, stakeholders, and communities to inform us of our next steps.

## Key DEI milestones:

**11% increase** in racially diverse representation at the Vice President level and above

**\$248M** spend with small businesses and diverse suppliers

**~\$500K** contributed to historically black colleges and universities (HBCUs), diverse secondary school scholars, and diverse student and academic groups

Named one of [America's Greatest Workplaces for Women for 2023](#) by Newsweek

Committed to benchmarking our disability inclusion journey with the Disability Equality Index and partnering with an external consultant to accelerate our DEI strategies and initiatives

Piloted new DEI training, highlighted DEI efforts in our updated Code of Ethics, and hosted meaningful conversations about DEI with employees across our system

## EMPLOYEE RESOURCE GROUPS (ERGs) AND OTHER RESOURCES

Over 3,000 Norfolk Southern employees are members of seven ERGs, and in 2022 these groups held 60 events including volunteer cleanups and tree plantings, meaningful activations around Pride Month, Women's History Month, Black History Month, and more.

ERGs have a positive impact on members and Norfolk Southern's culture by enhancing members' sense of pride and knowledge and helping to build community in the office and beyond through development, volunteering, mentorship, and more. Employee engagement and retention are improved by deepening members' connection to the company's vision and mission, and our ERGs actively promote the benefits of diversity and inclusion while strengthening teamwork and connections across departments and locations.

In 2022, Norfolk Southern launched the [Thoroughbred Scholars program](#) which provides scholarship awards of up to \$40,000 for the children of craft employees and some management employees. Every year Norfolk Southern will fund 100 scholarships of up to \$10,000 each and three special awards of up to \$40,000 each to help cover four years of college expenses. Reflecting the makeup of our workforce, 80 of the 100 scholarships are awarded to the children of our craft workforce.



Our goal is to ingrain inclusion as deeply as safety."  
**Christine Traubel, AVP, DEI**

## INCLUSION LEADERSHIP COUNCIL (ILC)

The ILC provides strategic focus and accountability in our work to build a company where every employee can thrive. It consists of cross-functional senior company leaders who are responsible for developing and leading our inclusion strategy. The ILC aims to hold the organization accountable to the DEI strategy and works to foster a work environment where diverse perspectives, experiences, and backgrounds are celebrated as catalysts for innovation and positive change.





**EMPLOYEE SPOTLIGHT:**

**Nabanita Nag**

Executive Vice President and Chief Legal Officer

Norfolk Southern's Chief Legal Officer Nabanita Nag is a sterling example of a DEI champion.

In 2022, Nabanita signed a public Leadership Council on Legal Diversity (LCLD) pledge detailing her personal and organizational commitments to lead and advocate for DEI in the legal profession. LCLD is an organization of over 400 members, who serve as general counsel of major corporations or managing partners of the nation's leading law firms.

She also led the creation of a department DEI committee to guide the legal department's efforts to advance DEI internally and within surrounding communities, supported the Corporate Counsel Women of Color Conference, and worked with two high-profile law firms, Troutman Pepper and Morris, Manning & Martin to establish a fellowship program. Through the program, three first-year diverse law fellows were given an opportunity to work "in house" with Norfolk Southern counsel for two weeks.

**GEORGE LOTTIER RISING STAR AWARD**

Norfolk Southern [received](#) the George Lottier Rising Star Award from the Georgia Minority Supplier Development Council in 2022. To be eligible for the award, a company must have a supplier diversity program that is active for less than three years and has significantly impacted the growth of supplier diversity within their organization.

Norfolk Southern launched a supplier diversity program in September 2021, which includes small businesses and certified diverse firms that are operated and controlled by organizations that are minority owned, women owned, veteran owned, disability owned, LGBTQ owned and more.



# Economic Performance

Norfolk Southern's sustainability strategy informs our overall business strategy and helps drive economic performance. A focus on sustainability and ESG principles is the right thing to do for business as well as for the planet. We share an ambition to reduce carbon emissions with many of our top customers, for whom sustainable supply chain solutions are no longer a luxury but essential.

This mutually beneficial business model has rewarded us with partners who continue doing business with us, and with strong financial performance in 2022, including with respect to revenues, operating income, and earnings per share.

## KEY STATISTICS FROM 2022:

Norfolk Southern kept the economy moving last year, shipping over:



**\$3.7B**

in intermodal shipments



**\$2.5B**

in agriculture, forest, and consumer products



**\$1.7B**

in metals and construction merchandise

Customer investment in facilities along Norfolk Southern's lines totals:



**\$3.2B**

invested



**3,100**

jobs

**~\$1.9B**

invested to promote safe, efficient operations, modernize our technology, and support economic growth in the communities we serve

**60% of the U.S. population served**

and about 50% of the manufacturing sector

**19,300 route miles**

of rail lines – enough track to span New York to Los Angeles nearly eight times

**7M highway miles eliminated daily,**

for our logistics and transportation partners, avoiding 41,000 tons of carbon release from highway transport

**27 automotive plants served,**

over half of the U.S.'s total production

We transported a tremendous amount of consumer goods, including:

- The equivalent of 145 million six-packs of beer – enough for more than one six-pack per American household
- Enough pet food to feed half a million dogs per year
- Enough potatoes to supply every Chick-fil-A restaurant in the United States, twice





## Local Impact

### SCOUT MOTORS ELECTRIC VEHICLE PLANT

Underscoring rail's importance to the green transition in the automotive industry – and serving as a key connection to a growing region of the country focused on electric vehicle and battery manufacturing – Norfolk Southern will service a new \$2 billion Scout Motors plant located in Blythewood, South Carolina. The plant is scheduled to start producing electric vehicles in 2026. Norfolk Southern is working with the state and Palmetto Railways to develop rail infrastructure for the plant.

### BIOFUEL AT ST. BERNARD

In Chalmette, Louisiana, Norfolk Southern is supporting St. Bernard Renewables (SBR), a new biorefinery co-located within PBF's Chalmette Refinery in St. Bernard Parish. To produce renewable

diesel fuel at the biorefinery, SBR has built a new unit to treat feedstocks and retrofitted an out-of-service refinery process unit known as a hydrocracker with new technology. SBR is scheduled to begin producing renewable diesel in 2023, with the capacity to refine more than 300 million gallons annually.

### FAIRWINDS LANDING

On Norfolk Southern property leased to its subsidiary Fairwinds Landing, \$100 million is being invested to transform Lambert's Point Docks in Norfolk, Virginia, into a maritime operations and logistics center that supports the offshore wind, defense, and transportation industries.

# Corporate Giving & Community Engagement

Norfolk Southern's [approach](#) to charitable donations and how we engage with the communities we serve and operate in is propelled by our commitment to relationship building and elevating all members of these communities. DEI is at the heart of our philanthropic efforts, and we partner with organizations that are committed to equal access for all.

*We donated over \$9.5 million in 2022 – a number that we want to actively increase moving forward. Specifically, we:*

## Awarded \$400K

in community impact grants across 15 states, meant to support fire departments, educational and environmental advocacy groups, community service initiatives, and arts and culture organizations

## Provided \$400K

in [grants](#) to 31 food banks across our network, as well as other assistance initiatives

## Allocated \$600K

in grants to 27 organizations across 18 different states that provide shelter and services for people who are unhoused

## Committed \$750K

to Georgia Tech's Advanced Technology Development Center (ATDC) to support its new [Sustainability Technology Program](#)

**Additionally, we actively rolled out four new giving focus areas – safety, sustainability, workforce development, and thriving communities – to better align what we do with Norfolk Southern's values and strategic priorities.**

Most recently, we created a community affairs team tasked with improving stakeholder outreach efforts and building relationships throughout all communities within our network.

### EMPLOYEE RESOURCE GROUPS (ERGs) GIVING

*Norfolk Southern supports community engagement efforts led by our ERGs. For example:*

- We sponsored the 2022 Atlanta Pride Festival in conjunction with TiES, our ERG focused on advocacy, education, and inclusion for the LGBTQ+ community
- We launched Giving November in partnership with our DEI Alliance and Thoroughbred Volunteers. The initiative encouraged our employees to give back to their communities through acts of service during the penultimate month of the year
- In December, our VeteraNS ERG laid over 500 wreaths on the graves of Veterans across several cemeteries in Atlanta as part of Wreaths Across America

In June 2023, we launched Thoroughbred Giving, a new streamlined way for our employees to give back to their communities in ways that matter most to them. Our employees are able to directly log their volunteer hours in the portal and they can enter their zip code to easily find nearby volunteering opportunities. For every four hours an employee volunteers, they receive \$50 to give to a charity of their choice.





# Innovation & Technology

Norfolk Southern is on an accelerated path of digital transformation, informed by data. Our diverse team of data scientists, developers and IT professionals are using digital technology to build a safer, more sustainable, and more reliable railroad. We are focused on three primary areas: data, automation and empowering the user.

Our machine-vision enabled inspection program is an example of how we are bringing automation to create a safer and more sustainable railroad. As part of our six-point safety plan announced this year, Norfolk Southern is partnering with Georgia Tech Research Institute to develop next-generation safety inspection technology, using machine vision and algorithms powered by artificial intelligence (AI) to identify defects and needed repairs much more effectively than traditional human inspection. Ultra-high-resolution cameras stationed in strategic locations around its network will give Norfolk Southern a 360-degree health check on railcars, improving its ability to detect, diagnose and repair defects before they become issues.

**Using AI, we created analytic models to accurately predict wear on rails up to 10 years in the future across our network.**

Our mobility efforts provide employees with handheld, internet-enabled devices that allow them to do the work at the point where it needs to be done, rather than taking notes in the field and going back to a computer. We are continuing to expand our use of mobile applications and devices in field and yard operations, enhancing safety, transparency, compliance, and efficiency.

## WOMEN IN TECHNOLOGY



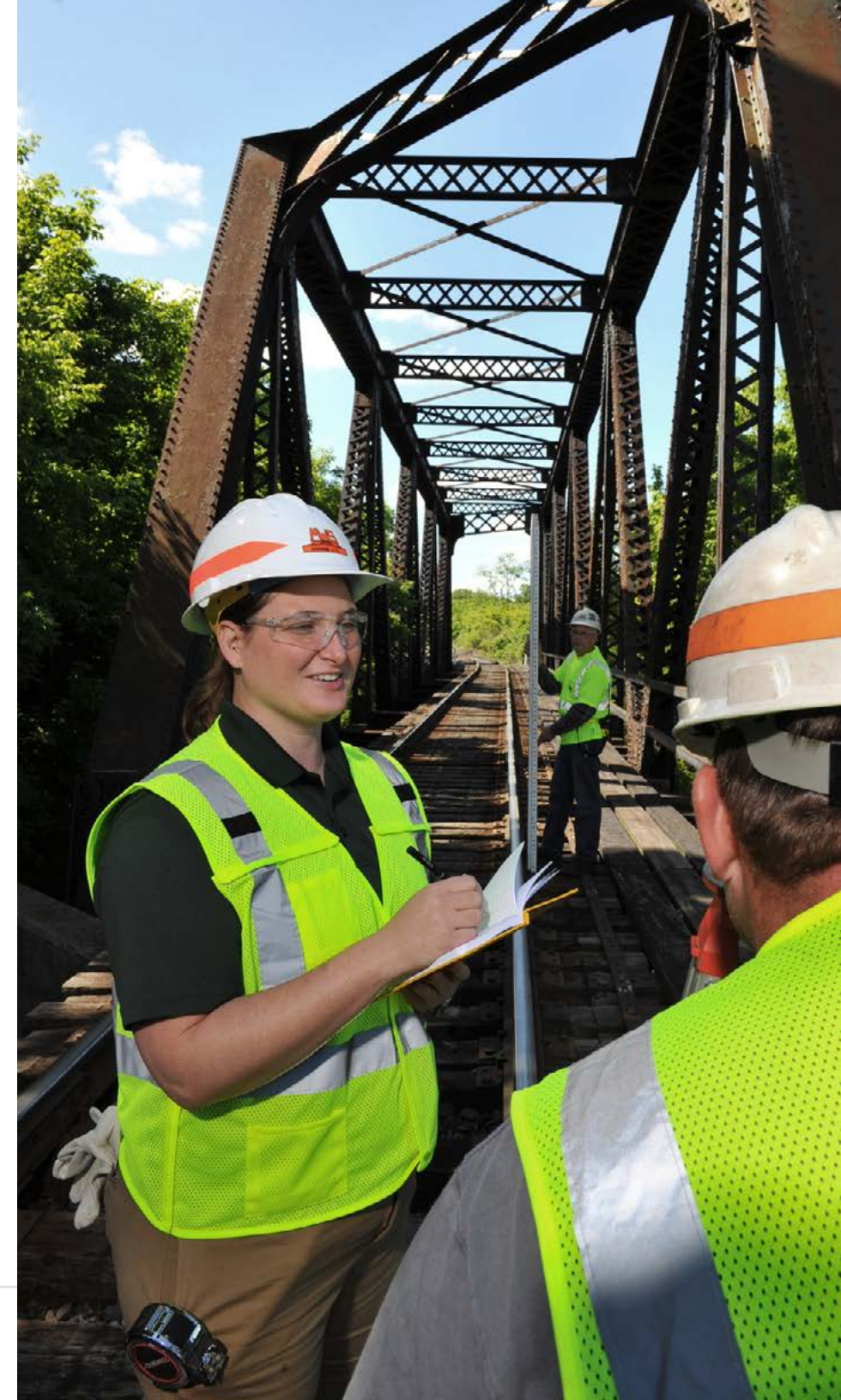
As part of its mission to support women in science, technology, engineering, and math (STEM), Norfolk Southern has a long-standing relationship with Women in Technology (WIT), an Atlanta-based nonprofit. The partnership aims to encourage women in IT jobs, but also to fortify the pipeline of talent and increase upward opportunity for women within Norfolk Southern.

Norfolk Southern sponsors tickets to WIT's monthly training sessions that gives local women opportunities for education, mentorship, and networking. In April 2022, we began supporting a program through Emory University for single mothers living below the poverty line who want to complete a certificate program in cybersecurity. One of the program's participants was hired to work at Norfolk Southern.

## RECOGNIZED FOR INNOVATION IN SAFETY

In spring 2023, the Technology Association of Georgia [recognized](#) Norfolk Southern as a top innovation-driven company for its Rail Wear Predictive Analytics and robust track maintenance.

This industry-leading technology ensures rails are replaced at the optimal time, increasing operational safety while reducing costs.





# Governance Pillar

One of Norfolk Southern's strengths is its governance structure. We have a highly effective and engaged Board of Directors involved in every aspect of our company's governance who provide accountability for business as well as safety and sustainability performance, ensuring we are doing everything we can to provide responsible growth for our investors, employees, communities, and business partners. With respect to East Palestine, our Board of Directors is committed to making things right and overseeing management's responsive efforts, including those covered in greater detail in the [East Palestine Incident and Responsive Efforts section](#).

## HIGHLIGHTS IN THIS AREA INCLUDE:

- Strong risk management protocols including the use of a dedicated Safety Committee
- Specific responsive and timely actions taken following the East Palestine derailment
- An updated Code of Ethics that clearly and concisely articulates our corporate values and Human Rights commitment

# Board Oversight & Risk Management

## BOARD OVERSIGHT AND PRACTICES

Our Board of Directors is highly engaged, actively involved, and focused on ensuring accountability and oversight on behalf of our shareholders. With accomplished backgrounds in multiple industries, our Board of Directors provides invaluable insight and leadership to ensure our continued success.

The Board took several steps in 2022 to enhance its overall governance practices, including separating the roles of CEO and Board Chair. On May 1, Amy Miles became our new independent Board Chair. Miles is the former CEO of Regal Entertainment Group, Inc., with previous experience at Deloitte & Touche and PricewaterhouseCoopers LLC. Miles has enhanced governance processes, leveraging the Board's capacity to provide strategic advice and actively engaging with management to stay informed on material matters impacting Norfolk Southern.

Guided by our independent Board Chair's experience and expertise, the Board is actively overseeing the implementation of the bold [new strategic plan](#) outlined at our [2022 Investor Day](#), which focuses on a balanced approach to safely deliver reliable and resilient service, propel smart and sustainable growth, and drive continuous productivity improvement.

More information about our Board of Directors and the extensive governance framework and practices they have established can be found in our [2023 Proxy Statement](#). Additional details about our risk management processes and related Board committees, including our dedicated Safety Committee, is set forth below and described further in our Proxy Statement.

## RISK MANAGEMENT

The Board monitors and receives periodic updates regarding the primary operational, compliance, financial, technological, and strategic risks facing Norfolk Southern, and oversees our corresponding Enterprise Risk Management (ERM) program. The Board uses the ERM program to proactively identify and mitigate the primary risks and uncertainties that may impact the company's business objectives. Norfolk Southern's management has in turn created an Enterprise Risk Council, comprised of executive leadership, which periodically receives updates on enterprise risk and risk-related topics. Additionally, groups of cross-functional senior business leaders across the company meet quarterly to discuss current and emerging risks and trends to proactively mitigate risk. The Board further 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.

*Subject to the Board's ultimate oversight and accountability, the Board has delegated the following risk management oversight responsibilities to its various committees:*

**Finance and Risk Management Committee:** oversight of the ERM program, including receiving reports on overall risk monitoring and mitigation activities, including technology risks, and assisting the Audit Committee in reviewing the company's major financial risk exposures

**Audit Committee:** oversight of the accuracy and integrity of Norfolk Southern's financial statements, regular financial reports, and internal policy compliance

**Governance and Nominating Committee:** oversight of sustainability and climate change risks, including the impact of legislative and regulatory developments impacting such risks

**Human Capital Management and Compensation Committee:** oversight of human capital management and compensation risks, including talent and recruiting risks, and compensation plans and programs to ensure they do not encourage unnecessary or excessive risk taking

**Safety Committee:** oversight of risk management related to Norfolk Southern's safety programs and practices. Norfolk Southern is the only Class 1 railroad with a standing Board-level Safety Committee. Our Safety Committee meets periodically with senior management to review multiple topics, including our safety performance, accident and injury rates, training programs, trends, and risk management activities, with deep dives into additional topics such as infrastructure, hazardous material safety processes, and innovative technologies.



## DIGITAL & PHYSICAL ASSET SECURITY

Norfolk Southern takes data and physical asset security seriously. Our multi-layered defensive cyber security strategy is based on the Framework for Improving Critical Infrastructure Cybersecurity from the National Institute of Standards and Technology. The process is continually monitored, tested, assessed, and updated while working with government agencies and peers to implement best practices, guard against an evolving threat environment, and ensure we remain compliant with relevant regulatory requirements.

## BOARD DIVERSITY

Our Board recognizes the value of diverse directors. During shareholder engagement in 2022, multiple shareholders focused on the increasing importance of diversity and gender diversity on our Board. Currently, 38% of our Board is comprised of women and ethnically diverse directors, a percentage we anticipate increasing by the 2024 Annual Meeting of Shareholders.

## RESPONSIVE ACTIONS – EAST PALESTINE

*The Board took several responsive actions in response to the East Palestine derailment, including:*

- Actively overseeing management’s responsive efforts, including the environmental, community support, and safety activities covered in greater detail in the [East Palestine Incident and Responsive Efforts section](#)
- Appointing a newly elevated Vice President of Safety
- Approving new compensation metrics for 2023 in the annual incentive program that better align with our new balanced strategy to safely provide reliable and resilient service, including using revenues rather than Operating Ratio and adding specific service and publicly reported safety metrics
  - Our Safety Committee receives regular reports regarding these safety metrics (FRA reported accident rate and FRA reported injury rate) which are consistently used in the industry to measure performance
  - We believe the addition of these safety metrics keeps performance in these areas top of mind for our employees and is consistent with our enhanced focus on safety, with both historical and peer performance considered when setting the precise targets



# Business Ethics & Compliance

## UPDATED CODE OF ETHICS



Norfolk Southern revised and updated its [Thoroughbred Code of Ethics](#) in 2022 to provide a modernized look and tone to the code that communicates our corporate values in a clear and concise manner. We performed a benchmarking assessment and plan to conduct a full program assessment in 2023.

Our goal is to ensure that we continue doing business in a responsible and ethical manner and that expectations are clearly

defined and available for both employees, customers, suppliers, and the communities we serve.

As set forth in the updated Thoroughbred Code of Ethics, management employees receive an annual ethics survey and questionnaire. Depending on their job position, employees receive periodic training to ensure they uphold federal laws covering antitrust, fair competition, and insider trading. Additionally, Norfolk Southern maintains an Ethics & Compliance

Hotline to make it easy for employees and third parties to confidentially, or anonymously if desired, report concerns or possible wrongdoing, including theft, fraud, or violations of law or company policies. The Hotline, 800-732-9279, is available 24/7.

## HUMAN RIGHTS COMMITMENT

Respect for others is fundamental to our values. We recognize that all people have a right to be treated with dignity and without discrimination. We seek to respect and support universal human rights in the workplace, the communities we serve, and our global supply chain. Our [commitment](#) is consistent with the United Nations Guiding Principles on Business and Human Rights (the UN Guiding Principles), which establishes that the role of government is to protect human rights while the role of business is to respect human rights, and that both can play important roles to remedy human rights offenses when they occur. Norfolk Southern's commitment draws upon international standards regarding human rights, including those described in 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.



# Legislation, Regulation, & Government Relations

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 that 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.

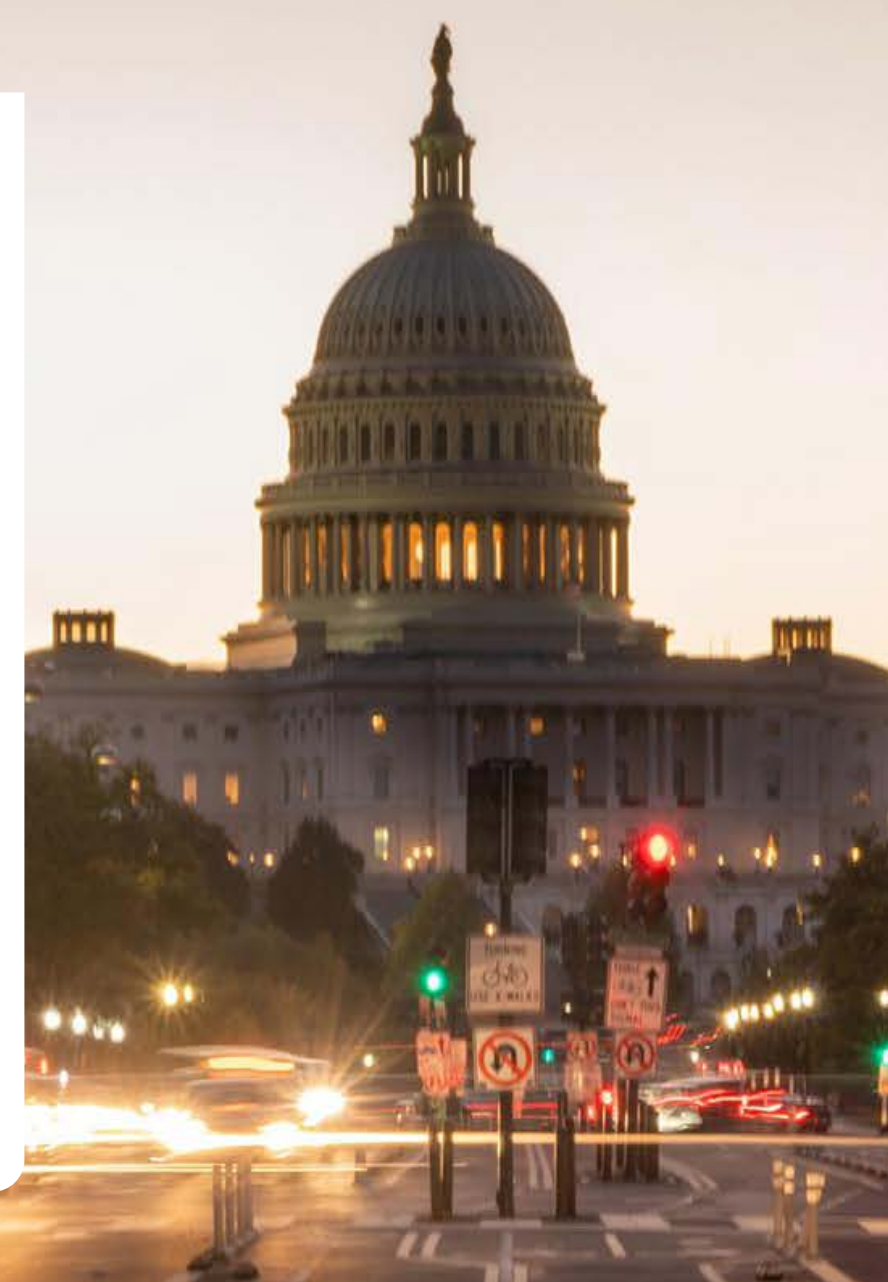
Our public policy advocacy efforts are focused on a wide range of issues that could impact the company, and our political contributions reflect a philosophy of productive bipartisan engagement. We generally support candidates, regardless of political party, whose positions on issues central to our business align with our interests. Please see [our website](#) for more information where we stand on key policy issues that impact our business.

While we may not agree with all the positions of every industry, trade, or policy organization in which we participate, or candidate to whom we contribute, Norfolk Southern believes continued engagement is the most effective tool to support the long-term interests of our stakeholders. We may further engage in indirect lobbying through trade associations and chambers of commerce of which we are a member. Our membership in any such organization

does not imply that we agree with or endorse every position that these groups may take. We work with the other members to ensure that lobbying, if any, conducted through trade organizations reflects our values and concerns.

We prioritize transparency across all our public affairs activities, providing regular reports on our political activities to our Board of Directors and disclosing 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 2022 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.

We know a safer railroad is a better railroad, and the events of the last few months have strengthened our commitment to rail safety. We have already taken actions to further enhance safety, and we are advocates in Washington for legislative provisions that have the potential to enhance freight rail safety. It will take the entire industry, including railcar owners, leasing companies, equipment manufacturers, and the railroad companies to make meaningful safety enhancements, and we are embracing our role in that journey.



# Disclosures Appendix

## ABOUT THIS REPORT

This report has been prepared in reference to the Global Reporting Initiative (GRI) Universal Standards and in alignment with the Sustainability Accounting Standards Board (SASB) and Task Force on Climate-related Financial Disclosures (TCFD) frameworks. Information includes sustainability initiatives in 2022 and Q1/Q2 of 2023 and financial data for 2022 (as well as through June 30, 2023 for items pertaining to East Palestine) for the operations of Norfolk Southern Corporation and its consolidated subsidiaries. Additional information on our ESG program is available on the Norfolk Southern website. The 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 Securities and Exchange Commission (SEC). Issues deemed material for the purposes of our ESG strategies and disclosures may not be considered material for SEC reporting purposes.

## 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 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.

## 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 reducing 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.

## CLIMATE CHANGE SCENARIO ANALYSIS

In alignment with our enterprise risk management process, Norfolk Southern performed a physical climate change scenario analysis in 2022 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 the Jupiter Intelligence ClimateScore Global program. Norfolk Southern reports annually on the climate-related risks and opportunities we face in our publicly available CDP Climate Change response.

## REPORTING FRAMEWORKS

Norfolk Southern measures progress on ESG activities against several third-party reporting frameworks, including the GRI, SASB, TCFD, and the United Nations Sustainable Development Goals (UN SDGs). This report has been prepared in reference to the GRI Universal Standards and in alignment with the SASB and TCFD frameworks.

**Global Reporting Initiative:** GRI provides commonly used standards for sustainability reporting that help organizations increase transparency and responsibility for long-term sustainability impacts.

**Sustainability Accounting Standards Board:** SASB standards guide the disclosure of financially material sustainability information by companies to their investors. Available for 77 industries, the standards identify the subset of environmental, social, and governance issues most relevant to financial performance in each industry.

**Task Force on Climate-Related Financial Disclosure:** The TCFD framework is designed to help companies and investors understand how to assess climate-related risks and opportunities.

**United Nations Sustainable Development Goals:** The UN SDGs consist of 17 goals, developed, and adopted by all UN member states in 2015, and work toward achieving peace and prosperity for people and the planet by 2030. Most pertinent to Norfolk Southern are the SDGs that align with our mission, vision, and values.



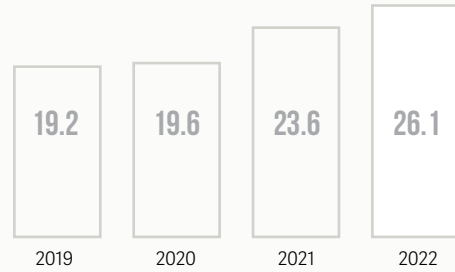
# Data Scorecard

NORFOLK SOUTHERN ENVIRONMENTAL, SOCIAL, AND GOVERNANCE REPORT



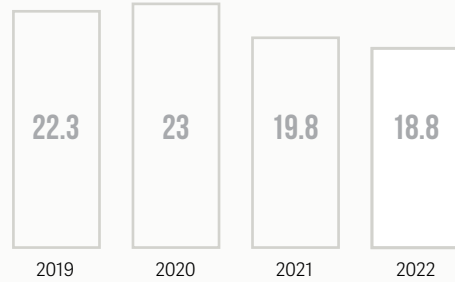
**TERMINAL DWELL\* ↑ 10.5%**

in average hours 2022 vs. 2021



**TRAIN SPEED\*\* ↓ 5%**

in average mph 2022 vs. 2021



**CAPITAL INVESTMENT**

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

	2019	2020	2021	2022
Track miles of rail installed	449	418	458	541
Miles of track surfaced	5,012	4,785	4,225	4,155
Crossties installed (millions)	2.4	1.8	2.0	2.2

**SUPPLY-CHAIN SPEND**

	2019	2020	2021	2022
Approved suppliers	7,633	7,837	8,206	8,471
Small and diverse suppliers	255	216	204	187
Small and diverse suppliers	\$126M	\$166M	\$189M	\$248M
Total	\$3.8B	\$2.9B	\$3.2B	\$4.4B

\* 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 2022**

(\$ in thousands)

State	Total Number of Employees Paid (A)	Total Payroll (A)	Total State & Local Taxes (B)	*Total Purchases & Other Payments (C)	includes taxes Total Purchases & Other Payments (C)	Miles of Road Operated 12/31/2022
Alabama	1,578	\$ 116,577	\$ 26,844	\$ 97,757	\$ 124,601	1,304
Delaware	59	4,360	293	2,351	2,644	82
District Of Columbia	3	563	2	19,592	19,594	19
Florida	223	15,836	2,609	61,442	64,051	148
Georgia	5,400	542,397	47,374	671,046	718,420	1,706
Illinois	1,300	99,177	28,400	1,104,947	1,133,347	1,261
Indiana	2,155	178,541	22,382	124,144	146,526	1,440
Iowa	15	751	302	1,524	1,826	43
Kentucky	987	67,915	16,090	119,077	135,167	429
Louisiana	106	6,449	6,517	5,486	12,003	76
Maryland	95	5,266	918	37,749	38,667	259
Michigan	608	47,687	2,006	53,526	55,532	489
Mississippi	274	16,909	11,019	32,046	43,065	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 2022**

(\$ in thousands)

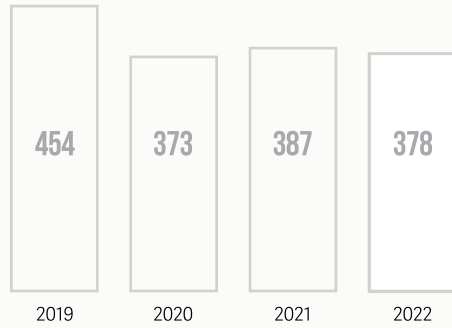
State	Total Number of Employees Paid (A)	Total Payroll (A)	Total State & Local Taxes (B)	*Total Purchases & Other Payments (C)	includes taxes Total Purchases & Other Payments (C)	Miles of Road Operated 12/31/2022
Missouri	482	\$ 36,565	\$ 11,213	\$ 105,471	\$ 116,684	409
New Jersey	167	10,798	9,559	96,701	106,260	893
New York	443	32,233	13,488	76,669	90,157	840
North Carolina	1,068	79,053	10,369	303,345	313,714	1,121
Ohio	2,907	224,864	16,357	753,540	769,897	1,905
Pennsylvania	3,424	273,467	44,602	1,107,362	1,151,964	2,410
South Carolina	664	51,496	12,820	53,816	66,636	762
Tennessee	1,439	106,282	24,296	75,127	99,423	718
Virginia	2,715	208,594	35,385	124,322	159,707	1,990
West Virginia	712	51,840	13,532	7,200	20,732	618
All Other	138	15,770	2,070	1,015,789	1,017,859	4
Total	26,962	\$ 2,193,390	\$ 358,447	\$ 6,050,029	\$ 6,408,476	19,137

(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.

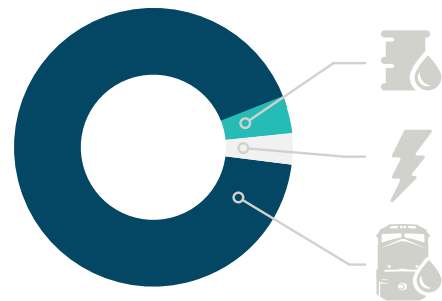
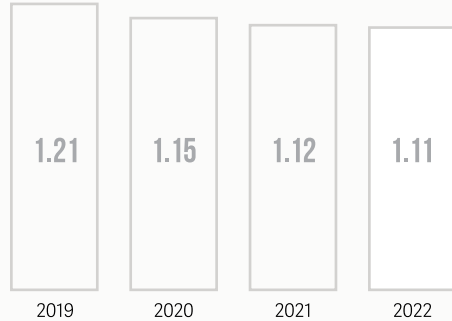
### LOCOMOTIVE DIESEL FUEL USE

in million gallons



### FUEL EFFICIENCY

gallons of diesel consumed per 1,000 gross ton-miles improved 8% since 2019



**STATIONARY SOURCES: 4%**  
**180,736 METRIC TONS** Fuel oil, kerosene, natural gas, propane, non-vehicle diesel

**PURCHASED ELECTRICITY: 4%**  
**152,460 METRIC TONS**

**MOBILE SOURCES: 92%**  
**3.98 MILLION METRIC TONS** Locomotive diesel, fleet and non-fleet vehicle fuel, jet fuel

### 2022 EMISSIONS

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

	SCOPE 1*	SCOPE 2	SCOPE 3
CO <sub>2</sub>	4,089,403	149,672	90,941
CH <sub>4</sub>	8,393	306	59
N <sub>2</sub> O	29,862	513	618
CO <sub>2</sub> e			2,701,909***
<b>Total</b>	<b>4,127,658</b>	<b>150,491</b>	<b>2,793,527**</b>

\* Scope 1 emissions exclude 31,488 tons of direct CO<sub>2</sub> emissions from the use of biofuels.

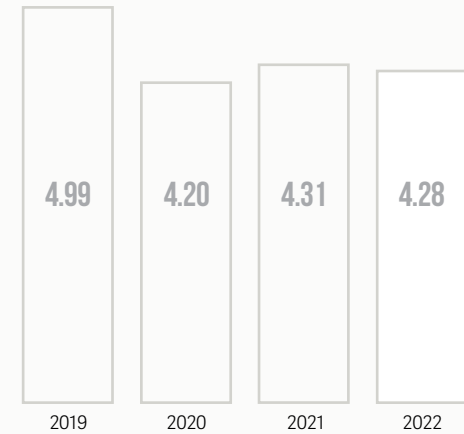
\*\* Emissions in Scope 3 above account for employee business travel, waste generated in operations, upstream leased assets, upstream transportation and distribution, purchased goods and services, capital goods, and fuel- and energy-related activities not covered in Scope 1.

\*\*\* 55,125 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. 956,554 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. 400,830 metric tons CO<sub>2</sub>e are related to purchased goods and services emissions allocated by top 30% supplier spend in 2022. 1,289,401 metric tons CO<sub>2</sub>e are related to capital goods emissions. Constituent gas breakdowns for purchased goods and services and capital goods are not available due to spend-based emissions factors being used in kgCO<sub>2</sub>e/USD.

### ABSOLUTE GHG EMISSIONS

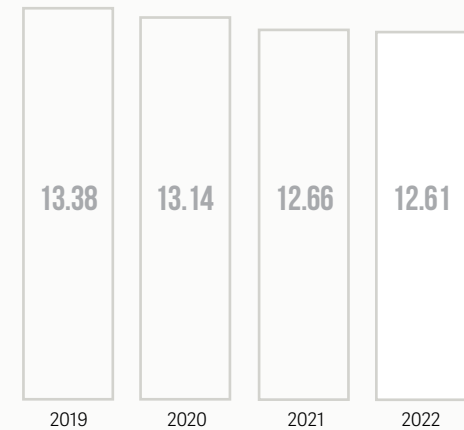
total Scope 1/Scope 2

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 6% since our 2019 base year. Values exclude emissions from biofuels.



2022 WASTE SCORECARD			
Summary*	Tons**	Materials reused or recycled	Tons**
Waste generated	232,134	Crossties for energy	66,637
Waste to landfill	92,755	Mixed scrap metal/steel	37,560
Waste diverted	139,379	Reclaimed used oil/grease	3,937
RCRA hazardous waste***	5,203	Recycled trash/cardboard	201
Total waste diverted from landfill	60%		

Battery recycling	Tons**
Lead acid	42
Nickel-cadmium	33
GNB absolyte	161
Other	2

Other recovered materials	Tons**
Fluorescent light bulbs	4.05
Solvent recovery/paint recycle	14,378

ENERGY SCORECARD****	
2022	366 million kilowatt hours
2021	362.8 million kilowatt hours
2020	421.3 million kilowatt hours
2019	442.4 million kilowatt hours

ELECTRICITY COST****	
2022	\$44.7 million
2021	\$40.5 million
2020	\$40.5 million
2019	\$40.5 million

WATER USAGE	
2022	517.1 million gallons
2021	608.7 million gallons
2020	662.4 million gallons

\* 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.

\*\*\*\* Valid as of June 30, 2023

<b>EMPLOYEE SAFETY SNAPSHOT</b> (Safety data numbers as of June 1, 2023)					
	2019	2020	2021	2022	YoY change 2021 to 2022
Reportable injuries*	356	293	228	191	16.2% ↓
Employees who lost work days due to injury	232	196	105	81	22.9% ↓
Reportable injury ratio per 200,000 employee-hours	1.51	1.52	1.26	1.01	19.8% ↓
Work-related fatalities	2	1	1	1	-
Fatality rate**	.01	.01	.01	.01	-
Serious injury count***	50	40	24	8	66.7% ↓
Ratio	0.21	0.21	0.13	0.04	69.2% ↓

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

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

\*\*\* 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.

<b>FRA TRAIN ACCIDENTS</b>				
	2019	2020	2021	2022
Total number	289	266	276	289
Incidents per million train miles	3.30	3.66	3.99	4.20

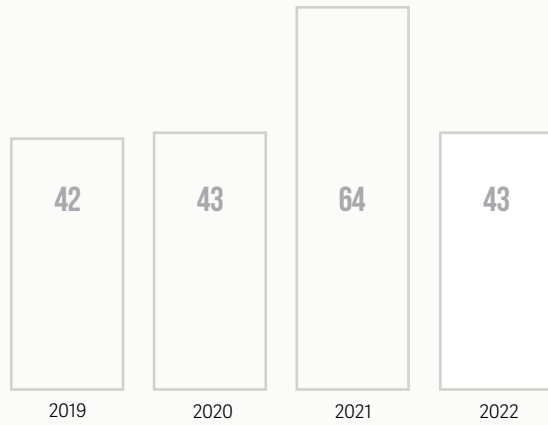
<b>FRA MAINLINE ACCIDENTS</b>				
	2019	2020	2021	2022
Total number	68	63	52	57
Incidents per million train miles	0.89	0.99	0.85	0.93

Mainline refers to that portion of the track that connects stations (other than auxiliary track) on which trains operate.

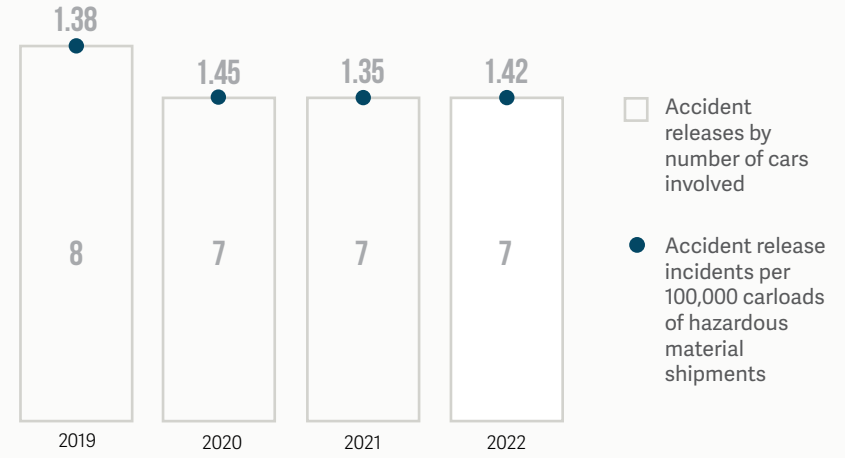
<b>HIGHWAY-RAIL GRADE-CROSSING INCIDENTS</b>				
	2019	2020	2021	2022
Injuries	112	100	84	86
Fatalities	32	27	25	26
Highway-rail incidents	358	302	358	310
Incidents per million train miles	4.09	4.16	5.17	4.54

<b>TRESPASSER INCIDENTS</b>				
	2019	2020	2021	2022
Injuries	71	61	59	58
Fatalities	75	51	64	52
Incidents per million train miles	1.66	1.54	1.78	1.6

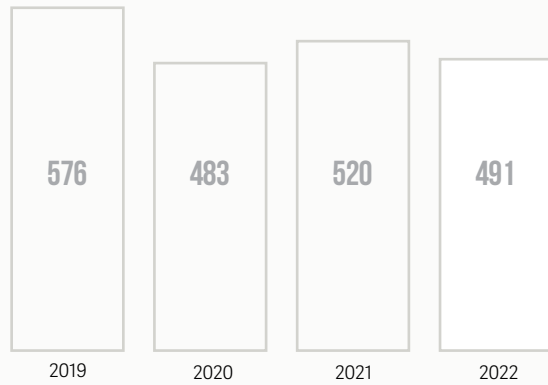
**TOTAL REPORTABLE HAZMAT INCIDENTS** includes accident and nonaccident releases



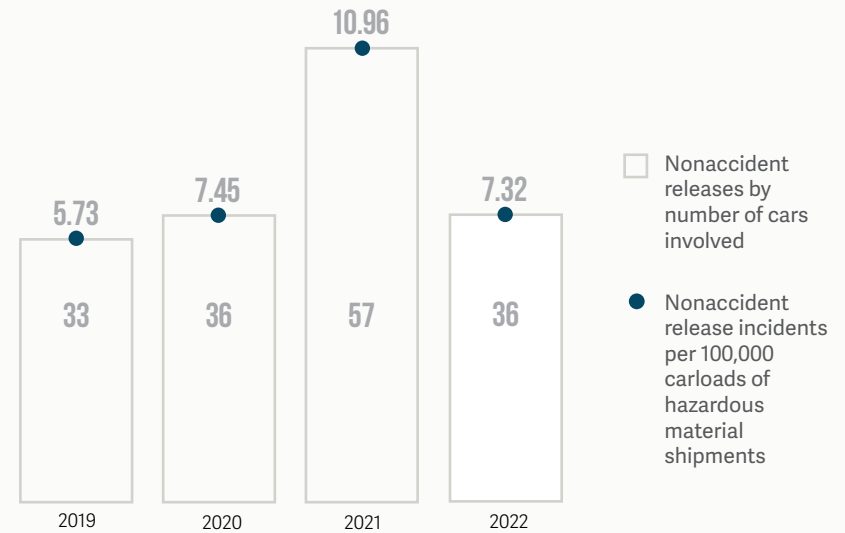
**HAZMAT ACCIDENT RELEASES**



**CARLOADS OF REGULATED HAZARDOUS MATERIAL** carloads in thousands



**HAZMAT NONACCIDENT RELEASES**



WORKFORCE DEMOGRAPHICS as of 12/31/2022								
Craft (unionized) workforce			Management workforce			Senior management		
Female	611	4.0%	Female	884	22.3%	Female	5	19%
Male	14,609	96.0%	Male	3,082	77.7%	Male	21	81%
<b>Total</b>	<b>15,220</b>	<b>100%</b>	<b>Total</b>	<b>3,966</b>	<b>100%</b>	<b>Total</b>	<b>26</b>	<b>100%</b>
Age under 30	1,523	10.0%	Age under 30	356	9.0%	Age under 30	-	-
30 to 50	8,606	56.5%	30 to 50	2,467	62.2%	30 to 50	10	38%
Over 50	5,091	33.4%	Over 50	1,143	28.8%	Over 50	16	62%
<b>Total</b>	<b>15,220</b>	<b>100%</b>	<b>Total</b>	<b>3,966</b>	<b>100%</b>	<b>Total</b>	<b>26</b>	<b>100%</b>
White	12,324	81.0%	White	2,774	69.9%	White	21	81%
Black or African American	2,282	15.0%	Black or African American	800	20.2%	Black or African American	3	12%
Hispanic/Latino	305	2.0%	Hispanic/Latino	119	3.0%	Hispanic/Latino	-	-
Asian	76	0.5%	Asian	187	4.7%	Asian	1	4%
Other	233	1.5%	Other	86	2.2%	Other	1	4%
<b>Total</b>	<b>15,220</b>	<b>100%</b>	<b>Total</b>	<b>3,966</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 12/31/2022

Workforce	2,302	12%	New hire	412	8%
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**2022 NEW HIRES** as of 12/31/2022

Craft (unionized) workforce			Management workforce		
Female	253	5.6%	Female	168	32%
Male	4,275	94.4%	Male	357	68%
<b>Total</b>	<b>4,528</b>	<b>100%</b>	<b>Total</b>	<b>525</b>	<b>100%</b>
Age under 30	1,782	39.4%	Age under 30	147	28.0%
30 to 50	2,332	51.5%	30 to 50	300	57.1%
Over 50	414	9.1%	Over 50	78	14.9%
<b>Total</b>	<b>4,528</b>	<b>100%</b>	<b>Total</b>	<b>525</b>	<b>100%</b>
White	2,680	59.2%	White	243	46.3%
Black or African American	1,425	31.5%	Black or African American	192	36.6%
Hispanic/Latino	161	3.6%	Hispanic/Latino	22	4.2%
Asian	112	2.5%	Asian	46	8.8%
Other	150	3.3%	Other	22	4.2%
<b>Total</b>	<b>4,528</b>	<b>100%</b>	<b>Total</b>	<b>525</b>	<b>100%</b>

**2022 EMPLOYEES WHO LEFT\*** as of 12/31/2022

Craft (unionized) workforce		
Female	204	5.3%
Male	3,646	94.7%
<b>Total</b>	<b>3,850</b>	<b>100%</b>
Age under 30	920	23.9%
30 to 50	2,116	55.0%
Over 50	814	21.1%
<b>Total</b>	<b>3,850</b>	<b>100%</b>
White	2,478	64.4%
Black or African American	1,078	28.0%
Hispanic/Latino	109	2.8%
Asian	69	1.8%
Other	116	3.0%
<b>Total</b>	<b>3,850</b>	<b>100%</b>

Management workforce		
Female	124	24%
Male	400	76%
<b>Total</b>	<b>524</b>	<b>100%</b>
Age under 30	69	13.2%
30 to 50	269	51.3%
Over 50	186	35.5%
<b>Total</b>	<b>524</b>	<b>100%</b>
White	330	63.0%
Black or African American	138	26.3%
Hispanic/Latino	18	3.4%
Asian	25	4.8%
Other	13	2.5%
<b>Total</b>	<b>524</b>	<b>100%</b>

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

FOUNDATION & CORPORATE GIVING					
		2019	2020	2021	2022
Total Foundation	\$	6,214,249	5,376,000	3,678,008	2,037,964
Total corporate giving	\$	2,452,866	2,396,100	3,242,180	6,373,672
Hampton Roads community gift	\$		5,000,000		
Children's Hospital of The King's Daughters gift	\$		1,000,000	1,000,000	500,000
Good Government Fund Matches	\$	743,050	686,100	667,703	590,173
<b>Total</b>	<b>\$</b>	<b>9,410,165</b>	<b>14,458,200</b>	<b>8,587,891</b>	<b>9,501,809</b>

EMPLOYEE CONTRIBUTIONS		
Donation	\$	393,779.08
Match	\$	343,815.05
<b>Total</b>	<b>\$</b>	<b>737,594.13</b>

EMPLOYEE CONTRIBUTIONS BY CAUSE	
Agriculture	4%
Arts Humanities	15%
Education	67%
Environment	5%
Other	9%
<b>Total</b>	<b>100%</b>

# Global Reporting Initiative (GRI) Content Index

GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI 2: GENERAL DISCLOSURES</b>	The organization and its reporting in reference to GRI requirements	
	2-1 Organizational details	a. Norfolk Southern Corporation b. 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." c. Atlanta, GA d. <a href="#">2022 Annual Report</a> - Form 10-K (p. K3-K4)
	2-2 Entities included in the organization's sustainability reporting	a. <a href="#">2022 Annual Report</a> - Form 10-K (p. K3) b. <a href="#">2022 Annual Report</a> - Form 10-K (p. K3) c. <a href="#">ESG Data Scorecard</a> ; <a href="#">2022 CDP Response</a> ; and <a href="#">2022 Annual Report</a> - Form 10-K (p. K5-K8)
	2-3 Reporting period, frequency and contact point	a. <a href="#">About this Report</a> b. <a href="#">About this Report</a> c. June 30, 2023 d. Corporate Communications Department, <a href="mailto:media.relations@nscorp.com">media.relations@nscorp.com</a>
	2-4 Restatements of information	a. The reported Absolute GHG Emissions and GHG Emissions Intensity for 2020 have each been restated based on updated biofuel volumes (from 3.8 to 4.20 and from 12.44 to 13.14, respectively).
	2-5 External assurance	a. <a href="#">2022 GHG Emissions Report</a> b. <a href="#">2022 GHG Emissions Report</a>

GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI 2: GENERAL DISCLOSURES</b>	Activities and workers	
	2-6 Activities, value chain and other business relationships	a. <a href="#">2022 Annual Report</a> - Form 10-K (p. K3-K6) b. <a href="#">2022 Annual Report - Financial Highlights; Responsible Sourcing &amp; Circularity, ESG Data Scorecard</a> c. <a href="#">2022 Annual Report</a> - Form 10-K: Appendix A d. <a href="#">2022 Annual Report</a> (p. 1-4)
	2-7 Employees	<a href="#">ESG Data Scorecard</a>
	2-8 Workers who are not employees	<a href="#">ESG Data Scorecard</a>
	Governance	
	2-9 Governance structure and composition	a. <a href="#">Board Oversight &amp; Risk Management</a> and <a href="#">2023 Proxy Statement</a> (p. 17-23) b. <a href="#">Board Oversight &amp; Risk Management</a> and <a href="#">2023 Proxy Statement</a> (p. 17-23) c. <a href="#">2023 Proxy Statement</a> (p. 7-26)
	2-10 Nomination and selection of the highest governance body	a. <a href="#">2023 Proxy Statement</a> (p. 7-26) and <a href="#">Corporate Governance Guidelines</a> b. <a href="#">2023 Proxy Statement</a> (p. 7-26) and <a href="#">Corporate Governance Guidelines</a>
	2-11 Chair of the highest governance body	a. <a href="#">2023 Proxy Statement</a> (p. 2-17) b. <a href="#">2023 Proxy Statement</a> (p. 2-17)
	2-12 Role of the highest governance body in overseeing the management of impacts	a. <a href="#">Board Oversight &amp; Risk Management, 2023 Proxy Statement</a> (p. 7-26), and <a href="#">Charter of the Governance and Nominating Committee</a> b. <a href="#">Board Oversight &amp; Risk Management, 2023 Proxy Statement</a> (p. 4-6, 15), <a href="#">Charter of the Governance and Nominating Committee</a> , and <a href="#">2022 CDP Response</a> c. <a href="#">2023 Proxy Statement</a> (p. 21)
	2-13 Delegation of responsibility for managing impacts	a. <a href="#">Board Oversight &amp; Risk Management</a> and <a href="#">2023 Proxy Statement</a> (p. 17-23) b. <a href="#">2022 CDP Response</a>

GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI 2: GENERAL DISCLOSURES</b>	<b>Governance (continued)</b>	
	2-14 Role of the highest governance body in sustainability reporting	a. This ESG report was reviewed by the Company's Executive Leadership Team and provided to the Board of Directors before publication.
	2-15 Conflicts of interest	a. <a href="#">The Thoroughbred Code of Ethics</a> (p. 32) and <a href="#">2023 Proxy Statement</a> (p. 17, 23, 24, 42) b. <a href="#">The Thoroughbred Code of Ethics</a> (p. 32) and <a href="#">2023 Proxy Statement</a> (p. 17, 23, 24, 42)
	2-17 Collective knowledge of the highest governance body	a. <a href="#">2023 Proxy Statement</a> (p. 14-15, 18)
	2-18 Evaluation of the performance of the highest governance body	a. <a href="#">2023 Proxy Statement</a> (p. 17-20) and <a href="#">Corporate Governance Guidelines</a> b. <a href="#">2023 Proxy Statement</a> (p. 17-20) and <a href="#">Corporate Governance Guidelines</a> c. <a href="#">2023 Proxy Statement</a> (p. 17-20) and <a href="#">Corporate Governance Guidelines</a>
	2-19 Remuneration policies	a. <a href="#">2023 Proxy Statement</a> (p. 45-56) and <a href="#">Charter of the Compensation Committee</a> b. <a href="#">2023 Proxy Statement</a> (p. 45-56) and <a href="#">Charter of the Compensation Committee</a>
	2-20 Process to determine remuneration	a. <a href="#">2023 Proxy Statement</a> (p. 45-56) and <a href="#">Charter of the Compensation Committee</a> b. <a href="#">2023 Proxy Statement</a> (p. 32-33)
	2-21 Annual total compensation ratio	a. <a href="#">2023 Proxy Statement</a> (p. 78-79) b. <a href="#">2023 Proxy Statement</a> (p. 78-79)

GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI 2: GENERAL DISCLOSURES</b>	Strategy, policies and practices	
	2-22 Statement on sustainable development strategy	a. <a href="#">A Message from Our CEO</a>
	2-23 Policy commitments	a. <a href="#">Business Ethics &amp; Compliance, Thoroughbred Code of Ethics</a> b. <a href="#">Business Ethics &amp; Compliance, Thoroughbred Code of Ethics</a> (p. 38-39) c. <a href="https://code.nscorp.com/">https://code.nscorp.com/</a> d. <a href="#">Thoroughbred Code of Ethics</a> (p. 43) e. <a href="#">Thoroughbred Code of Ethics</a> (p. 5) f. <a href="#">Business Ethics &amp; Compliance</a>
	2-24 Embedding policy commitments	a. <a href="#">Business Ethics &amp; Compliance, Thoroughbred Code of Ethics</a>
	2-26 Mechanisms for seeking advice and raising concerns	<a href="#">Thoroughbred Code of Ethics</a> (p. 5, 8, 42-43) and Ethics & Compliance Hotline
	2-28 Membership associations	a. <a href="#">Legislation, Regulation, &amp; Government Relations</a>
	2-29 Approach to stakeholder engagement	a. <a href="#">Materiality Assessment, Responsible Sourcing &amp; Circularity, Employee Health &amp; Safety, Emergency Preparedness &amp; Response, Employee Recruitment &amp; Development, Craft Workforce Engagement, Corporate Giving &amp; Community Engagement, Legislation, Regulation, &amp; Government Relations, 2023 Proxy Statement</a> (p. 4, 18-20) and <a href="#">2022 Annual Report</a> (p. 2-3)
	2-30 Collective bargaining agreements	a. <a href="#">2022 Annual Report</a> (p. 11-15)
<b>GRI 3: MATERIAL TOPICS</b>	3-1 Process to determine material topics	a. <a href="#">Materiality Assessment</a> b. <a href="#">Materiality Assessment</a>
	3-2 List of material topics	a. <a href="#">Materiality Assessment</a> b. No changes

GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI TOPIC STANDARDS</b>	GRI 201: Economic Performance	
	201-1 Direct economic value generated and distributed	<a href="#">2022 Annual Report – Financial Highlights</a> and <a href="#">ESG Data Scorecard</a>
	201-2 Financial implications and other risks and opportunities due to climate change	<a href="#">2022 Annual Report</a> (p. K15) and <a href="#">2022 CDP Response</a>
	GRI 207: Tax Transparency	
	207-4 Country-by-country reporting	<a href="#">2022 Annual Report – Financial Highlights</a> and <a href="#">ESG Data Scorecard</a>
	GRI 302: Energy	
	302-1 Energy consumption within the organization	<a href="#">2022 Annual Report – Financial Highlights</a> and <a href="#">ESG Data Scorecard</a>
	302-3 Energy intensity	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 CDP Response</a>
	302-4 Reduction of energy consumption	<a href="#">Carbon Emissions &amp; Climate Change</a> , <a href="#">Energy &amp; Water Consumption</a> , <a href="#">ESG Data Scorecard</a> , and <a href="#">2022 CDP Response</a>
	GRI 304: Biodiversity	
304-3 Habitats protected or restored	<a href="#">Sustainable Land Use &amp; Biodiversity</a>	



GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI TOPIC STANDARDS</b>	<b>GRI 305: Emissions</b>	
	305-1 Direct GHG emissions (Scope 1)	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 CDP Response</a>
	305-2 Indirect GHG emissions (Scope 2)	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 CDP Response</a>
	305-3 Indirect GHG emissions (Scope 3)	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 CDP Response</a>
	305-4 GHG emissions intensity ratio	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 CDP Response</a>
	305-5 GHG reductions realized	<a href="#">Carbon Emissions &amp; Climate Change</a> , <a href="#">Energy &amp; Water Consumption</a> , <a href="#">ESG Data Scorecard</a> , and <a href="#">2022 CDP Response</a>
	<b>GRI 306: Waste</b>	
	306-3 Waste generated	<a href="#">ESG Data Scorecard</a>
	306-4 Waste diverted from disposal	<a href="#">Responsible Sourcing &amp; Circularity</a> , <a href="#">ESG Data Scorecard</a>
	306-5 Waste directed to disposal	<a href="#">ESG Data Scorecard</a>
	<b>GRI 401: Employment</b>	
	401-1 New employee hires	<a href="#">ESG Data Scorecard</a>
	<b>GRI 403: Occupational Health and Safety</b>	
	403-3 Occupational health services	<a href="#">East Palestine &amp; Responsive Efforts</a> , <a href="#">Employee Health &amp; Safety</a> , <a href="#">Thoroughbred Code of Ethics</a> (p. 13-16, 43)
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	<a href="#">East Palestine &amp; Responsive Efforts</a> , <a href="#">Employee Health &amp; Safety</a> , <a href="#">Thoroughbred Code of Ethics</a> (p. 13-16, 43)
	403-9 Work-related injuries	<a href="#">ESG Data Scorecard</a>

GRI STANDARD	DISCLOSURE	RESPONSE / INFORMATION LOCATION
<b>GRI TOPIC STANDARDS</b>	GRI 405: Diversity and Equal Opportunity	
	405-1 Diversity of employees	<a href="#">Diversity, Equality, &amp; Inclusion</a> and <a href="#">ESG Data Scorecard</a>
	GRI 413: Local Communities	
	413-1 Operations with local community engagement, impact assessments, and development programs	<a href="#">East Palestine &amp; Responsive Efforts</a> , <a href="#">Materiality Assessment</a> , <a href="#">Employee Health &amp; Safety</a> , <a href="#">Emergency Preparedness &amp; Response</a> , <a href="#">Corporate Giving &amp; Community Engagement</a> , and <a href="#">ESG Data Scorecard</a>
	413-2 Operations with significant actual and potential negative impacts on local communities	<a href="#">East Palestine &amp; Responsive Efforts</a> , <a href="#">Materiality Assessment</a> , <a href="#">Employee Health &amp; Safety</a> , <a href="#">Emergency Preparedness &amp; Response</a> , and <a href="#">ESG Data Scorecard</a>
	GRI 418: Customer Privacy	
	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	<a href="#">Digital &amp; Physical Asset Security</a> . No material customer data breaches were recorded in 2022.

# Sustainability Accounting Standards Board (SASB) Content Index

## SUSTAINABILITY DISCLOSURE TOPICS & ACCOUNTING METRICS

TOPIC	CODE	ACCOUNTING METRIC	RESPONSE / INFORMATION LOCATION
<b>GREENHOUSE GAS EMISSIONS</b>	TR-RA-110a.1	Gross global Scope 1 emissions	<a href="#">ESG Data Scorecard</a>
	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	<a href="#">Carbon Emissions &amp; Climate Change, ESG Data Scorecard, 2022 CDP Response</a>
	TR-RA-110a.3	Total fuel consumed, percentage renewable	<a href="#">Carbon Emissions &amp; Climate Change, Energy &amp; Water Consumption, ESG Data Scorecard, 2022 CDP Response</a>
<b>AIR QUALITY</b>	TR-RA-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O) and (2) particulate matter (PM10)	(1) t NOx = 37,781 metric tons (2) t PM10 = 1,058 metric tons
<b>EMPLOYEE HEALTH AND SAFETY</b>	TR-RA-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	<a href="#">ESG Data Scorecard</a>
<b>COMPETITIVE BEHAVIOR</b>	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 2022.

TOPIC	CODE	ACCOUNTING METRIC	RESPONSE / INFORMATION LOCATION
<b>ACCIDENT AND SAFETY MANAGEMENT</b>	TR-RA-540a.1	Number of accidents and incidents	<a href="#">ESG Data Scorecard</a>
	TR-RA-540a.2	Number of (1) accident releases and (2) nonaccident releases (NARs)	<a href="#">ESG Data Scorecard</a> , <a href="#">Employee Health &amp; Safety</a>
	TR-RA-540a.3	Number of Federal Railroad Administration (FRA) Recommended Violation Defects	<a href="#">ESG Data Scorecard</a>
	TR-RA-540a.4	Frequency of internal railway integrity inspections	2 inspections per week*

**ACTIVITY METRICS**


ACTIVITY METRIC	CODE	RESPONSE / INFORMATION LOCATION
TR-RA-000.A	Number of carloads transported	<a href="#">2022 Annual Report – Form 10-K</a> (p. K5 – K6)
TR-RA-000.B	Number of intermodal units transported	<a href="#">2022 Annual Report – Form 10-K</a> (p. K5)
TR-RA-000.C	Track miles	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 Annual Report – Form 10-K</a> (p. K5)
TR-RA-000.D	Revenue ton miles (RTMs)	<a href="#">2022 Annual Report – Form 10-K</a> (p. K5)
TR-RA-000.E	Number of employees	<a href="#">ESG Data Scorecard</a>




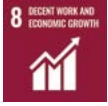

\*(The FRA requires twice-weekly inspections, with at least one calendar-day interval between inspections if the track has carried passenger trains, or more than 10 million gross tons of traffic during the preceding calendar year. Norfolk Southern inspects all track at the FRA regulatory levels based on million gross ton-miles and class of track operated.)






# 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	<a href="#">Board Oversight &amp; Risk Management, 2023 Proxy Statement</a> (p. 8-22), <a href="#">Charter of the Governance and Nominating Committee</a> , and <a href="#">2022 CDP Response</a> (C1.1)
b. Describe management's role in assessing and managing climate-related risks and opportunities	<a href="#">Materiality Assessment, Carbon Emissions &amp; Climate Change, Board Oversight &amp; Risk Management, Climate Change Scenario Analysis, 2023 Proxy Statement</a> (p. 5, 18), <a href="#">Charter of the Governance and Nominating Committee</a> , and <a href="#">2022 CDP Response</a> (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.	<a href="#">Materiality Assessment, 2022 CDP Response</a> (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.	<a href="#">Board Oversight &amp; Risk Management, Materiality Assessment, 2023 Proxy Statement</a> (p. 5, 18), <a href="#">Charter of the Governance and Nominating Committee</a> , and <a href="#">2022 CPD Response</a> (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 2°C or lower scenario.	<a href="#">Materiality Assessment, Carbon Emissions &amp; Climate Change, Board Oversight &amp; Risk Management, Climate Change Scenario Analysis, 2023 Proxy Statement</a> (p. 5, 18), <a href="#">Charter of the Governance and Nominating Committee</a> , and <a href="#">2022 CDP Response</a> (C1.2)
<b>3. Risk Management</b>	
a. Describe the organization's processes for identifying and assessing climate-related risks.	<a href="#">Materiality Assessment, Carbon Emissions &amp; Climate Change, Climate Change Scenario Analysis, 2022 CDP Response</a> (C2.1, C2.1a, and C2.2, C2.2a, C2.3, C2.3a)
b. Describe the organization's processes for managing climate-related risks.	<a href="#">2022 CDP Response</a> (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.	<a href="#">2022 CDP Response</a> (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.	<a href="#">Carbon Emissions &amp; Climate Change</a> , <a href="#">Climate Change Scenario Analysis</a> , and <a href="#">2022 CDP Response</a> (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.	<a href="#">ESG Data Scorecard</a> and <a href="#">2022 CDP Response</a> (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.	<a href="#">Carbon Emissions &amp; Climate Change</a> and <a href="#">2022 CDP Response</a> (C4.1 and C4.1b)

SUSTAINABLE DEVELOPMENT GOALS	ALIGNMENT
<p>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.</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 &amp; Community Engagement ESG Report - Employee Recruitment &amp; Development</p>

SUSTAINABLE DEVELOPMENT GOALS		ALIGNMENT
	<ul style="list-style-type: none"> <li>Achieve gender equality and empower all women and girls</li> </ul>	The Thoroughbred Code of Ethics Proxy Statement Annual Report ESG Report - Diversity, Equity, & Inclusion ESG Report - Employee Recruitment & Development ESG Report - Innovation & Technology, ESG Report - Board Diversity
	<ul style="list-style-type: none"> <li>Ensure availability and sustainable management of water and sanitation for all</li> </ul>	ESG Report - Sustainable Land Use & Biodiversity ESG Report - Energy & Water Consumption ESG Report - Data Scorecard
	<ul style="list-style-type: none"> <li>Ensure access to affordable, reliable, sustainable and modern energy for all</li> </ul>	CDP Response ESG Report - Carbon Emissions & Climate Change ESG Report - Energy & Water Consumption ESG Report - Data Scorecard
	<ul style="list-style-type: none"> <li>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</li> </ul>	The Thoroughbred Code of Ethics Annual Report Proxy Statement CDP Response ESG Report - Responsible Sourcing & Circularity ESG Report - Employee Health & Safety ESG Report - Employee Recruitment & Development ESG Report - Diversity Equity & Inclusion ESG Report - Economic Performance ESG Report - Innovation & Technology
	<ul style="list-style-type: none"> <li>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</li> </ul>	Annual Report ESG Report - Economic Performance ESG Report - Innovation & Technology ESG Report - Corporate Giving & Community Engagement ESG Report - Data Scorecard

SUSTAINABLE DEVELOPMENT GOALS		ALIGNMENT
	<ul style="list-style-type: none"> <li>• Make cities and human settlements inclusive, safe, resilient and sustainable</li> </ul>	Annual Report The Thoroughbred Code of Ethics ESG Report - Carbon Emissions & Climate Change ESG Report - Corporate Giving & Community Engagement ESG Report - Data Scorecard
	<ul style="list-style-type: none"> <li>• Ensure sustainable consumption and production patterns</li> </ul>	CDP Response ESG Report - Responsible Sourcing & Circularity ESG Report - Corporate Giving & Community Engagement ESG Report - Data Scorecard
	<ul style="list-style-type: none"> <li>• Take urgent action to combat climate change and its impacts</li> </ul>	Annual Report CDP Response The Thoroughbred Code of Ethics ESG Report - Carbon Emissions & Climate Change ESG Report - Legislation, Regulation, & Government Relations ESG Report - Data Scorecard
	<ul style="list-style-type: none"> <li>• Conserve and sustainably use the oceans, seas and marine resources for sustainable development</li> </ul>	ESG Report - Sustainable Land Use & Biodiversity
	<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>	CDP Response ESG Report - Sustainable Land Use & Biodiversity





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2022 DATA. PERCENTS ARE ROUNDED.

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