

AMTRAK® SUSTAINABILITY REPORT FY2019



A MESSAGE FROM AMTRAK'S PRESIDENT & CHIEF EXECUTIVE OFFICER,
MR. WILLIAM FLYNN

Our country, our society, and our company face a different future than what we anticipated even six months ago. When the work described in the following pages was taking place, it was within one of Amtrak's strongest ridership and financial years in the company's history. As we evaluate the future before us and how we can best serve our customers across America, sustainability remains a key focus.

In the short time when the world stopped traveling and manufacturing and driving, we saw a reduction in **global emissions near 17%**. In Los Angeles, a city that Amtrak serves, the skies cleared and the air quality was the best it's been in decades. The areas with the greatest improvement in air quality have a greater population driving vehicles and trucks. Allow me to take this opportunity to point out an obvious solution - Amtrak. We serve nearly 500 locations around the country - from business travelers in New Haven, CT to families on vacation in San Antonio, TX. Traveling by Amtrak reduces highway congestion and leads to improved air quality. In fact, our electrified system along the northeast corridor emits up to 83% fewer greenhouse gases than **driving alone**. As clearly stated in our tag line, "The Future Rides With Us".

We are committed to your safety and we are committed to operating and maintaining a resilient rail travel company with a concerted focus on limiting our, and your contributions to global emissions.

Thank you for riding Amtrak,



AMTRAK® SUSTAINABILITY REPORT

FY2019

It is incredible to see how quickly business can change in response to a public health, safety or environmental threat. It is equally incredible to see how rapidly businesses innovate and activate solutions that may have merely been an idea before becoming the new way to do business in an altered state of commerce. When the world stopped due to the spread of the coronavirus, Amtrak kept moving, providing an essential service to those who needed it most.

At Amtrak, we accepted cashless payments, offered Flexible Dining service on all long-distance routes, limited ticket sales to 50% of train's seat capacity on reserved services, and displayed signage at our busiest stations to indicate safe distances in high traffic areas, just to name a few. Outside of onboard services, we set up nearly 2,000 employees in remote work environments, hosted weekly meditation calls for employees, and increased cleaning protocols to keep our employees and customer safe. Fewer trains resulted in a surplus of food and supplies. We donated extra food to shelters in locations around the country and excess blankets to a military-run hospital in New York City to help those in need during this unprecedented time. Across the board, we adapted, seemingly overnight.

Behind these adaptations to market demands and disruptions were the foundation of our workforce, our employees. Amtrak's employees were committed to emerging from this historic public health crisis as a stronger and more resilient company given the lessons we have learned. In fact, what we experienced across all business functions can be applied in the development of Amtrak's sustainability and climate resilience plans.

A lot of great work was completed in fiscal year 2019 (FY19). It was Amtrak's strongest year financially and boasted record ridership with 32.5 million trips – for the third year in a row. The momentum from FY19 continued into FY20 through ongoing investments in new fuel-efficient equipment, preparing to receive the new Acela trainsets, and executing nearly \$700 M in state of good repair infrastructure projects – like those highlighted on page 14. Through FY19, we achieved all four corporate sustainability goals to reduce greenhouse gas emissions, diesel fuel and electricity, and increased recycling through special projects and a renewed focus on communicating best practices. Looking into FY20, we expect challenges with meeting several of our sustainability goals due to precipitous decline in service but intend to continue advancing work in climate adaptation and resilience.

As we reflect on accomplishments from last year, we see numerous examples of collaborative sustainability projects resulting in reduced operating expenses, stewardship of our natural resources, and increased accessibility for customers. ■



Q&A WITH TRACIE WINBIGLER

CHIEF FINANCIAL OFFICER

The Task Force on Climate-Related Disclosures states in its July 2017 report, “One of the most significant, and perhaps most misunderstood, risks that organizations face today relates to climate change.” As the senior executive overseeing Amtrak’s capital investments and financial strategies, we sat down with Tracie Winbigler, CFO, to understand her vision of how smart investments in assets and preparedness planning will strengthen Amtrak’s position as the most energy efficient travel company, lessen our contribution to global emissions, and bolster our resilience against environmental stressors.

To drastically curb emissions and slow causes of climate change, public and private sectors are talking about the need for a low carbon economy. What role does Amtrak play in this transition?

Amtrak plays many important roles. We are a key stakeholder in the global emissions reduction effort and are the most sustainable option to travel between New York and Washington, DC, Los Angeles to San Diego, and every other short-range travel route. Traveling on our electrified system in the northeast corridor emits 83% less greenhouse gas than driving and up to 73% less than flying. Across our national system, Amtrak is 47% more energy efficient than driving and one third more efficient than flying, which means we are fundamentally the better choice for travelers to reduce their impact on the environment. The [Intergovernmental Panel on Climate Change \(IPCC\)](#) identified rail as the key transportation solution to drive down global emissions by getting people out of cars and planes and onto trains. Amtrak’s interstate rail system is a critical part of that solution. Not only did we move more than 32+ million customers (a historic record!), but we are directly supporting our customers’ and corporate clients’ low carbon commitments to travel with a smaller footprint.

In our own operations, we’ve proudly reduced company greenhouse gas emissions (GHG) by 20% since 2010 and lowered our emissions by 4% in FY19 (another company record). We need to do our part to reduce the impact of transportation emissions on climate change, so we are working to set a longer-term goal to decrease emissions substantially within the next decade. We know there’s room to improve, which is why we’re expanding the ways Amtrak will continually

reduce our GHG emissions. We’re buying more low-carbon electricity, operating more efficient equipment, and reducing energy consumption in our stations, offices, and maintenance shops. Over the last 24 months we’ve invested extensively to begin replacing our diesel locomotive fleet with units that are more fuel efficient, and prepared for the new Acela [fleet](#) which is 40% more energy efficient than the original Acela train sets.

How has Amtrak integrated climate resilience into functions of the business?

Amtrak voluntarily reports to [CDP, the global carbon disclosure organization](#), on progress to reduce our carbon footprint and implement climate resilience strategies. We received a B from CDP for 2019 in the Transport Services sector, placing us in the “management” category among freight and passenger rail and aviation companies, because we demonstrate our ability to “take coordinated action on climate issues” across various business functions. Because we have consistently identified the various ways Amtrak embeds climate considerations within our governance structure, emissions target setting, risk evaluation, and strategic planning, we have a foundation of salient information from which to draw for company-wide resilience planning efforts.

Completing the CDP questionnaire helped teams across Amtrak incorporate climate considerations into the company’s operations, funding, planning, and communications – both internally and externally. Each year, we deliver to Congress five-year planning documents that emphasize climate concerns and rail’s inherent environmental advantages.



Q&A WITH TRACIE WINBIGLER

(CONTINUED)



We leverage this opportunity to suggest future capital investments and policies that will improve the resilience and sustainability of our network. Environmental risks and climate impacts are included in this package because we are already seeing the impacts from changing conditions on company operations and service. It is critical that our State, regional, and Congressional partners understand the risks that we must work together to manage.

Within the guiding strategies of the company, executive leadership included a new corporate goal in the FY20 annual operating plan, “develop and implement a climate resilience strategic plan.” Since 2015, we’ve completed several climate-related projects, including vulnerability assessments, and developed proprietary inundation maps to anticipate future conditions. Having a strategic resiliency plan provides direction and focus to evaluate, identify, and prioritize areas where we should take immediate action. We have already begun amending business practices and design standards to protect our rail assets and lessen the disruption to Amtrak’s customers and employees from acute events and in anticipation of long-term climate shifts.

What practical actions do you see underway that better position Amtrak for continued growth and expansion in a future with increased threats and environmental risks?

We need to operate a safe, clean, modern, and efficient business to be relevant for the future. We are doing that in several ways, including making continued improvements to our stations to offer increased accessibility and mobility for

customers; using technology to inform decisions for capital planning and project prioritization; using geographic information system (GIS) mapping tools to assess future conditions surrounding Amtrak assets; evaluating growing markets and demographic trends to understand our next generation of customers; and designing the catenary system (which supplies our trains with electric power) to withstand greater wind speeds and more extreme temperatures. To further protect our existing infrastructure and maintain safe operations, we’re clearing culverts for better drainage, elevating critical components above flood plain levels, and assessing solutions for flood prone areas.

We’re also talking about sustainability and the future of Amtrak, especially in the executive team. Nearly every employee town hall meeting and quarterly business update includes at least one energy, recycling, or reputational risk question from an employee to Amtrak leadership. Senior management tracks our performance against corporate sustainability goals on a quarterly basis which helps us stay focused on efforts to meet our commitments. Every year, sustainability and climate resilience work expands to encompass new projects, more departments, and more ambitious commitments to ensure long-term operations. We’re attracting talent with experience in these areas, and our current employees are stepping up to the challenge to position Amtrak for a successful future. Amtrak’s ability to consistently achieve sustainability goals prove our dedication to continuous progress. ■

OUR VALUES

Our Amtrak Values are an expression of our principles and beliefs. They guide everything we do – and ultimately, they define us as a company.

We want Amtrak to be a place where our employees recognize, appreciate and live our values. When this connection is made, we make Amtrak a great place to work – and we create a powerful and engaged team capable of achieving any goal. With this in mind, we recently spoke to more than 1,000 employees through focus groups across the company. We collected their insight on which values were most important to them. These conversations affirmed much of what we already believe and know to be true. Amtrak is full of great people who share many of the same qualities. We have a passion for service, we take great pride in our work, we believe in teamwork, and we have a strong sense of commitment to each other and our customers.

Together, these qualities are the core of our three Amtrak Values. These values are simple, memorable, and meaningful:

1. DO THE RIGHT THING

This value, central to everything we do, starts with always being safe – for ourselves, our co-workers and our customers. It means that we act with integrity and do everything we can to protect our environment. We owe it to future generations to reduce waste and shrink our carbon footprint.

2. PUT CUSTOMERS FIRST

Taking care of our customers is the essence of our mandate from Congress – and it is how we ensure our continued livelihoods with this company. Our team has a strong sense of service today. Our challenge is that we must continually act upon it.

3. EXCEL TOGETHER

Focusing on teamwork and performance, we must work toward the same goals while learning from each other. Our customers desire modern solutions and today's business environment requires speed and simplicity. By excelling together, there are no limits to what we can accomplish. ■



AMTRAK ACROSS AMERICA

Vital To 348+ Million Travelers A Year

At the National Railroad Passenger Corporation (Amtrak), we work with our partners to help move people, the economy and the nation forward. Our mission, as defined by the U.S. Congress through the **Passenger Rail Investment and Improvement Act of 2008**, is to “provide efficient and effective intercity passenger rail mobility consisting of high-quality service that is trip-time competitive with other intercity travel options.” Amtrak operates a network of intercity passenger rail services spanning 46 states, the District of Columbia and three Canadian provinces.

Amtrak is a federally chartered corporation, operating as a for-profit company, with the federal government as majority stockholder. Members of the Amtrak Board of Directors are appointed by the President of the United States and confirmed by the U.S. Senate. The company was created by an act of Congress in 1970 to take control of the majority of the nation’s intercity passenger rail services. We’ve been helping people go places since daily operations began in May 1971. Taking into account Amtrak’s Northeast Corridor, State Supported and Long Distance service lines, shared intermodal stations, and infrastructure access and services provided to 11 state and regional authorities for commuter services from coast to coast, our services are used by more than 348 million travelers a year.



NORTHEAST CORRIDOR (NEC)

Acela and **Northeast Regional** services connect Washington, DC, Philadelphia, New York, and Boston over the 457-mile NEC. The NEC, the majority of which is owned by Amtrak with smaller segments owned by Massachusetts, Connecticut and New York, is the busiest railroad in North America with about 2,200 Amtrak, commuter, and freight trains operating over some portion of the Washington-Boston route daily.

FY2019 Highlights

- Ridership: 12.5 million (up 3.3% year-over-year)
- The NEC represents 38.5% of Amtrak’s total ridership (56% of total revenue).
- With eight commuter railroads operating on the NEC, and approximately 820,000 Amtrak and commuter trips taken every weekday, we are removing drivers from highways, relieving urban congestion and improving air quality.

NATIONAL NETWORK

State Supported Services

In FY2019, Amtrak received funding from 17 states through 20 agencies to operate 28 short-distance intercity routes (less than 750 miles). These routes serve the Northeast, Midwest, South, Northwest, and West.

FY2019 Highlights

- 15.4 million riders (up 2.4% year-over-year)
- 47.5% of total ridership (23% of total revenue)
- Five routes with more than one million riders: *Pacific Surfliner* (CA), *Capitol Corridor* (CA), *Empire Service/Maple Leaf* (NY), *Keystone Service* (PA), and *San Joaquins* (CA)

Long Distance

Our 15 Long Distance routes (over 750 miles) provide the only rail service at nearly half of Amtrak’s 500+ stations and are the only Amtrak trains in 23 of the 46 states in the network.

FY2018 Highlights

- 4.6 million riders (up 0.9% year-over-year)
- 14% of total ridership (21% of total revenue)

CONTRACT COMMUTER SERVICES

Amtrak is one of the largest operators of contract commuter services in North America—providing services and/or infrastructure access to 11 state and regional authorities. Connecting urban centers alleviates highway congestion, which decreases emissions caused by motor vehicles. It also helps support state initiatives to expand rail service and improve air quality. ■

FY19 SUSTAINABILITY PROGRESS

These four strategic sustainability goals focus our workforce on resources we consume and impacts we make while we operate Amtrak. We strive to do better and from the numbers below, we're on our way.



ELECTRICITY USE



In FY19 **we decreased energy use by 4.4% at our 40 largest facilities** – well above our -1% goal.



DIESEL FUEL USE



In FY19 **we surpassed our goal of -1% and achieved a total 2.8% reduction** in purchased revenue diesel fuel over FY18.



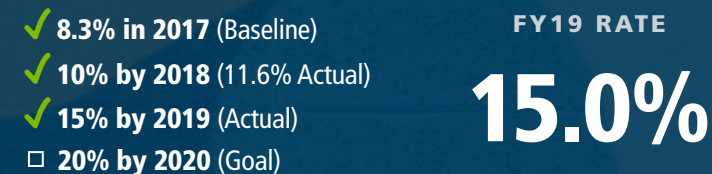
GHG EMISSIONS



Surpassing our goal of -1%, **greenhouse gas emissions (GHG) were down nearly 4%** in FY19 compared to FY18.



RECYCLING RATE



We met our FY19 goal of **diverting 15% of our trash away from landfills**, a step toward our goal of 20% by 2020.

PERFORMANCE SCORECARD

The performance scorecard is a way for Amtrak to communicate how we're doing year over year across several efforts in the company. The following metrics include our three strategic sustainability goals and a range of other focus areas. We believe it's important for you to see the numbers behind each commitment.

STRATEGIC SUSTAINABILITY GOALS

RESOURCE USE AND EMISSIONS	FY2019	FY2018	Comment
Revenue Locomotive Diesel Fuel	53,307,026 gallons (-2.8% YOY)	54,824,658 gallons	In FY19 we surpassed our goal of -1% and achieved a total 2.8% reduction over FY18. Our Mechanical and Transportation departments remained focused on driving down locomotive idling time, especially at our maintenance facilities. Deploying fuel-efficient Charger locomotives on state-supported routes also contributed to this goal.
Electricity (non-propulsion)	206,395,397 kWh (-4.4% YOY)	215,829,488 kWh	We decreased energy use by 4.4% at our 40 largest facilities – well above our -1% goal. Not limited to weather-related events or changes in how Amtrak operations consumed energy, a contributing factor was energy conservation projects conducted at facilities in Oakland, Rensselaer, Long Island City, Los Angeles, and Lorton, VA
Greenhouse Gas Emissions	934,038 tons CO2e (-3.9% YOY)	972,276 tons CO2e	Surpassing our goal of -1%, greenhouse gas emissions (GHG) were down nearly 4% in FY19 compared to FY18. We calculate and verify GHG emissions from all locomotive diesel fuel, traction power for our electric trains, electricity used in Amtrak facilities, fuel for maintenance equipment, refrigerants, and highway fleet fuel. In FY19, Amtrak actions to reduce GHG emissions from fuels and non-traction electricity were the biggest drivers of the 4% drop. We also saw a decrease of 1.5% due to U.S. EPA's updated emission factors (eGrid database) that reflected changes in the electricity supply mix.

ENVIRONMENTAL

METRIC	FY2019	FY2018	Comment
Industrial Recycling	28,816 tons	9,921 tons	Amtrak recycles industrial materials from our maintenance activities, including steel parts, other scrap metals, and polycarbonate windows, and we recover material value wherever possible. These figures fluctuate year-over-year based on the number of projects and volumes generated from these projects.
Municipal Recycling	4,576 tons	3,948 tons	Municipal materials include all trash and recyclables generated on board Amtrak trains and at Amtrak facilities, including stations and offices. In FY19, Amtrak focused on introducing new recycling services and identifying additional recyclable waste streams.
Recycling Rate	15.0%	11.60%	We succeeded in increasing our overall recycling rate for non-industrial materials by 15%, up from 11.6% at the end of the previous year. Our Mechanical Maintenance facilities in Wilmington and Bear, Del., Beech Grove, Ind., and Rensselaer, N.Y. led the way with recycling rates approaching 50% of their municipal solid waste. In FY19 we recycled an estimated 437 tons of clean paper and cardboard more than 34 tons of seat cushions, fabrics and other materials from train "Refresh" projects, keeping them out of landfills.
Environmental Audit Score	91.6	NA	Amtrak facilities achieved an overall environmental audit score of 91.6 for FY19, surpassing the goal of 86. The evaluation was based on 18 comprehensive environmental audits conducted across our system, including mechanical maintenance facilities, engineering maintenance-of-way bases, and large stations. The audit score measures conformance with environmental regulatory programs and Amtrak policies and procedures, on a scale of 0 – 100.





SOCIAL

RAILROAD SAFETY	FY2019	FY2018	Comment
Customer Injury Rate	16.74 incidents (Goal: 18.8)	20.8 incidents	Amtrak's customer injury rate represents the number of customer injuries per 100 million passenger miles, including incidents on trains, platforms, and in Amtrak facilities, such as stations. In 2018 and through 2019, Amtrak began further analyzing customer injury data to better identify trends to include location, activity, and source of injuries sustained by customers. We're continuing to focus on educating customers through Amtrak's "Get A Grip" campaign, which provides safety tips while on board moving trains, staircases, and escalators.
Employee Injury Rate	3.41 incidents (Goal: 3.4)	3.65 incidents	The employee injury rate is the number of railroad worker on-duty injuries and illnesses per 200,000 employee-hours annually (equivalent of 100 full time employees). SIF Potential Incidents were not serious but had the potential to be. Primary drivers of SIF Potential incidents in FY19 included motor vehicle accidents and falls from heights.
Serious Injury or Fatality (SIF) Potential Incidents	2 incidents (Goal: 0)	70 incidents	
Trespasser and Grade Crossings Incidents	9.68 incidents/1MM train miles	10 incidents/1MM train miles	Amtrak is initiating a Grade Crossing Risk Assessment program to increase the safety of operations at grade crossings. This program includes public outreach and risk assessments throughout the system and piloting partnerships with host railroads.
Positive Train Control (PTC)	All Amtrak-owned or controlled track had PTC in operation, except roughly 0.9 miles which are expected to be completed by June 2020.	All Amtrak-owned or controlled track had PTC in operation by January 1, 2019, except roughly 130 miles.	As of March 31, 2020, Amtrak has 96.6% of route miles operating with PTC throughout Amtrak's network. In addition, 96.8% of Amtrak trains are operating with PTC .

SUPPLIER DIVERSITY	FY2019	FY2018	Comment
Suppliers	14%	12%	Our corporate goal commits that 10% of annual spend will be on diverse suppliers. Diverse suppliers are identified within federal guidelines such as woman, minority, veteran, disabled, or Native American-owned. Our efforts continue to foster inclusion across the board.

SERVICE TO COMMUNITIES	FY2019	FY2018	Comment
New or Relocated Stations for Existing Intercity Rail Service	7 stations	8 stations	Service to the Pioneer Valley in Massachusetts started with three new stations: Greenfield, Holyoke, and Northampton. Other notable stations completed by state partners include Raleigh, NC, Springfield, MA, Paoli, PA, Mt. Joy, PA, and the BWI Airport station.
New Stations for New Intercity Rail Service	3 stations	1 station	
Accessibility Projects	33 completed projects; \$78M	31 completed projects; \$52M	Amtrak is committed to improving facilities to enhance the customer experience and more importantly, provide greater mobility. Projects include ADA station upgrades, passenger information displays, and accessible boarding technology.



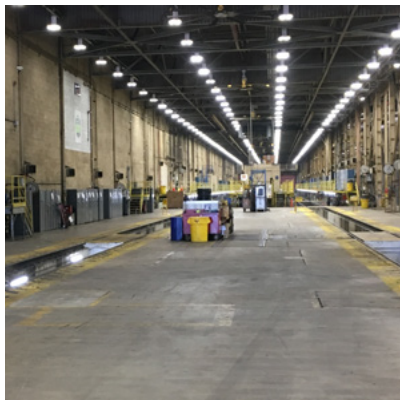
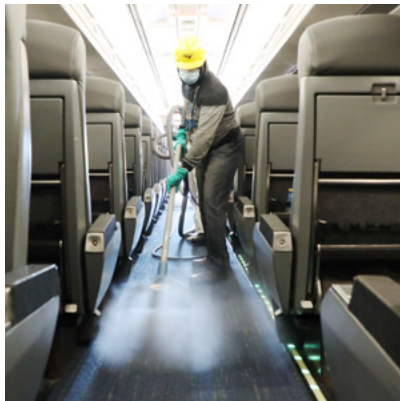
ECONOMIC

REVENUE	FY2019	FY2018	Comment
Total GAAP* Revenue	\$3.504B	\$3.387B	For more on Amtrak's financial performance go to Amtrak.com/about-amtrak
Total Operating Cost Recovery	99.1%	94.9%	*Generally Approved Accounting Practices

FLEET	FY2019	FY2018	Comment
Existing Fleet Refresh	Amfleet 1: \$92,344 Acela: \$3,497,397	Amfleet 1: 450 cars; \$15M investment Acela: 100 cars; \$4M investment	The Amfleet 1 and Acela passenger car refreshes were two of Amtrak's major projects to incorporate sustainability into end-of-life considerations for large volumes of material. Many of the items installed as part of the Refresh were designed with longer lives, thereby reducing the frequency of changeout and waste generation. Several significant waste streams were removed from landfill destinations and recycled, e.g., foam, seat covers, carpet, and light bulbs. Incorporating sustainability have been successfully applied to all other fleet refreshes.
New Fleet Investment	Purchased 75 locomotives with the option to purchase an additional 100	Completed procurement process	In early FY19, Amtrak awarded a contract to Siemens for new Tier 4 (EPA emissions control level) locomotives. The first of 75 locomotives will go into service in 2021, with a 3 year roll out. The new locomotives are more fuel efficient and have lower pollutant emissions compared to older technology, leading to significant reductions in our fleet's environmental impact.

HIGHLIGHT STORIES

Click on the headline to read more about each specific project.



AMTRAK'S RESPONSE TO COVID-19

There is nothing more important to us than the safety of our customers and employees. As the crisis quickly affected our business operations, Amtrak leadership implemented measures to protect our workforce while maintaining service.

For our customers, we

- Made social distance accommodations onboard our trains and in our stations;
- Reduced crowds at departure boards by enabling Amtrak app users to receive gate and track information via push notification at select stations;
- Enhanced cleaning and disinfecting frequency and retrofitted protective barriers where necessary. Commonly used surfaces in stations such as door handles, counter tops, seating areas and Quik-Trak kiosks are frequently cleaned with EPA-registered disinfectants; and
- Improved our cleaning application methods by misting all cars and locomotives, with a focus on all touch points considered high risk for transmission.

Our employees are the key to our success. From the locomotive engineers and conductors who operate our trains, to the coach cleaners, mechanics, and maintenance of way workers who keep our equipment and tracks in working order, to the many employees who ensure our passengers arrive safely and comfortably to their destination—we cannot run this railroad without employees.

For our employees, we

- Moved office-based personnel to remote work locations for several months;
- Covered all COVID related medical expenses, from testing, to paid time off during recovery;
- Hosted weekly meditation sessions and mental health webcasts; and
- Launched the Amtrak Sews campaign which resulted in over 3,500 masks made by employees for employees.

We are doing all of this so that when you're ready to travel again, you can be confident in knowing that Amtrak will be ready for you. ■





CONNECTING WITH OUR FUTURE WORKFORCE

In 2019, Amtrak's University Recruiting program experienced tremendous success in hiring interns and co-ops in several locations throughout the United States, including Washington, DC; Philadelphia, PA; Wilmington, DE; New York, NY; Boston, MA; Chicago, IL and Los Angeles, CA.

Amtrak's interns and co-ops were hired at various academic levels, including graduate and undergraduate, with significant diversity in academic majors and educational disciplines. Amtrak's focus on sustainability, as demonstrated through our business practices and decisions, was of strong interest to Amtrak's interns and co-ops.

With this knowledge, University Recruiting incorporated several sustainability activities into the program in 2019. In May 2019, Amtrak's Sustainability team presented to students at the new hire orientation to kick off the summer internship program. In October 2019, University Recruiting partnered with Amtrak's Sustainability team to host a Lunch and Learn for the interns and co-ops in Philadelphia and Washington, DC. During this interactive event, students were excited to learn about Amtrak's commitment to advancing sustainability initiatives.

The University Recruiting team attended career fairs at universities and colleges to meet and hire students studying relevant majors, such as Sustainable Transportation, Supply Chain Management & Sustainability, and Environmental Studies to recruit future leaders with a passion for sustainability. Partnerships have also been developed with

student chapters of professional university organizations to hold information sessions and other activities on university campuses. This strategy strengthens Amtrak's reputation as a top employer for sustainability-focused talent. More than ever, environmental awareness and sustainability is truly a significant, relevant topic to our future leaders and workforce. ■

"What I like about working for a transportation company like Amtrak is that I have the opportunity to be more mindful of how I travel. Being able to reduce my carbon footprint is really important to me, especially because of global warming, and I like that Amtrak is dedicated to providing safe and reliable intercity travel."

Lauryn Edmonson, University Recruitment Marketing Intern at Amtrak, hired in January 2020



MILEPOST AH-86 SLOPE STABILIZATION

Amtrak's trains run through rural farmlands in Eastern Pennsylvania. While this provides bucolic views for passengers, the open rock formations require periodic assessment and maintenance to ensure safe and on time train operations.

Due to the time and costs associated with restoring and protecting our rail systems, slope stabilization projects like this one in Mt. Joy, PA are designed to last 75 years. Accounting for this investment and the need for reliable service through varying terrains and changing climate conditions, Engineering teams anchored adjacent rock formations and implemented erosion control solutions to prevent rockfall and mudslides.

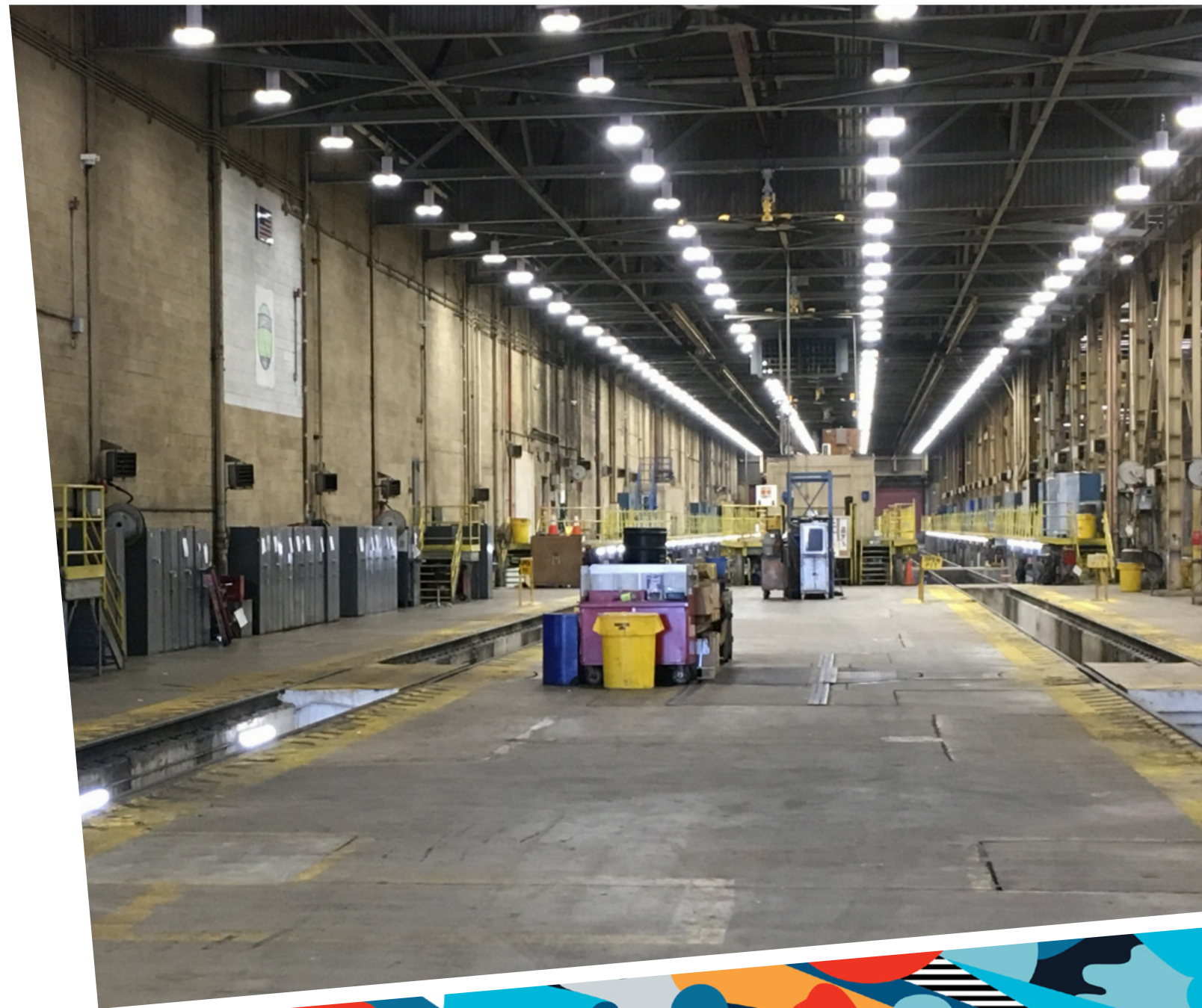
Heavy precipitation events are becoming increasingly frequent and proper drainage is essential to ensure the resiliency of Amtrak's infrastructure. We're continually investing in projects so that our operations can withstand the impacts of more severe and frequent weather events. This type of project is only one element of climate resilience work underway at Amtrak; we're monitoring the costs to implement and the effectiveness of various hardening solutions so we can plan for future investments. ■



BRIGHTER IDEAS

Amtrak's maintenance facilities are the “workhorses” of our operations. Each location has hundreds of employees with many buildings operating 24 hours a day. At these facilities, employees repair, clean, inspect, and prepare train consists for service. That means we need proper lighting for safe work environments –day and night.

Every year, Amtrak funds a capital energy efficiency program which allows our teams to upgrade lighting across facilities, stations, and offices. One of our largest maintenance facilities, in Washington, DC, had several buildings with older, inefficient fixtures. After replacing nearly 1,200 fixtures with dimmable LEDs, the facility's estimated annual savings offer a 42% reduction in kilowatt hours and \$250,000 in utility costs, based on current rates. Between the technology employed to dim down to 10% when not in use, improved lighting conditions, and an \$84,000 rebate from the DC Sustainable Energy Utility (DCSEU), we achieved environmental, social, and financial benefits from this well-planned and executed project. ■



RECYCLING AT BEAR CAR SHOPS

Despite a softer recycling market that makes it challenging to find downstream supply chains for recycled materials, our employees at Bear Car Shops in Delaware were undeterred.

Together, employees across all functions and shifts started recycling common materials in 2012. Over the next eight years, team members located vendors to recycle a wide range of materials, including carpet, light bulbs, plastics, stainless steel, and foam. By FY19, out of the 507 tons of material removed from Bear Car Shops, nearly 126 tons were recycled. That's a 25% recycling rate!

Management and supervisors worked hard to make the process as efficient as possible which increased the employee adoption rate. Their focus to increase the diversion rate at this single facility resulted in a replication of success across other Amtrak maintenance facilities. Positive recognition among peers, reducing their environmental impact by diverting more material away from landfills, and lowering operating costs changed the culture. They "Excelled Together" and continue to "Do the Right Thing", showcasing Amtrak Values every day. Employees now often seek new and innovative ways to manage their waste and to recycle as many materials as possible. ■



BEECH GROVE WASTEWATER TREATMENT BASIN

Rail yards are often large, sprawling industrial facilities. Keeping clean stormwater and groundwater away from industrial areas preserves local watersheds. One of Amtrak's Values is to Do the Right Thing which includes being a good neighbor. Our core values also include ensuring the safety of Amtrak's employees.

At one of our largest maintenance facilities in Beech Grove, IN, it was time to upgrade a deteriorated 60,000-gallon industrial wastewater treatment basin for improved system safety and functionality. Cracks in the sides had allowed clean groundwater to enter the basin, taxing the municipal sewer system to which it discharged. Stairs, catwalks and ladders were installed to enable accessibility and ensure the basin was compliant with worker safety requirements. Upgrading the Beech Grove wastewater treatment system made it more effective; it improved safe access to the system; and importantly, it removed a significant volume of flow to the city's sewer by reducing the amount of groundwater entering the basin. This project is an example of Amtrak's commitment to environmental stewardship and employee safety. ■

"Given the age of the existing basin, this was a challenging project; however, we were able to apply new products that can seal concrete under water and blocks to stabilize steep soil slopes to extend the life of the system."

Rich Mohlenhoff, P.E., Environmental Program Manager





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Clockwise from left: N. Farthing,
Environmental Specialist, Years
of service: 2; L. Fotiou, Lead
Environmental Specialist, Years of
service: 7; J. Gross, Superintendent,
Years of service: 12.

Photo Credit: Pierre Edwards

