



# 2021 Sustainability Progress Report

*Building a better tomorrow* AUGUST 2022

Link



# Sustainability

## Sustainability at Sound Transit

Sustainability is at the core of our mission: connecting more people to more places to make life better and create equitable opportunities for all. Investing in transit builds a better future by supporting a clean environment, connecting communities and fostering vibrant economies. Despite the challenges of operating during a pandemic, Sound Transit supported regional sustainability by continuing to serve the riders who depend on transit the most.

Sustainability helps implement our mission by:

- Providing affordable, safe regional transportation options.
- Promoting stewardship that conserves the planet's natural environment.
- Supporting community prosperity by helping residents and businesses save time and money.



Sound Transit uses a robust Environment and Sustainability Management System to guide our environmental and sustainability initiatives. The system holds the agency accountable for controlling potential environmental impacts, achieving annual environmental and sustainability targets, and demonstrating continual improvement in performance.

Since 2007, Sound Transit's ESMS has maintained international ISO 14001 certification for accountability in controlling environmental impacts, maintaining environmental compliance and demonstrating enhanced sustainability performance.

**Sustainable Business Practices and strategies will be integrated throughout the Sound Transit organization, including planning, designing, constructing, operating existing and new transit systems and facilities. Executive Order No. 1, 2007**

## About this report

This year's Annual Progress Report summarizes our efforts to achieve long- and short-term environmental and sustainability goals, and it highlights the ongoing challenges of providing service while continuing to recover from a pandemic.

Analysis and performance measures in this report focus on how Sound Transit uses its resources—including through capital project planning and design—and how we operate our services. (This report does not include resource use from the agency's construction activities.)

The pandemic continues to dramatically alter travel patterns throughout the region, as clearly reflected in annual ridership and resource use data. While 2020 data illustrated an abrupt break from the agency's improving efficiency and sustainability performance over the past five plus years, 2021 data begins to show the story of the agency's ongoing recovery from the pandemic.

The data in this report focuses on the metrics set by Sound Transit's Sustainability Plan, which established short-term goals for the years 2019 through 2024 and extended the agency's long-term goals to 2050. The year 2018 serves as the baseline for the agency's short-term goals and key performance indicators.

These metrics reflect multiple reporting frameworks and standards, including those used by other transit agencies and local governments, as well as the American Public Transportation Association's Sustainability Commitment and The Climate Registry. Sound Transit's 2019 and 2020 greenhouse gas inventories have received third party verification to be compliant with The Climate Registry General Reporting Protocol.





# Transit is sustainable

Sound Transit's system expansion is essential to Central Puget Sound's sustainable future. We promote sustainability by developing and operating regional transit and fostering smart growth. The agency's focus on rebounding ridership to pre-pandemic levels is also an integral component of our sustainability goals.

System expansion will help more people travel affordably and reliably on environmentally friendly buses and trains throughout the region's growing communities. Expanding mass transit services benefits everyone by offering a less carbon-intensive means of travel, which decreases air and water pollution. Plus, transit also:



**SAVES TIME**



**SAVES FUEL**



**SAVES MONEY**

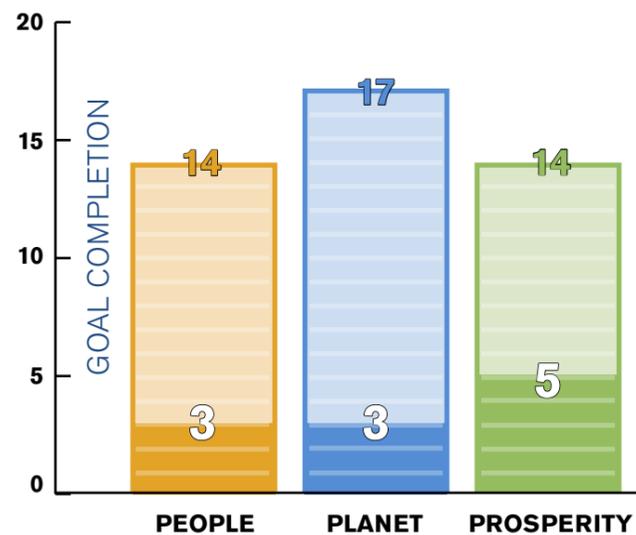


**IMPROVES AIR QUALITY**

## Progress toward the Sustainability Plan

This report includes both data on Sound Transit's operational performance from a resource use perspective, as well as progress on short-term goals in the Sustainability Plan. As of 2021, Sound Transit has completed eleven of the Plan's 45 short-term goals, and we're on track to complete the majority by 2024.

# TOTAL  # COMPLETED



## Key accomplishments

We achieved a number of important sustainability accomplishments over the last year that leverage social, environmental and financial benefits for the region's future. In 2021, Sound Transit:

- Continued to recover ridership levels as three new Link light rail stations opened and COVID-19 pandemic restrictions lifted. Ridership rebounded 12% in 2021.
- Diverted nearly 122,000 tons of greenhouse gas emissions—nearly 2.5 times the emissions produced—despite continued low ridership due to the pandemic.
- Planned for the agency's first battery electric bus service on the SR 522 bus rapid transit corridor.
- Joined the Federal Transit Administration's Healthy Planet Challenge.
- Launched the fare ambassador pilot program to ensure equitable fare enforcement.
- Saved more than \$700K from 35 new and existing sustainability and resource efficiency projects.

## Continual improvement

Sound Transit is committed to improving sustainability performance year after year. In the next year, we'll focus our sustainability efforts on:

- Continuing fleet decarbonization efforts by drafting an FTA-compliant Zero Emission Fleet Transition Plan for all Sound Transit bus services.
- Updating sustainable design requirements for system expansion projects with a focus on carbon reduction and resource conservation.
- Continuing to support the implementation of the Racial Equity Toolkit.
- Determining how to prioritize sustainability in complex decision-making processes.
- Preparing to participate in the Washington State Clean Fuel Standard, which is expected to generate agency revenue from operating carbon-free transportation.

# People

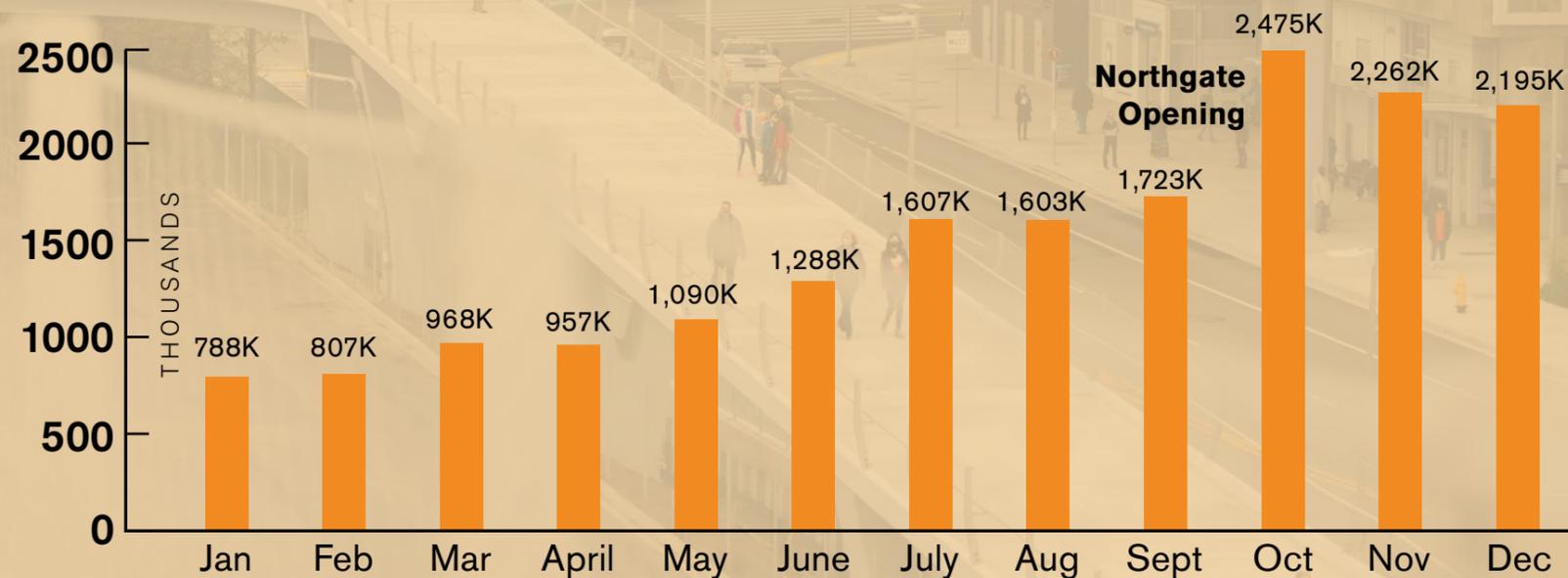
Helping people move freely, affordably and healthily by providing regional transit service

## Recovering ridership



Sound Transit remains committed to providing affordable, reliable service to ensure residents can access the places they live, work and play. In 2021, ridership reflected pandemic recovery trends by closely mirroring the rise and fall of COVID-19 variants. More people took transit month over month, with ridership across all services increasing more than 200% between January and October's opening of the Northgate Link light rail extension. The 4.3-mile extension added three new stations to the system, at Northgate, Roosevelt and U District, and further enabled access to community resources such as North Seattle Community College, the Kraken Community Iceplex and many other businesses and medical facilities. With the rise of the COVID-19 Omicron variant at the end of the year, ridership dipped but still remained more than twice as high as the beginning of the year.

**More people took transit month over month, with ridership across all services increasing more than 200% between January and October's opening of the Northgate Link light rail extension.**



## Key Performance Indicators

**Dollars contributed to affordable housing revolving loan fund:**  
\$4 million

**Staff trained in equity and inclusion:**  
88% of staff completed Equal Employment Opportunity Training.  
59% of staff completed Implicit Bias Training.  
20% of staff completed Inclusion Training.  
10% of staff attended Organizational Equity Workshop.

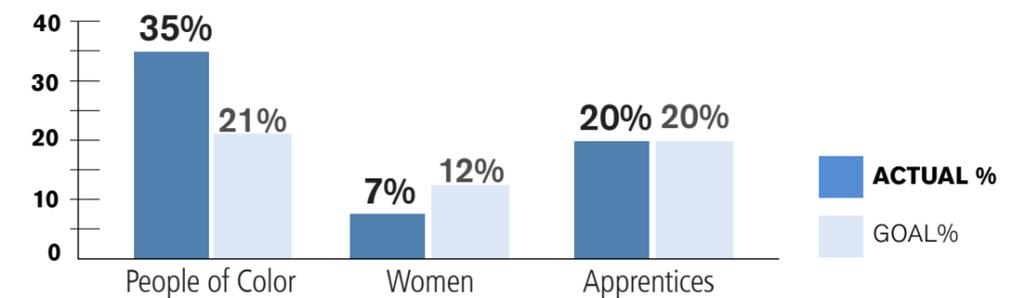
**Hours worked on ST job sites:**  
35% by people of color; 7% by women; 20% by apprentices.

**Staff trained to sustainable professional accreditations:**  
49 Envision Sustainability Professionals.  
18 LEED Accredited Professionals.  
12 other sustainability certifications.

## Employing Puget Sound residents

Sound Transit's system expansion projects bring construction employment opportunities to communities across the Puget Sound region and we work to promote opportunities for apprentices, women and people of color in the construction industry.

In 2021, Sound Transit's construction projects directly employed more than 9,861 people working 4.3 million hours and earning \$214 million in wages.



# People

Helping people move freely, affordably and healthily by providing regional transit service

## LONG-TERM GOALS:

### Social equity addressed and implemented as an agency value

#### Accelerating affordable housing

Sound Transit is committed to supporting affordable housing development. In 2021, Amazon and Sound Transit announced a partnership to accelerate the creation of up to 1,200 new affordable housing units on our surplus properties near light rail stations across the region. Amazon committed \$100 million in funding to spur developers to expedite these critical projects.



**“Housing and transit are intertwined, and this latest commitment will help ensure families from all income levels will benefit from the build out of mass transit—greater affordability and equitable economic opportunity, easy access to daily needs, and the environmental benefits of reduced traffic congestion and car reliance.”**

*Catherine Bell, Head of Community Development at Amazon.*

### All staff champion sustainability

#### Enhancing the Passenger Experience

Sound Transit's Passenger Experience program worked across the agency to develop Station Experience Design Guidelines for Link light rail stations and the surrounding environment to better support transit passengers. The new agency design guidance streamlines requirements for enhancing the passenger experience by providing consistent, efficient and supportive designs for stations, station access, integration with surrounding neighborhoods and equitable transit-oriented development.



#### Equitably collecting fares

Furthering the agency's commitment to equitable fare collection processes, Sound Transit launched the Fare Ambassador Pilot Program in 2021. The initiative replaces fare enforcement officers with Fare Ambassadors. Fare Ambassadors wear bright yellow caps and carry yellow messenger bags to be easily recognizable, and they focus on passenger education and customer service rather than enforcement.

The program also expands access to ORCA LIFT fares for low-income riders and partners with King County Metro to provide subsidized annual passes to qualified riders. “Fare revenues are critical for operating a fast-expanding regional transit system that increases mobility and opportunities across the region, especially for populations that depend most on transit,” said former Sound Transit CEO Peter Rogoff. “It is critical that we foster a welcoming environment for every rider and ensure that transit is accessible and affordable for all.”

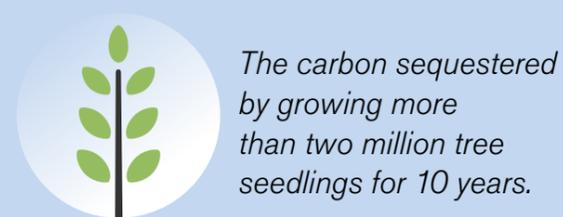
# Planet

Promoting stewardship to conserve the planet's natural environment

## Increasing environmental benefits

Sound Transit and our partner services provide tangible environmental benefits for the region's growing communities. When residents choose transit instead of driving alone, they reduce air and water pollution, among other benefits.

Passengers taking Sound Transit avoided nearly 122,000 tons of greenhouse gas emissions annually. This represents a 3% increase in avoided emissions since 2020, illustrating a gradual ridership rebound as the region recovers from the COVID-19 pandemic. In 2021, Sound Transit avoided nearly 2.5 times the amount of emissions the agency produced, compared to nearly six times the emissions produced in 2019, prior to the pandemic. The avoided emissions are equivalent to:



## Key Performance Indicators

### Greenhouse gas emissions

27% reduction

### Criteria air pollutants

Particulate Matter: 16% decrease | Volatile Organic Compounds: 3% increase

NOx: 2% decrease | CO: 0% decrease | Sox: 13% decrease

### kWh renewable energy production

153,511 kWh produced in 2021

### Energy used in facilities built before 2018

0% reduction

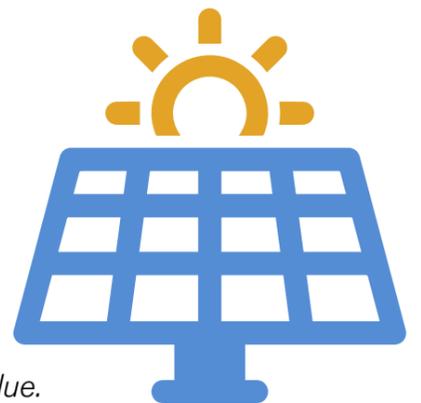
### Number of fineable environmental compliance violations

0 violations in 2021

### Agency water use

45% increase

Key performance indicators' percent changes are total (not normalized). Percent changes are based on a 2018 baseline value.



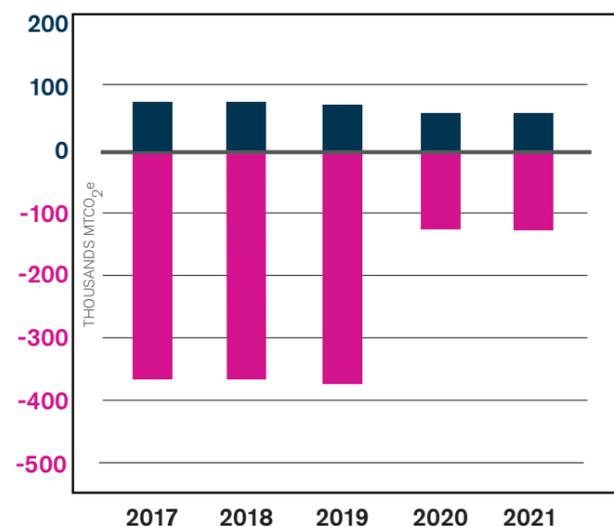
# 93%

of Sound Transit's electricity comes from carbon free sources

### Greenhouse gas emissions

Every year the benefits of Sound Transit's service far exceeds the emissions associated with operating that service.

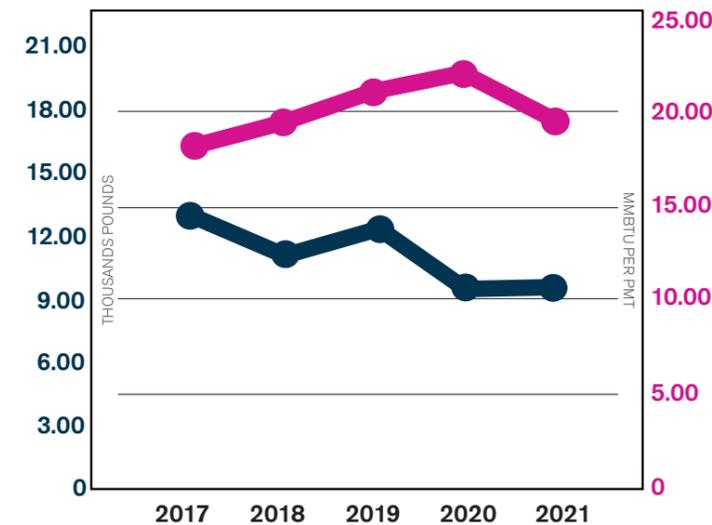
■ Agency emissions from operations  
■ Regional emissions avoided when residents take transit



### Reducing air pollution

Updates to Sounder engines and phasing out older ST Express diesel buses have reduced Sound Transit's air pollution.

■ PM10  
■ Carbon monoxide



# Planet

Promoting stewardship to conserve the planet's natural environment

## LONG-TERM GOALS:

### Achieve carbon-free operations

#### Electrifying fleets and facilities

We've made significant strides toward our 2030 goal of carbon-free electricity use. Notable 2021 accomplishments included:

- Renovating Union Station to become a carbon-free facility. This includes plans for a new high-efficiency electric boiler to replace the natural gas boiler, powered by Seattle City Light's carbon free electricity.
- Installing non-revenue fleet electric vehicle charging units at the Northgate and Union Station garages. These charging stations will allow the non-revenue fleet to replace gas-powered vehicles with fully electric vehicles.
- Launching the second Green Direct agreement with Puget Sound Energy. This power purchase agreement, in combination with the 2020 agreement, allowed Sound Transit to achieve 93% carbon-free electricity by purchasing 100% renewable electricity from Puget Sound Energy.



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### Enhance ecosystem functions

#### Minimizing our critical habitat impacts

Sound Transit strives to avoid and minimize impacts to wetlands, streams and other critical habitat areas. If impacts are unavoidable, we mitigate in a number of ways, including creating new wetlands, relocating streams, and enhancing existing degraded habitats. These mitigation approaches are all implemented concurrent with the project impacts.

In 2021, Sound Transit staff evaluated the feasibility of using "advance mitigation" on future projects in the South Corridor, where options to compensate for unavoidable impacts to wetlands and streams are limited. Advance mitigation is planned, designed and constructed several years before a project's environmental impacts will begin. The benefits of advance mitigation include potential cost savings, decreased risk of mitigation site failure, and greater ecological benefits that align with watershed priorities.

#### Partnering for trees

In 2021, Sound Transit, the City of Shoreline and King Conservation District announced the Trees for Rail partnership to re-green the Lynnwood Link light rail corridor with native trees and shrubs. This first-of-its-kind partnership utilized the KCD's Urban Tree Canopy program to establish native vegetation and tree canopy to reduce the construction impact on adjacent homeowners. The City of Shoreline requires landscape buffers between the light rail corridor and residential neighborhoods, but in some locations there was not enough space on Sound Transit or city property for plantings. Shoreline, Sound Transit and KCD worked together to develop a plan to plant trees and shrubs at nearby homes. "This program builds on our existing commitment to plant thousands of trees along the Lynnwood Link alignment," said former Sound Transit CEO Peter Rogoff. "We think teaming up with the City of Shoreline and bringing the expertise of KCD to homeowners in these areas will be a big win for residents and the environment."



# Prosperity

Support local economic prosperity by enabling residents and businesses to save time and money

## Savings taxpayer dollars

Sound Transit invests in sustainability—and sustainability pays back. Over the past 10 years, we’ve invested in many projects that save natural resources and save the agency money. These projects include operational improvements like using electric wayside power units on Sounder trains to reduce the idling of diesel engines and upgrading inefficient lighting to LEDs. This sample of the agency’s resource conservation projects saved Sound Transit more than \$700,000 in 2021 alone, and nearly \$6.3 million over project lifetimes.

### Savings:



	2021 Savings	Savings to date
Fleet upgrade projects	\$406,871	\$4,738,012
Irrigation projects	\$53,416	\$328,386
Facilities upgrade projects	\$28,397	\$207,608
Solar installations	\$13,931	\$36,563
LED lighting upgrade projects	\$200,510	\$961,799

More details on sustainability cost savings are located in Appendix B.

## Key Performance Indicators

### Staff trained in emergency preparedness

1,411 staff trained in COVID-19 Work Site Safety | 25 staff attended Safety Lunch and Learns  
449 staff trained in Non-Revenue Vehicle Safe Driving | 17 staff certified in First Aid/CPR/AED

### Projects that include Climate Change Vulnerability Assessments

100% of eligible projects

### Waste diverted

33%

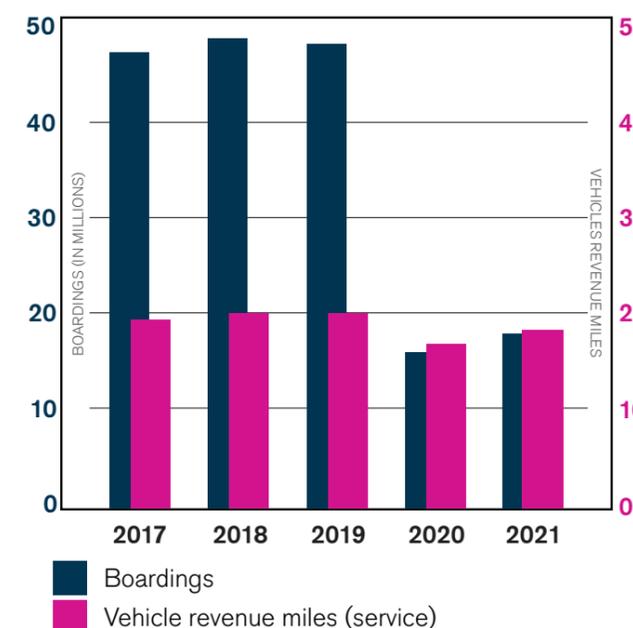
### Percentage of and increase in dollar value of new procurements that include green methods and features

44% of procurements included green methods | 42% decrease in dollar value from 2018, 204% increase in dollar value from 2020

Key performance indicators' percent changes are total (not normalized)

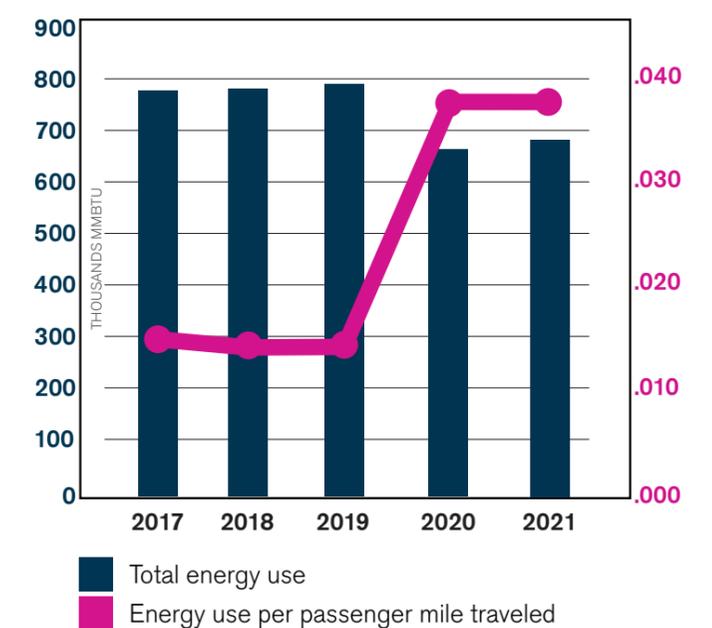
### Boardings and service

Sound Transit carried more passengers per service levels every year, until the disruption of the COVID-19 pandemic



### Revenue fleet energy use

All services services continued to operate efficiently by carrying passengers further while using fuel more efficiently, until the disruption of the COVID-19 pandemic.



# Prosperity

Support local economic prosperity by enabling residents and businesses to save time and money

## LONG-TERM GOAL:

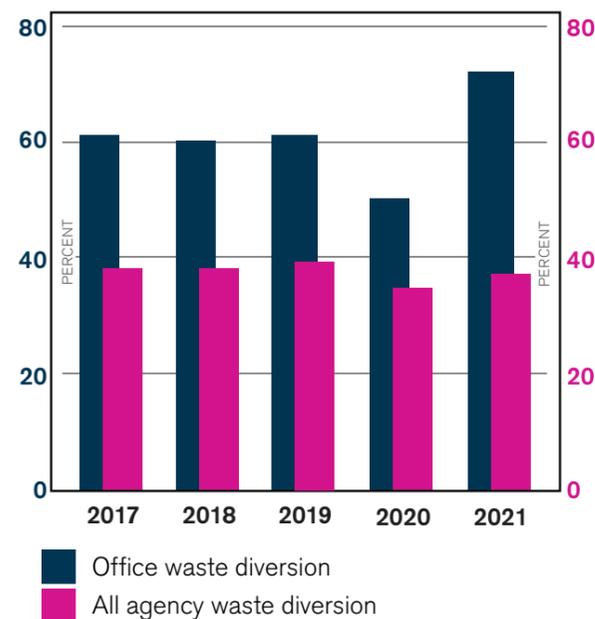
### Build resilience to climate change and natural or manmade disasters

#### Evaluating climate change impacts

In 2021, the agency drafted Climate Vulnerability Guidelines to create a uniform process for evaluating the climate vulnerability of proposed Link light rail capital projects. The guidelines provide standardized guidance for Sound Transit and consultant staff to assess how and where current and future climate change impacts may impact the functioning and longevity of project infrastructure and service delivery. The guidance focuses on heat, localized flooding and sea level rise and also includes scientific data from peer-reviewed literature on the scale of these expected impacts.

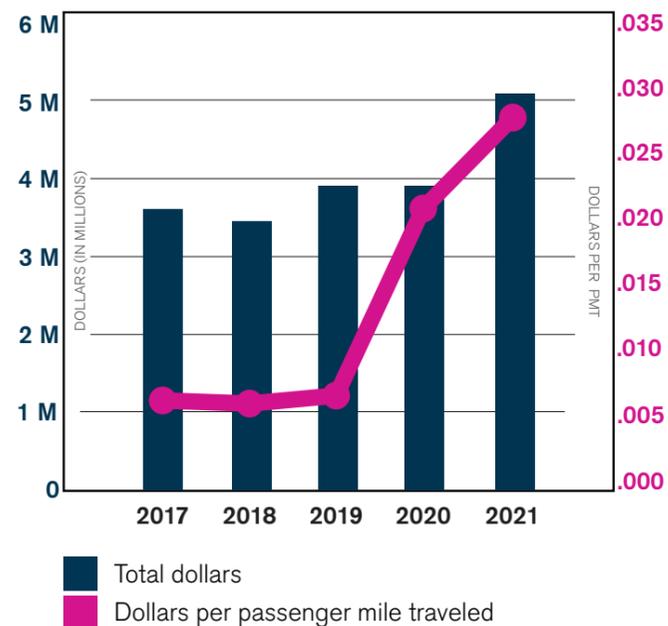
#### Waste diversion

Sound Transit continues to maintain a high waste diversion rate in our office buildings and is exploring ways to increase waste diversion from service operations.



#### Utility costs

Sound Transit is a growing agency, but has been able to keep costs per level of service relatively steady, until the disruption of the COVID-19 pandemic.



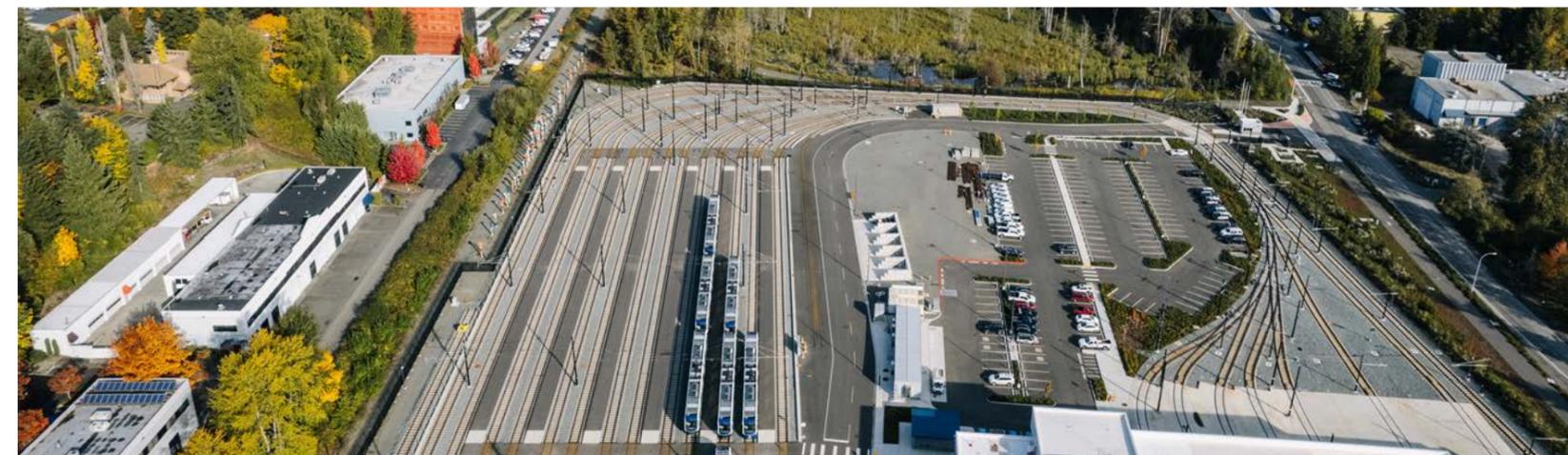
### Maximize operational efficiency

#### Achieving LEED Gold

The Operations and Maintenance Facility East is the first facility of its kind at Sound Transit to receive LEED Gold for New Construction certification. Earning LEED Gold demonstrates our ongoing commitment to building sustainable and resource-efficient buildings that provide a healthy working environment, support environmental best practices, and save operating costs over the entire life of the facility.

The state-of-the-art facility will accommodate the service, maintenance, storage and deployment of 96 light rail vehicles. Key sustainability features include:

- Advanced energy meters and controls to ensure energy efficiency over time.
- A 100-kw rooftop solar array to offset energy use.
- Electric vehicle chargers for NRV fleet.
- More than 95% construction waste diversion from landfills.
- Irrigation water use reductions of 64% with drought tolerant plants and drip irrigation systems.
- Interior water reduction of more than 40% through use of water efficient fixtures.
- Energy efficient outdoor light fixtures that minimize neighborhood light pollution.
- Forest Stewardship Council-certified wood throughout the project.



# 2021 Sustainability Targets

## Sound Transit Year in Review

### People

- Evaluate alternatives for delivering parking investments in the Everett Link Extension corridor.\*
- Evaluate affordable homeownership potential on at least one surplus property site.\*
- Finalize revolving loan fund business plan.
- Refine sustainability guidelines and goals for transit-oriented development projects.
- Develop and initiate implementation of an agency anti-racist strategy.
- Create implementation plans for the Racial Equity Tool, Equitable Engagement Tool, and Equity and Inclusion Policy.
- Launch three training initiatives to address implicit bias, racial equity and anti-racism.
- Enhance the technical assistance program to better serve veteran and disability-owned businesses.
- Implement a methodology for applying equity criteria in alternatives and environmental evaluation processes for all capital projects.\*
- Initiate new construction apprenticeship programs in Snohomish and Pierce Counties.
- Award and implement first round of System Access Funds.\*
- Identify key Operations Facilities staff to pursue sustainability professional accreditations.
- Develop workplan to establish internal agency green team.
- Implement work plan to create standards for a hybrid workforce of office-based, job site and teleworking staff.
- Finalize Station Experience Design Manual to guide and standardize passenger experience.\*
- Train all Passenger Experience staff on using personas to inform decision making and employ the passenger persona approach to project development and service planning.

\* These partially completed targets are on track for finalization in 2022

# 2021 Sustainability Targets

Sound Transit Year in Review

## Planet

- Renovate Union Station to operate as a carbon-free facility.\*
- Launch regional, interagency battery electric bus working group.
- Install non-revenue fleet electric vehicle charging at Northgate Station and Union Station garages.
- Revise contract specifications and project requirements for construction stormwater management, treatment and discharge.
- Reduce the carbon intensity of electricity by launching Phase 2 of PSE Green Direct Program.
- Evaluate carbon-free electricity purchasing options with utility partners.
- Document procedures for using the environmental commitment tracking and reporting system.\*

- Launch Efficiency and Sustainability Program's internal grant opportunities.
- Update design criteria by determining applicability of embodied carbon in materials, electric vehicle and solar power readiness and zero carbon green building certifications.\*
- Update Migratory Bird Treaty Act design specifications, project requirements and plans.\*
- Require 85% of eligible construction equipment to meet EPA's highest standards.
- Evaluate the feasibility of an advanced mitigation approach for wetlands and streams using an ST3 project as a case study.
- Define customized options for performance-oriented sustainability goals on capital projects.

## Prosperity

- Develop guidelines for conducting climate vulnerability assessments for capital projects.
- Integrate total cost of ownership and budget information into 90% of new IT and non-expansion project intake processes.\*
- Conduct gap assessment of agency capabilities against international standards for safety and asset management.
- Align reporting between agency's Sustainability and Strategic Plans.
- Improve waste collection stormwater protection at Operations and Maintenance Facility Central.
- Initiate streamlining of IT onboarding process through the launch of the Workforce Enablement Program.
- Develop and require the use of standard sustainability language for Operations and Maintenance agreements.
- Include sustainability evaluation criteria in at least 75% of informal Request for Quotes with Qualifications (less than \$250,000)

\* These partially completed targets are on track for finalization in 2022.

# 2022 Environmental and Sustainability Targets

Supporting people, planet and prosperity

## People

- Create potential delivery approaches for joint-development projects integrated with new park and-ride facilities.
- Support the opening of more than 600 affordable rental housing units.
- Finalize sustainability guidelines for transit-oriented development projects.
- Begin anti-racist strategy work plan implementation.
- Launch the Racial Equity Toolkit and Equitable Engagement Tool implementation plan.
- Host five anti-racism workshop cohorts for ST employees.
- Enhance training and technical opportunities to prepare DBEs to lead ST contracts.
- Define options for implementing flexible access improvements for delayed parking facilities.
- Expand the permit parking program's authority to include daily permits.
- Establish agencywide sustainability networking and educational forum for all staff.
- Identify key DECM and PSO staff to pursue sustainability professional accreditations.
- Refine hybrid workforce standards and conduct trainings on hybrid best practices.
- Launch self-service resources for IT service desk.
- Support retirement readiness program.
- Launch Passenger Information Management System.
- Set up job-description platform with revised ADA requirements.

*\* These partially completed targets are on track for finalization in 2022*

# 2022 Environmental and Sustainability Targets

Supporting people, planet and prosperity

## Planet

- Propose carbon-free operational design standards for new facilities.
- Draft a roadmap for achieving carbon-free operations for facilities and fleets by 2050.
- Develop zero-emissions implementation plan for agency bus fleets.
- Evaluate the potential to use renewable diesel fuel in agency bus fleets.
- Increase green building standard to LEED Gold for new facilities.
- Set low-carbon concrete requirements for three new facilities.
- Refine the cataloguing of ecosystem services to be evaluated for ST mitigation sites.
- Survey SBE/DBE contractors' equipment inventory to determine air quality emissions.
- Evaluate two new green building standards.
- Clarify and document Tribal engagement protocols for capital projects.

## Prosperity

- Initiate Snohomish County Threat Hazard Identification Risk Analysis.
- Revamp staff emergency preparedness plans for hybrid workforce.
- Standardize climate vulnerability assessment implementation for capital projects.
- Incorporate sustainability into non-system expansion projects by including screening criteria in the Portfolio Review Board and department-level pre-screening processes, as appropriate.
- Update and approve Asset Management policy.
- Prioritize and address high-risk items for safety management system ISO certification.
- Implement centralized hazard database to streamline safety and security hazard management.
- Draft operating plans to support LEED EBOM certification at Union Station.
- Expand the Green Procurement program to include all staff.
- Embed sustainability into the evaluation criteria for all Architecture and Engineering and Qualifications-Based Construction procurements.
- Develop and implement the Procurement & Contracts Division electronic contract library for all agency access.

*\* These partially completed targets are on track for finalization in 2022*



For more information contact [esms@soundtransit.org](mailto:esms@soundtransit.org)  
or visit [soundtransit.org/get-to-know-us/who-we-are/environment-sustainability](https://www.soundtransit.org/get-to-know-us/who-we-are/environment-sustainability)

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