



# Calendar Year 2024 Annual Report: **Sustainability**

Let's go.



# General Manager Message



What does sustainability mean to you? To me, it means forward thinking.

As the General Manager of BART, I feel a profound responsibility to the generations that follow me. They, too, deserve a world that provides them with the resources they need to thrive. The concept of sustainability should serve as a reminder that we are on this planet only briefly, yet the actions we take today will have cascading effects into the future.

Public transportation has long been a forward-thinking industry. When BART opened in 1972, some called it a Space Age system because of its use of advanced technology like automatic train control, a focus on “pampering the passenger,” and the futuristic aesthetic.

Today, more than fifty years later, I can’t speak of the future without mentioning the financial challenges BART has faced in the post-pandemic years. The Bay Area has the highest rate of remote work in the nation, and it has decimated our transit ridership and consequently, the fare revenue we rely on to keep trains running. BART’s longtime funding model is outdated, unjust, and simply unviable.

There has long been underinvestment in transit operations, even as traffic increases and toxic emissions from automobiles choke our ecosystems and color our famously blue skies gray with smog. Climate change continues to rage its ugly course. We must not look away. Taking BART even once a month is a small gift you can give to the environment and your community.

Despite the financial challenges that lie ahead, BART is approaching the coming decades with optimism and excitement. We’re laying the groundwork for the future of our system and region on multiple fronts. To cite some examples from 2024:

- 86% of our contracted electricity was greenhouse gas free, utilizing renewable energy such as wind, solar, and hydroelectric. On average, a passenger saves 25.1 pounds of CO2 emissions with each ride when they choose BART over driving.

- We continued our focus on enhancing the customer experience by modernizing and installing new escalators that are constructed of sustainable materials and use an automated lubrication system optimized for efficiency.
- Our installation of energy-efficient LED lighting at stations and parking lots is ongoing. This work includes fixture specifications, smart controls, and daylighting and is saving us money on energy and efficiency costs. You can see the benefits firsthand; our system looks brighter, safer, and more welcoming than ever.
- The Fruitvale Transit Village Transit-Oriented Development was completed at Fruitvale Station, offering 181 affordable housing units in a vibrant community where residents can live, work, and shop. The property was previously a parking lot.
- BART was awarded more than \$24 million in funds to expand EV charging at stations, encouraging drivers to choose electric vehicles.
- We made BART accessible to more people by increasing the discount for Clipper START, our means-based fare program, from 20% to 50%. By incentivizing people to take transit, we’re keeping cars off the road and making lives easier.

We also incorporated sustainability into our rider engagement strategy. In the summer of 2024, BART gave thousands of retired BART paper tickets destined for the shredder to local fashion students. The students created more than thirty outfits incorporating the tickets, which were displayed during a full-blown fashion show at Rockridge Station that drew hundreds. This project is a great example of creative thinking that gets people excited about transit and sustainability.

At BART, we are all public servants, a duty we do not take lightly. In 2024, our employees collaborated to create the Green Team to organize volunteer and educational events every quarter, including tree plantings and shore cleanups. Our employees take pride in public service, and that includes serving the community outside of the workplace.

To end on the theme of the future, I want to draw your attention to the new Role in the Region Report we published in 2024. The enlightening study explores BART’s economic, social, and environmental importance to the region, while outlining a stark vision of a Bay Area without BART. The Role in the Region Report makes one point exceedingly clear: We can’t afford to lose transit.

**Robert M. Powers**  
General Manager  
San Francisco Bay Area Rapid Transit District

# BART Calendar Year 2024 Sustainability Highlights

## 86%

of BART's contracted  
electric supply was  
greenhouse gas-free



Final Car of the original  
**Fleet of the Future**  
contract delivered



## 25.1

lbs. of CO<sub>2</sub>e  
emissions avoided per average  
round trip



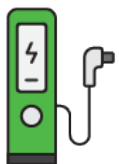
Earthquake Safety  
Program completed



## 179

affordable housing units built at  
Fruitvale Station

Purchased first nine  
electric trucks



## \$24,126,560

in funds awarded for EV charging  
expansion



More than 150,000 retired paper tickets  
given to fashion design students from four  
local schools who repurposed them into  
garments for a special fashion show

# Table of Contents

Introduction..... page 2

Case Study 1: BART’s Role in the Region Report ..... page 3

Case Study 2: Earthquake Safety Program Completed..... page 4

Case Study 3: BART Green Team: Tree Planting Event & Coastal Cleanup ..... page 5

Case Study 4: BART Focuses on Wayfinding Amid Other Customer Access Updates ..... page 6

Case Study 5: BART Awarded Grants for Electric Vehicle Charging Expansion..... page 8

Case Study 6: Transit Oriented Development Project Completed at Fruitvale Station ..... page 9

Performance Metrics ..... page 10

Appendix ..... page 13



# Introduction

The *2024 Annual Report: Sustainability* communicates progress in BART's sustainability program. The purpose of the report is to provide transparency to the public and ensure BART's commitment to the goals of the program. The sustainability program aims to support a sustainable, healthy, and vibrant Bay Area through actions and investments that create a less car-dependent region and a greener transportation system.

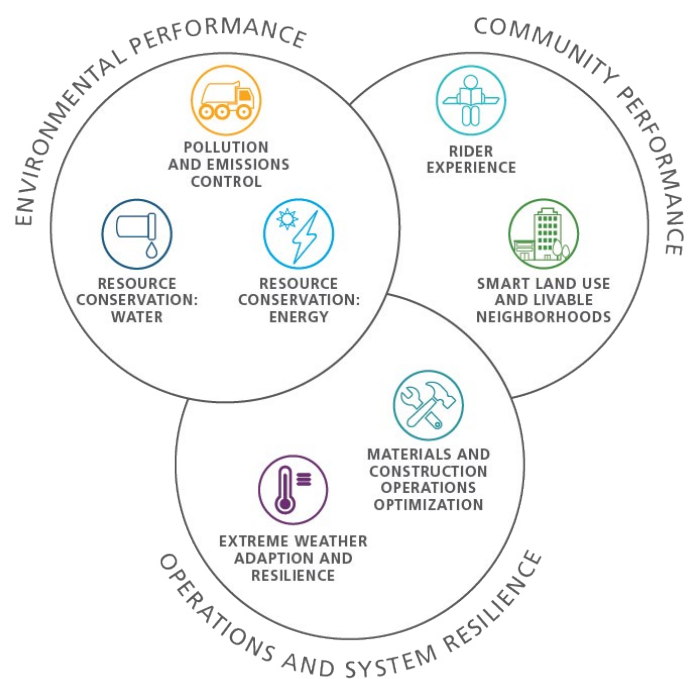
## Report Format

The report contains a collection of case studies that highlight BART's achievements in sustainability for the reporting period and a summary of BART's sustainability performance metrics. In the Appendix, there are additional details about energy use, greenhouse gas emissions, water use and waste as well as status updates on each of the 120 action items identified in BART's 2015–2025 Sustainability Action Plan.

## About the Sustainability Program

In concert with the District's Sustainability Policy, adopted in 2017, BART published a 10-year Sustainability Action Plan that details the targets, current progress, and future actions to integrate sustainability as a standard practice throughout BART. The plan was created with input from numerous BART departments and in coordination with broader regional and American Public Transportation Association (APTA) sustainability goals. The detailed roadmap includes performance metrics to measure outcomes of actions that support BART's commitment to provide safe, affordable, equitable, and environmentally friendly transit. BART's energy, greenhouse gas emissions, and water targets were derived from Business as Usual (BAU) scenarios that utilize the baseline values in 2015 and planned growth in the number of stations, planned extensions to the existing lines, and expected improvements to the system. The committed and aspirational targets represent percentage reductions from the projected BAU values in 2025.

## 7 Sustainability Categories



The Sustainability Action Plan contains seven categories representing different aspects of BART's sustainability program. Each of the case studies, metrics, and actions contained in this report relate to goals identified in the Sustainability Action Plan for one or more of the categories.

The policy and action plan may be found at <https://www.bart.gov/sustainability/policies>.

## Reporting Period

The report focuses on efforts from the 2024 calendar year (i.e., January 1 to December 31).



# BART's Role in the Region Report

BART published a new [Role in the Region Report](#) in 2024, which uses data analysis and personal stories to explore how the system is deeply intertwined with the Bay Area's sustainability, climate goals, travel network, economy, housing, health impacts, and affordability. The study was commissioned to underscore BART's importance to the region given the short and long-term changes to travel patterns caused by the COVID-19 pandemic and the ensuing financial challenges that lie ahead.

BART had published a prior Role in the Region report in 2016. At that time, many commuters squeezed their way into crowded BART trains during rush hour, primarily going to and from downtown San Francisco. But the onset and aftermath of the COVID-19 pandemic has changed how and where people in the Bay Area work. Seeking more space and cheaper housing prices, many residents moved away from the San Francisco and South Bay urban cores to outer areas not as well served by BART. Additionally, the advent of increased remote work, whether fully remote or hybrid, has reduced the amount of commuting on BART. For example, although the number of unique BART numbers is currently at around 72% of pre-pandemic numbers, overall trips are only at 43% of pre-pandemic figures as of 2024. This ridership decline has had major implications for BART's financial outlook.

The new Role in the Region report helps contextualize what has changed for



*People of all stripes still need a reliable, sustainable transit system to get where they need to go.*

BART since the prior study 8 years ago, and most importantly, what has not changed: people of all stripes still need a reliable, sustainable transit system to get where they need to go.

Speaking on why leading this effort was important for his team, Daniel Wu, a Principal Planner in BART's Strategic & Planning Policy Group, said, "In addition to showing the quantitative analysis, we felt that if we could provide stories about how BART impacts people's lives qualitatively, it would show how compelling BART is as the core of the regional transit system. This will hopefully encourage more people to consider taking BART in the future and understand our crucial role."

The team analyzed data to demonstrate BART's impact on affordability, housing, highway congestion, transportation access for vulnerable populations, job growth, climate, health, and safety in the Bay Area. In each of these categories, BART is shown to positively contribute

to regional goals that make the Bay Area more livable and connected. An additional section of the report imagines the impact that reduced BART service would have if financial difficulties force BART to make drastic cuts in the near future. Finally, the report includes excerpts from BART Connects, which was an outreach effort that involved interviewing real people who ride and rely on BART and illustrating how the system impacts their lives.

Although there have been many changes to how BART operates over the years and more will likely come as BART continues to adapt to our riders' needs. Wu explained that the Role in the Region report summarizes how BART should continue to be a backbone of transportation for the Bay Area.

"There are many challenges facing BART in the coming years, but for me this project strengthened my understanding of BART as a critical resource in the region."



# Earthquake Safety Program Completed

In 2024, BART completed its Earthquake Safety Program (ESP), which retrofitted vulnerable high traffic portions of the original system to make it safer in a large quake. As a critical lifeline to the region, BART cannot afford to sustain damage or recover slowly from potentially catastrophic events like earthquakes. Completion of the ESP makes BART more resilient and compliant with current standards for seismic performance.

The US Geologic Survey (USGS) predicts the next big earthquake in the Bay Area will likely occur in the next 30 years. The BART system crosses or is near many fault lines, so the epicenter of the next major earthquake could be situated close to the system. The original BART system was designed to meet the 1960 building standards, which have since evolved. After the 1989 Loma Prieta earthquake, BART was running again in less than 12 hours and was instrumental in keeping the Bay moving when the Bay Bridge was closed for over a month. BART can use lessons learned from the ESP to build resilience against other potential natural disasters.

The ESP was funded in part by Measure AA, a \$980 million general obligation BART bond approved by voters in 2004. The program focused on upgrading portions of the original system not only for life safety but also to ensure that BART can return to operation shortly after a



*The scope of the Earthquake Safety Program included retrofitting the system's tracks in places like the Transbay Tube.*

major earthquake. ESP included vulnerability studies, design, and construction, originally just focusing on the core system. The program leveraged budget-savings to expand and retrofit additional parts of the system. BART extensions built in the 1990s or later were not included since they were designed and constructed to a higher seismic standard than the original system.

The scope of the ESP included retrofitting the system track including aerial structures, stations, Transbay Tube, maintenance yards, and other facilities and equipment, as well as dismantling the Lake Merritt Administration building.

These necessary infrastructure upgrades complement BART's Earthquake Emergency Response plan, which includes several drills a year to ensure staff is trained and ready to respond. BART also

uses the ShakeAlert Earthquake Early Warning System. If the BART server calculates a high enough seismic intensity, the server will automatically signal trains to reduce speeds or stop. This system removes human response time and can even slow down or stop trains before the shaking occurs depending on how far away the quake is centered.

In the event of an earthquake, BART trains are held in place (except for trains in the Transbay Tube and BART Berkeley Hills Tunnel) to ensure the shaking isn't followed by an even bigger quake. The control center staff then check for the intensity of the quake, any alarms and reports of damage. Train Operators then move their trains at reduced speed while visually inspecting the track.





# BART Green Team: Tree Planting Event & Coastal Cleanup

In 2024, BART created a new Green Team that organizes volunteer events for BART employees and their loved ones around the Bay. During two of those events, the Green Team helped plant trees and clean up trash along the Bay's shoreline.

Sustainability, environmental protection, and public service are integral to BART's mission. But these themes aren't just restricted to the day-to-day functions of running the train system. Employees at BART also get involved in efforts to enhance our local environment and communities. In 2024, a group of employees collaborated to formalize these efforts by creating a Green Team, which organizes volunteer and educational events every quarter.

For Earth Day in April 2024, the Green Team organized a tree planting event at the Martin Luther King Jr. Regional Shoreline in Oakland in collaboration with the Oakland Parks and Recreation Foundation and Trees for Oakland. BART employees, their loved ones, BART District 4 Director Robert Raburn and his wife, Pat, and other members of the community came together to plant 100 trees, including Monterey cypress, Catalina ironwood, hollyleaf cherry, flannel bush, and various types of oak. These trees are native, climate adapted and/or shoreline adapted and will help sequester carbon that would otherwise



*BART's Green Team and other members of the community came together to plant 100 trees along the Martin Luther King Jr. Regional Shoreline in Oakland.*

contribute to climate change. The trees will also provide habitat for animal species and shade for humans and animals seeking relief from heat.

Michael Cox, BART's Manager of Sustainability Projects, mentioned after the event, "It was such a pleasure to see everyone out here doing work that helps fight against climate change. We are all public servants at BART, and we take extra pride in being able to help our community with events like this."

On International Coastal Cleanup Day in September 2024, the Green Team helped pick up trash along the Martin Luther King Jr. Regional Shoreline. Coastlines and waterways are common destinations for pollution. Rain and stormwater pick up litter on the street

and carry it to larger water systems and coastlines. Due to this, there are billions of pounds of plastic in the world's oceans, where it often converges into large patches that cover about 40 percent of the planet's total oceanic surface area. Thus, the goal of the cleanup event was to keep that trash from entering the ocean and therefore improve habitat for marine species in and around the Bay. The BART team picked up about 9 trash bags of garbage during the event, which was hosted by the California Coastal Commission.





# BART Focuses on Wayfinding Amid Other Customer Access Updates

Improving station access for riders is a constant focus for BART. Investments in BART's station access support the broader livability goals of the Bay Area, reinforce sustainable communities, and enable riders to get to and from stations safely, comfortably, affordable, and cost-effectively.

BART is involved in the regional transit coordination efforts laid out in the Transit Transformation Action Plan, which includes focuses like fare coordination and integration, paratransit improvements, and mapping and wayfinding. Wayfinding is the process by which passengers orient themselves and go where they want. The Regional Mapping and Wayfinding project, led by the Metropolitan Transportation Commission, is planning to implement new regional signage at 9 transit stations, including four BART stations. This project will unify signage, including regional transit identity, across all 27 Bay Area transit operators. A prototype of select signage for the project was installed at El Cerrito del Norte Station in December 2024. Signage includes station identification, elevator, bus stop, and new line diagram signage, as well as new maps.

BART improved bike access at two BART stations this year. BART completed the Ashby BART Bicycle Access Improvement Project, which strengthened east-west bicycle connections, closed a key



*The Ashby BART Bicycle Access Improvement Project included building a new bike lane that closes a gap in Berkeley's bike network.*

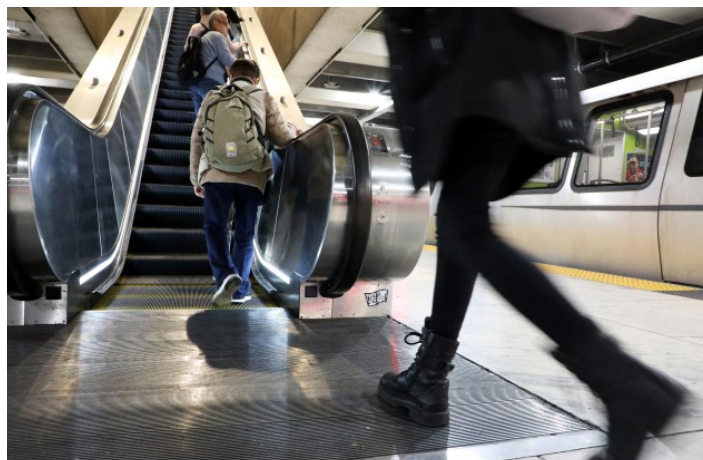
gap in Berkeley's bike network, and linked Woolsey Street to Prince Street. Significant construction progress continued at North Berkeley BART, including completing the two-way cycle tracks on the access roads, a new speed table in front of the station entrance, widening the Ohlone Greenway on BART property, and adding larger, double-decker bicycle eLockers to further improve pedestrian and bicycle accessibility. Additionally, BART deployed a new BayWheels bikeshare station at Daly City Station, which was the first in San Mateo County. Bicycle stairway channels, which assist with vertical circulation in stations by enabling customers to push their bikes up and down the BART stairways without carrying them, were installed at 12th Street and Walnut Creek Stations.

BART continues work on the 38 stations that needed accessibility improvements. These improvements include handrails, wall protrusion detection, curb ramps, ramps, passenger loading paving, accessible call boxes, and hearing loops at station agent booths to make it easier to hear station agents. BART phased these stations into 6 groups and has completed construction for the first two groups. The next two groups are in design.

2024 was the fifth year of BART's Escalator Modernization program, which enhances rider safety and escalator reliability. Phase One of the project is focusing on the San Francisco Market Street stations: Embarcadero, Montgomery Street, Powell Street, and Civic Center/UN Plaza stations. Modernization efforts were completed



for six additional escalators this year, bringing the program total to 16 of the planned 45 total escalators, which includes four Muni escalators at Embarcadero. A key provision of the program requires the contractor to maintain a reliability rate of at least 96% for the new escalators during the life of the nearly 10-year contract. These escalators are more energy-efficient, with LED lighting, a “sleep mode,” and variable frequency regenerative drives. These new features allow escalators to slow down and save electricity when no passengers are using them. Phase Two of the program will involve 38 escalators at the downtown Oakland and San Francisco Mission Street stations. Future phases will address the remaining 96 escalators in the system.



*Phase One of the Escalator Modernization program involves upgrading escalators at Embarcadero, Montgomery, Powell, and Civic Center/UN Plaza.*



# BART Awarded Grants for Electric Vehicle Charging Expansion

Providing electric vehicle (EV) charging at stations is consistent with BART's sustainability goals and commitment to improving the Bay Area environment. BART has about 47,000 garage and surface lot parking stalls at its stations, of which only two stations (Warm Springs and Lafayette) currently have EV chargers. To support state greenhouse gas emission reduction goals, the BART Board adopted the Electric Vehicle Charging Policy in 2021 to support the addition of EV chargers at BART facilities. Expanding EV charging at BART will support robust electric vehicle adoption across a wide range of socioeconomic groups.

BART is seeking to provide publicly accessible EV charging infrastructure to eventually serve up to 10% of parking spaces at 35 BART-managed station parking lots and garages, one (1) park and ride, and five (5) employee parking areas. BART plans to prioritize EV deployment at stations in or near disadvantaged communities. These charging stations will be available for BART riders as well as community members who live near stations and have been hesitant to buy an electric vehicle because of a lack of convenient charging options.

In 2024, BART issued a request for proposal to find a third-party partner to design, install, own, and operate the chargers. Construction is expected to begin in late 2025. An objective of this effort was to improve the customer experience at little capital or operating



*BART's EV charging stations will be available for both BART riders and community members who lack other convenient charging options.*

cost to BART. To achieve that, BART secured multiple regional, state, and federal grants to support the program, including over \$14 million from the U.S. Department of Transportation.

"BART already strongly encourages riders to walk, bike or take other public transit to our stations," said BART Sustainability Group Manager Monica Meagher. "This grant will allow us to jumpstart our efforts to expand the availability of EV chargers at all of our stations, which will provide our riders another environmentally friendly way to get to BART."

BART tracks the percentage of passengers who get to our stations by active means (like walking and biking), shared mobility (like buses), and driving. This allows BART to estimate the greenhouse gas (GHG) emissions associated with passenger access to the station. The goal is to increase active and shared modes and reduce driving, which

will reduce associated GHG emissions. BART plans to identify drivers using EVs compared to traditional internal combustion engine vehicles to further refine these emissions calculations as drivers transition to EVs.

While the future of federal EV charging grants is uncertain, there continue to be local, regional, and state opportunities to support this effort.



# Transit-Oriented Development Project Completed at Fruitvale Station

A new transit-oriented development (TOD) project, called Casa Sueños, was completed at Fruitvale Station in 2024. The project adds 179 affordable housing units and 6,000 square feet of retail space in the heart of a vibrant, transit-rich community in Oakland. This supports BART's goal of encouraging ridership by increasing density near its stations, which is the fundamental tenet of TOD.

Casa Sueños is part of the second phase of development at Fruitvale Transit Village, which also includes an additional 70,000 square feet of office and retail space, and 141 housing units completed in 2004 and 2018. Through the 1990s, the site consisted of parking lots for the station. BART proposed replacing them with a multi-level parking facility. However, community feedback encouraged BART to pivot, so in 1998, BART conducted a land swap with the Unity Council, a non-profit Social Equity Development Corporation which led the master planning for the transit village and developed the first phase of the site's development. BART built a new parking garage on a different parcel, while the Unity Council in partnership with other developers has been gradually expanding the development of commercial and residential space at what is now called the Fruitvale Transit Village.

Since then, the site and its buildout have been heralded as exemplars of transit-



*179 affordable housing units and 6,000 square feet of retail space were built at Fruitvale Station.*

oriented development and community partnership. A [2018 study](#) by researchers at UCLA indicated that the Fruitvale TOD increased socioeconomic well-being in the neighborhood while maintaining a similar level of racial and ethnic diversity. Fruitvale Village now contains many amenities, including a high school, a library, medical clinics, a market, office space, and housing. Casa Sueños is the newest addition, and provides 179 studio, one-bedroom, and two-bedroom apartments for families earning at or below 80% of the area median income. 46 apartments are reserved for formerly homeless households. An additional 6,000 square feet of commercial space are currently being used by a local nonprofit organization.

Research and case studies have also shown that TOD can help increase

transit ridership and thus reduce vehicular traffic and parking demand\*. This in turn can help cities and regions achieve their greenhouse gas reduction goals by shifting travel away from GHG-intensive automobiles. And with more riders living, shopping and working within walking distance of our stations, TOD supports BART's goals of decreasing GHG emissions associated with passenger access to our stations and increasing mode share for active transportation modes like walking and biking.

\*Travel Characteristics of Transit-Oriented Development in California | [bart.gov](https://www.bart.gov)



# Performance Metrics



## RESOURCE CONSERVATION: ENERGY & GHG EMISSIONS

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025 <sup>1,2</sup>	
Total energy use	Megajoules (MJ)/ vehicle revenue mile (VRM)	21.19	19.93	20.52	20.89	21.18	23.70	21.74	17.95	19.13	21.51	Committed 19.52	Aspirational 19.19
Total greenhouse gas (GHG) emissions	Metric tons of carbon dioxide equivalent (MT CO <sub>2</sub> e)/ thousand VRM	1.92	1.65	0.23	0.25	0.26	0.11	0.10	0.05	0.32	0.34	Committed 0.31	Aspirational 0.24



## RESOURCE CONSERVATION: WATER

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025 <sup>3</sup>	
Total potable water use	Gallons / VRM	0.64	0.65	0.86	0.95	0.85	1.01	0.73	0.53	0.66	0.77	Committed 0.43	Aspirational 0.38

<sup>1</sup>Total energy use: see Appendix for additional charts and information

<sup>2</sup>Total GHG emissions: see Appendix for additional charts and information

<sup>3</sup>Total potable water use: see Appendix for additional charts and information

# Performance Metrics



## SMART LAND USE AND LIVABLE NEIGHBORHOODS

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025 <sup>4,5,6</sup>
Residential units	# of units built (cumulative since 1993)	1,416	1,506	1,975	1,975	2,649	3,251	3,251	3,609	4,051	4,232	7,000
Affordable residential units	# of affordable units built (cumulative since 1993)	256	346	613	613	845	901	901	901	1,119	1,298	2,400
Office/commercial square footage	Square feet built (cumulative since 1993)	188,590	188,590	194,590	194,590	637,590	643,690	643,690	658,690	854,754	874,590	1,000,000
Mode share: active (walking and bicycling)	%	44%	Will be measured in next Station Profile (survey underway in 2024)									52%
Mode share: shared mobility	%	29%	Will be measured in next Station Profile (survey underway in 2024)									32%
Mode share: drive & park	%	27%	Will be measured in next Station Profile (survey underway in 2024)									16%
GHG emissions associated with passenger access to the station	kg of CO2 / rider / day	0.56	Will be measured in next Station Profile (survey underway in 2024)									0.43



## RIDER EXPERIENCE

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025 <sup>7,8</sup>
Quarterly reporting of safety and performance indicators	Completed / Not Completed					Completed						Completed
Has BART met all adopted Performance Standards for Safety and Performance Comfort?	Yes / No					No						Yes

<sup>4</sup>Residential units, affordable residential units, and office/commercial square footage | [bart.gov](https://www.bart.gov)

<sup>5</sup>Mode share | [bart.gov](https://www.bart.gov)

<sup>6</sup>GHG emissions associated with passenger access to the station: methodology yet to be finalized

<sup>7</sup>Reporting on safety and performance indicators | [bart.gov](https://www.bart.gov)

<sup>8</sup>The adopted Performance Standards for Safety and Patron Comfort consist of the following KPIs:

Safety KPI: see quarterly performance reports on crime against persons | [bart.gov](https://www.bart.gov)

Customer Satisfaction KPI: see quarterly performance reports on overall customer satisfaction | [bart.gov](https://www.bart.gov)

# Performance Metrics



## EMISSION AND POLLUTION CONTROL

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025
Recycle Capture Rate at Stations	%		Tracking commenced in 2024.								53%	53%
Landfill Recoverability Rate at Stations	%		Tracking commenced in 2024.								36%	36%
Landfill Recoverability Rate at Stations	%		Tracking commenced in 2024.								21%	21%



## MATERIALS AND CONSTRUCTION OPERATIONS OPTIMIZATION

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025
Percentage of BART Project Delivery Staff trained in BART Facilities Standards (BFS) Sustainability Controls	%		Training commenced in 2021.					18%	31%	90%	99%	100%



## EXTREME WEATHER ADAPTATION AND RESILIENCE

	Units	2015 (Baseline)	2016	2017	2018	2019	2020	2021	2022	2023	2024	Target 2025 <sup>9</sup>
100% High Priority Actions in the BART Local Hazard Mitigation Plan (LHMP) Actions underway or complete	%		Tracking commenced in 2021.					86%	86%	86%	100%	100%

<sup>9</sup>High Priority Actions in the LHMP | [bart.gov](https://bart.gov)

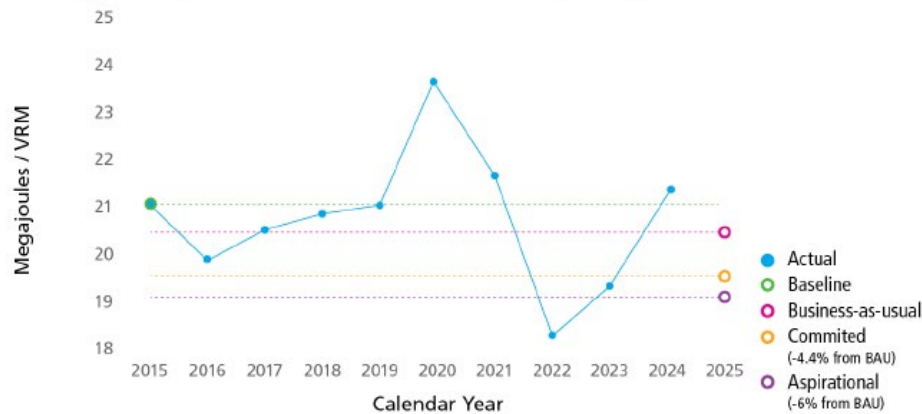
# Appendix



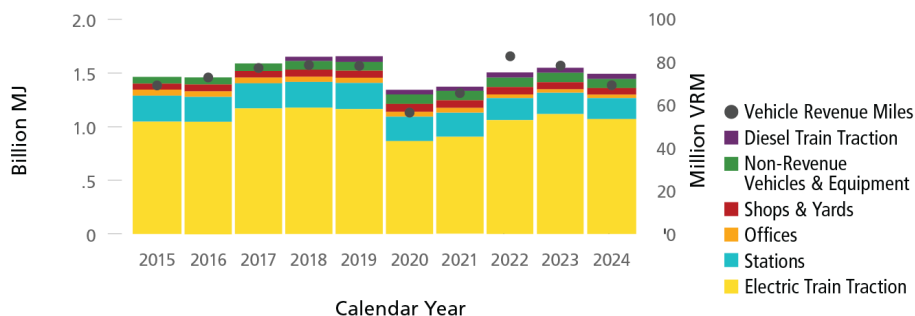


# Energy Use

## Energy Use per Vehicle Revenue Mile (VRM)



## Energy Use by Asset Category



In 2024, BART was above our 2025 committed and aspirational targets, in addition to our 2015 baseline. Since the publication of our Sustainability Action Plan in 2017, BART's service profile has changed drastically due to the COVID-19 pandemic. In particular, we shortened the length of our trains in the main BART system in September 2023 to better align our service with current ridership patterns and save energy. However, this also meant that we were running fewer vehicle revenue miles than we had originally projected in our Plan. Furthermore, our energy use in other categories remained relatively flat since they aren't as intertwined with train length.

Thus, although we used 4% less energy overall in 2024 as compared to the prior year, our vehicle revenue miles declined by 13%. This caused our energy use per VRM to trend upward from 2023 to 2024.

Since 2015, BART has also completed several projects to reduce energy use at stations and parking garages by replacing old lighting fixtures with more energy-efficient LEDs. Total energy use at stations has decreased by approximately 11% compared to 2021. Energy use at offices has declined by 30% since 2021, largely due to the numerous energy conservation techniques employed at BART's new LEED Gold-certified headquarters.

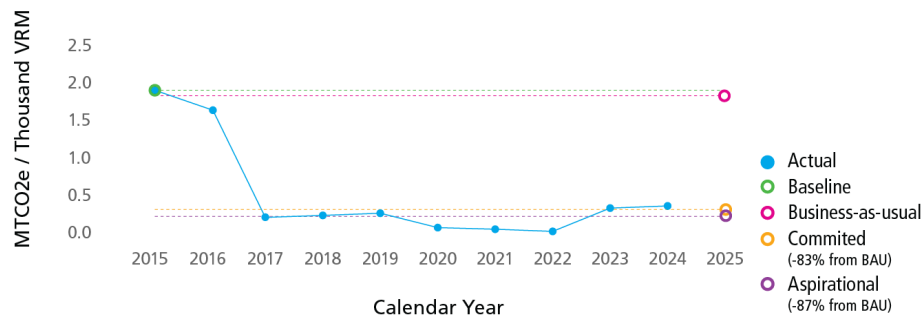
BART's core system and Oakland Airport Connector are powered by electricity. The eBART Extension, a 10-mile extension connecting the Pittsburg/Bay Point and Antioch stations, opened in May 2018 and uses diesel-electric multiple unit technology instead of electrified rail.

Since 2015, BART has opened 5 new stations across the system and increased the amount of scheduled service. These changes have caused total energy use to increase since 2015, although energy use per VRM has declined.



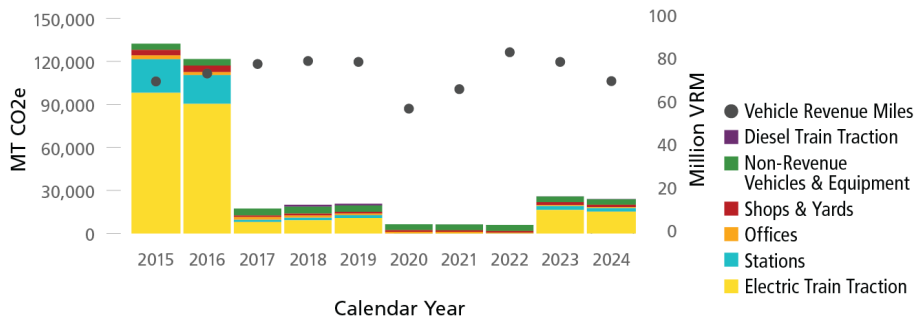
# Greenhouse Gas Emissions

## GHG Emissions per Vehicle Revenue Mile (VRM)



In 2024, BART was just short of meeting its 2025 committed and aspirational targets for metric tons of carbon dioxide-equivalent per vehicle revenue mile (VRM). 86% of BART's contracted electricity supply was GHG-free, which is a 2% decline from the previous year. Increased market demand for renewables has made it more difficult to fill our open positions. As a result, BART filled its remaining open positions with electricity from unspecified sources, which are not designated as GHG-free. This caused year-over-year emissions to increase for electric train traction, stations, and offices. Emissions for shops & yards declined by 8% due to less natural gas being used for heating. Emissions for our non-revenue fleet & vehicles declined from 2023 because of reduced energy use in that category.

## GHG Emissions by Asset Category

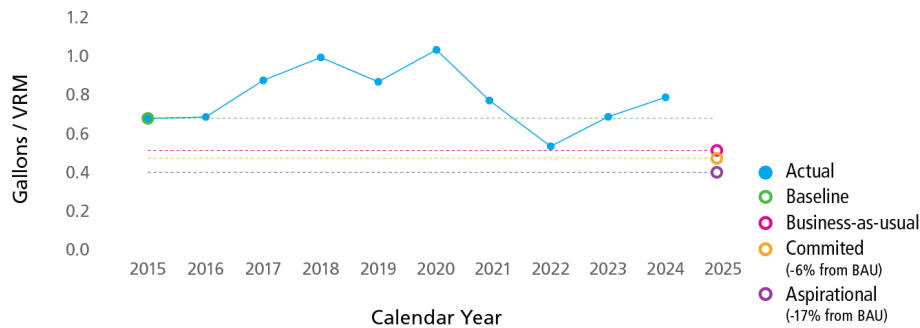


Since adopting the District's Wholesale Electricity Policy in 2017, BART has shifted its energy sourcing away from unspecified power sources in favor of specified GHG-free sources, which has significantly reduced BART's GHG emissions from the 2015 baseline. Additionally, the District has transitioned from conventional diesel to renewable diesel for use in eBART trains and the diesel-powered non-revenue fleet. BART is developing plans to increase electrification of its non-revenue fleet.

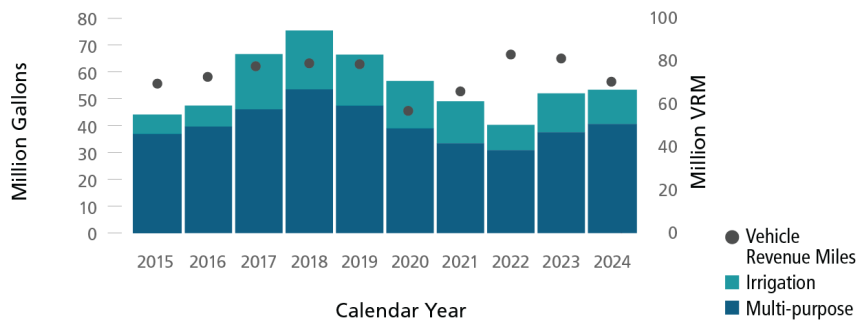


# Potable Water Use

## Water Use per Vehicle Revenue Mile (VRM)



## Water Use by Type



In 2023, BART's water use per vehicle revenue mile increased by 17% compared to 2022. Overall water use increased by approximately 3%, and vehicle revenue miles decreased by approximately 3%. As our ridership grows, there are more people using our restrooms. This means there is more water being used at our stations. However, we have taken steps to minimize water used for irrigation at our stations and across BART by prioritizing drought-tolerant landscaping and installing new meters that help manage our irrigation schedules.

Compared to the baseline year, BART's water use initially increased from 2015 to 2018. Due to drought conditions in 2015 and 2016, BART maintained low water usage by reducing the frequency of train car washing and irrigation. As drought conditions improved since late 2016, train car washing returned to the prior frequency and previously deactivated water fixtures for irrigation were reactivated, causing water use to increase. Additionally, the Warm Springs Extension added sites that increased water consumption during that period, including the environmental mitigation project. To help address these trends, particularly in recognition of emerging drought conditions, new cross-departmental working groups were created in 2020 to optimize water use for irrigation and at BART's shops and yards. These groups will continue enhancing long and short-term analysis of trends and will be developing new standard operating procedures accordingly.



# Municipal Solid Waste Generation and Diversion

Metric	Definition	2024
Recycle capture rate at stations	Proportion of all recyclable material in the landfill and recycle streams that is successfully sorted into the recycle stream	<b>53%</b>
Recycle contamination rate at stations	Proportion of waste in recycle bins that is not recyclable	<b>21%</b>

BART conducted its first audit examining waste sorting and generation at our stations. The purpose was to establish a baseline for new waste metrics we will track going forward.

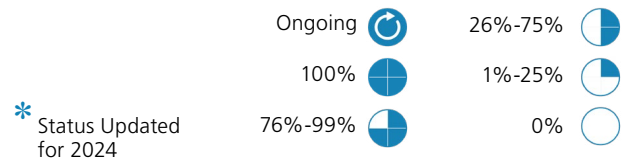
The first metric is the recycle capture rate at stations, which is the proportion of recyclable material that is properly sorted into recycling bins, instead of being missorted into landfill or compost. We estimate that about 52% of our recyclable material is properly disposed of in recycling bins. We will explore adding new bins and signage in the future to improve this number.

The second metric is the recycle contamination rate at stations, which is the proportion of material in recycling bins that is landfill or compost material. We estimate that 21% of the material in the recycling bins is contamination.

BART is currently expanding our recycling and composting program at our shops & yards.



# Action Table

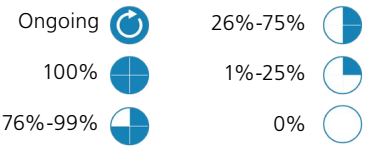


















Each of the actions and subactions described in BART's Sustainability Action Plan were reviewed to determine their status as of December 2024. Actions in the plan were inspired by BART initiatives that were either proposed or underway, as well as best practices from other transit agencies. The District's internal peer review of these actions reflects the professional input of relevant groups. The table below summarizes the status of each of the 118 actions and subactions.



## RESOURCE CONSERVATION: ENERGY & GHG EMISSIONS

ACTION	SUB-ACTION	STATUS	SUMMARY
RCE1 - Increase Capacity to Support Regional GHG Goals	Enable expanded service for additional riders; increasing ridership capacity	*	Achieved substantial completion for one of two traction power substation replacements in downtown San Francisco. The other substation is anticipated to be complete by summer 2025. Anticipate advertising a contract for installation of three traction power substations in the East Bay in fall 2025. Completed Hayward Test Track installation for Communications-Based Train Control. Completed delivery of first D and E series car order (775 cars). An additional 86 of 306 cars have been delivered for the Core Capacity expansion. *
RCE2 - Adopt a Strategic Energy Plan	2.1 - Develop plan to achieve low-carbon energy procurement targets		Energy plan developed and targets identified.
	2.2 - Develop Wholesale Electricity Portfolio Policy		Wholesale electricity policy adopted by Board.
	2.3 - Track and report energy indicators; set performance goals	*	Energy use by location and power type reported annually and used to develop performance goals. *
RCE3 - Make Renewable Energy Purchases	Continue to invest in wholesale low-carbon, zero-carbon and renewable electricity purchases		As of 2024, BART receives 71% of its electricity from renewable energy sources and 86% from zero-carbon sources.
RCE4 - Invest in On-site Energy Generation	4.1 - Move forward with on-site solar power generation		Solar energy systems in place at Antioch, Lafayette, Warm Springs, Richmond, Hayward, and Union City. Additional systems being considered for new stations.
	4.2 - Solar power generation vs. transit-oriented development (TOD) and housing policies		5 potential solar sites were identified for solar generation that do not have plans for any TOD development within the next 20 years.
	4.3 - Seek funding to support photovoltaic (PV) installations and storage		Funding pursued as needed for new projects.
RCE5 - Investigate Investment in Renewable Diesel	Explore feasibility of renewable fuels for eBART and non-revenue fleet.		BART has transitioned to renewable diesel for both eBART and non-revenue vehicles.
RCE6 - Conduct Station Energy Consumption Analysis	6.0 - Conduct Station Energy Consumption Analysis		A study was completed examining three representative stations. Based on the lessons learned, BART has no further plans to study three additional underground stations.

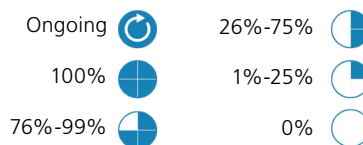


ACTION	SUB-ACTION	STATUS	SUMMARY
RCE7 - Invest in Lighting Retrofits	7.1 - Prioritize stations for energy-efficient lighting retrofits	 *	11 of 48 stations, 14 of 15 parking garages, and 13 of 29 parking lots have been retrofitted. Funding reserved for full lighting retrofits at 6 additional stations. *
	7.2 - Develop robust lighting design guidance	 *	Lighting design guidelines incorporated into the Passenger Station and Passenger Station Sites Design Criteria. *
RCE8 - New Energy Efficient Train Cars	Continue to fund the new train car procurement; conduct testing to confirm energy efficiency gains	 *	We've received all of the 775 new cars included in the first Fleet of the Future order, and are continuing to receive new cars to expand the fleet. *
RCE9 - Reduce Electricity Losses from Traction Power	Explore and apply potential improvements to reduce traction power losses		BART will evaluate the option to install reversible rectifiers as substations are replaced.
RCE10 - Explore Opportunities for Energy Storage	10.1 - Funding options in coordination with new train car procurement		The Self-Generation Incentive Program (SGIP) program offered by the California Public Utilities Commission (CPUC) was explored as a potential opportunity, but it would not apply for funding batteries for regenerative braking system. BART will continue exploring other options for funding as opportunities arise.
	10.2 - Engineering-level study of system-wide energy storage		Study completed in 2016 indicated that storing energy from regenerative braking is not currently feasible due to battery limitations. Potential opportunities will be revisited at a later date.
RCE11 - Green Non-Revenue Fleet	11.1 - Replace retired vehicles with hybrids		BART purchased 9 electric Ford Lightning trucks. The fleet now has 3 electric motorcycles, 9 electric trucks, and 14 hybrids. BART continues to evaluate electric vehicles when making fleet purchases. *
	11.2 - Right-size heavy equipment to save fuel		Department superintendents provide guidance on vehicle uses prior to replacement by maintenance. Multiuse vehicles are pursued when possible.
	11.3 - Implement operational strategies, e.g. anti-idle and fuel saving driving		New logistics trucks are designed to shut off after 5 minutes according to CA regulations. Maintenance & Engineering employees are required to take driver safety course. All employees required to take Space Cushion Driving webinar, which offers defensive driving strategies that help reduce fuel consumption and maintenance.
RCE12 - Employee Trip Reduction in Non-Revenue Vehicles	Reduce fuel and emissions for BART employee work-related travel		BART staff is researching opportunities to provide employee shuttle from BART stations to select shops & yards.
RCE13 - Support Energy Efficiency Operations in Offices	Assess the feasibility of reducing BART's corporate energy use via employee training		Not started
RCE14 - Electric Vehicle (EV) Charging Policy and Implementation	14.1 - Pursue funding for installing EV charging stations		Received notification of over \$24 million of funding from Department of Transportation, Metropolitan Transportation Commission, Bay Area Air Quality Management District, California Energy Commission, and Peninsula Clean Energy. *
	14.2 - Pilot EV charging at Warm Springs Station		The EV charging pilot at Warm Springs has been implemented.
	14.3 - Develop expansion of station EV charging	 *	Released and received responses for Request for Proposal for adding EV charging to BART-managed parking facilities. *
	14.4 - Install EV charging at shops/yards to enable EVs in non-revenue fleet		Portable charging stations added to MET Building and eBART. Hardwired EV charging stations available at eBART and Hayward Maintenance Complex for employees and non-revenue fleet. Contract secured to add hardwired chargers at OKS. Planning is underway for further expansion. *
	14.5 - Install EV charging for convenient employee use		EV charging stations available at Antioch Maintenance Facility and Hayward Maintenance Complex Component Repair Shop and Central Warehouse for employees and non-revenue fleet. Additional employee chargers to be added as part of RFP. *



# RESOURCE CONSERVATION: WATER

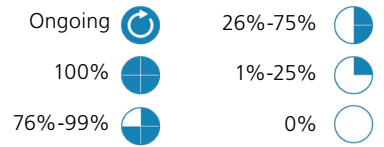
\* Status Updated  
for 2024






ACTION		SUB-ACTION	STATUS	SUMMARY
RCW1 - Regularly Audit Water Use and Correct Issues	1.1 - Allocate resources to pilot water use data tracking			Water use is tracked systemwide by meter. Piloted data dashboard using cloud analytics tool. Cross-departmental team has begun compiling additional data about meters and site-specific water use throughout system. Irrigation at several locations has been optimized as a result of analysis.
	1.2 - Leak detection and fixes			15 Calsense controllers have been installed at various locations. Leak detection at shops & yards will be enhanced upon installation of new water mains and piping as part of Measure RR fire main upgrade. Water billing data and manual inspection techniques are used at other locations. Certain water utilities also provide real-time leak alerts.
	1.3 - Electronic data from water suppliers			BART developed a proposal for enhancing data intake for water data.
RCW2 - Address Irrigation Usage and Infrastructure	2.1 - Prioritize and conduct irrigation upgrades			Developed dashboards and spreadsheets to assist with auditing water meters and consumption trends at key locations.
	2.2 - Remote Access Controllers pilot and lessons learned			Pilot completed at Warm Springs and lessons will be applied to future projects.
	2.3 - Update irrigation maintenance manual			This action item has been included in landscape architect's job responsibilities. Irrigation maintenance manual no longer relevant for this effort.
RCW3 - Upgrade Water Fixtures	3.1 - Prioritize and install water-saving fixtures			Water fixtures are upgraded during station modernization efforts.
	3.2 - Audit existing fixtures			Audit completed to identify plumbing fixtures that are not low flow and do not meet current water efficiency requirements.
	3.3 - Pilot low flow fixtures and apply findings			Low-flow pilot only applicable to new facilities. For existing toilets, not feasible to retrofit due to low slope of sewage pipe.
RCW4 - Replace Water Systems in Shops and Yards	Identify leaks; consider upgrades to water systems			OHY water distribution is being overhauled by the Hayward Yard Fire Protection contract 54RR-260 and is expected to be completed in 2025. It will provide more efficient water distribution for separated domestic and fire mains, a greater number of valves for better control of the system and monitoring for high flow, and has re-established redundancy in the Fire Protection system at the main shop. *
				A modification at the Oakland Shop to the domestic water distribution system will allow Maintenance to fill mobile water tanks from the backflow preventer location rather than via fire hydrants, which will save money (water billed at a lower rate) and time spent responding to Utility and Fire Department nuisance inquiries/responses. Repairs were completed on underground W-line tunnel fire protection that will reduce weekly water loss/waste.



\* Status Updated  
for 2024

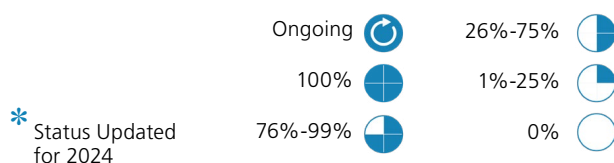














ACTION	SUB-ACTION	STATUS	SUMMARY
RCW5 - Investigate Train Car Washing	Determine the most water-efficient cycle/schedule that still meets BART's asset management needs		Maintenance team is testing a new detergent on the fleet now that all vehicles are D or E series cars. This testing is ongoing in 2025.*
RCW6 - Engage Operations Staff for Water Conservation	Educate and engage relevant staff on ideas for water conservation in the workplace		Cross-departmental team created to address water consumption at shops and yards and develop standard operating procedures to better manage activities.
RCW7 - Participate in Water District Conservation Programs	Explore available rebates, incentives, and technical assistance		12th St./Oakland City Center Station has received the Water Smart Business Certification. Research completed on available rebates in various water districts.

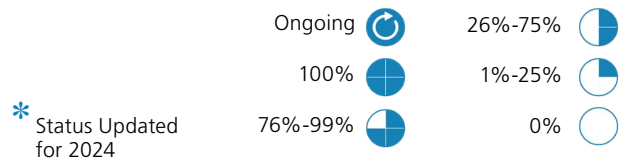











# EMISSION AND POLLUTION CONTROL



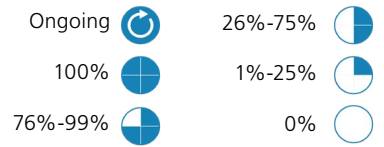
ACTION	SUB-ACTION	STATUS	SUMMARY
EP1 - Support Solid Waste Reduction	1.1 - Review station recycling pilot; targets for landfill diversion and waste reduction	 *	BART procured additional dumpster sensors for all station dumpsters to improve estimated total waste and diversion rates at stations. Worked to refine waste metrics.
	1.2 - Renegotiate waste hauling and recycling contracts		BART compiled all waste hauler contracts and service agreements, which were franchise agreements. Contract negotiations were not feasible.
	1.3 - Public education and marketing campaigns for recycling		Not started.
	1.4 - Hire workers to service and support station recycling		Current System Service workforce is sufficient to meet projected recycling management needs.
EP2 - Pilot Station Dumpster Enclosures	Implement pilot project for dumpster enclosures		Project completed to determine best practices for dumpster enclosure design. Rather than completing a pilot, accepted requirements were incorporated into BART Facilities Standards. New construction or future upgrades to dumpster enclosures will capture and use these best practices.
EP3 - Pilot Facility-base Sustainability Program at Shop(s)/Yard(s)	3.1 - Opportunities for pilot of Sustainability Plan at shops/ yards		Not started.
	3.2 - Evaluate pilot; develop Sustainability Program for shops/yards		Not started.
EP4 - Improve Recycling at All Shops and Yards	4.1 - Review Oakland shops' recycling, create plans for all other shops/yards		Visited Oakland shop in December 2021 to document current waste streams and collection process. Plan to start a recycling and composting pilot at a smaller shop with fewer departments.
	4.2 - Identify costs and resources needed for system-wide recycling plan		Costs and resources for system-wide recycling and compost identified, including initial set up and ongoing annual maintenance. *
EP5 - Incorporate Composting in Employee Worksites	5.1 - Develop composting and recycling program for administration offices		BART has recycling and composting at offices (BHQ, MET Building, and Cash Handling Building).
	5.2 - Composting in staff rooms at shops/yards systemwide		Visited Daly City Yard and Concord Yard in 2024 to document current waste streams and collection process. Plan to start a recycling and composting pilot at Concord in 2025, before applying lessons learned to other locations. *
	5.3 - Investigate potential to include composting at BART stations		Waste target setting project to be completed in 2025 *






ACTION	SUB-ACTION	STATUS	SUMMARY
EP6 - Improve Office Recycling and Re-use	6.1 - Inter-BART "green team" to advance waste reduction strategies	 *	Office of Chief Information Officer (OCIO) Digitization team implemented e-signatures and other resources to reduce processes that require paper. Initial outreach for "green team" creation and signup has begun. *
	6.2 - Develop paperless policy; Board of Directors all-digital pilot; review union contracts		BART Record Retention Manual, with exceptions, requires records created on or after January 1, 2021 to be stored digitally. Digital signatures have been in use reducing printing. Board preparation meetings are paperless. Board meetings provide hard copies for accessibility reasons. Union contracts were reviewed for paper and printing requirements.
	6.3 - Searchable database of materials available for salvage/re-use	 *	Developed a material exchange spreadsheet for office items. *
EP7 - Reduce BART's Hazardous Waste	7.1 - Specify non-hazardous materials in capital projects; seek alternatives		Construction projects are routinely being routed to System Safety for material management review. Emphasis on recycling and reuse has resulted in significant diversion of waste from disposal site to reuse and reclaim.
	7.2 - Reuse and launder oily rags		This program was piloted but it did not meet the needs of our staff. *
EP8 - Minimize and clean storm water runoff	8.1 - Construct trash interceptors/storm drain diversion structures		Finished pilot at Fruitvale Station. Waiting on funding for future phases. *
	8.2 - Increase crews to improve cleanliness and inspect storm drain inlets		Additional positions on the maintenance crew to be considered in the future.
	8.3 - Pilot the capture, storage, and reuse of rainwater		A potential pilot is currently unfunded. BART is actively exploring and applying for grants to fund this initiative.
	8.4 - Update BFS drainage sections to reflect best practices		BFS 3.2.1 published in 2022. Civil Design Drainage Criteria was updated. Requirements for biofiltration in facilities and site planning added under Article 11.4 Biotreatment and Article 11.5 Storm Water Control Plan (SWCP) respectively.
EP9 - Clean and Reuse Water	9.1 - Explore and implement the reuse of sump pump water		Upon analysis, reuse of sump pump water is currently infeasible for BART's operations.
	9.2 - Explore and implement grey water systems at the shops and yards		Due to public health concerns and metals in water discharge, grey water systems are currently infeasible for BART's operations.
	9.3 - Explore and implement storm water capture		Not started
EP10 - Invest in Tree Planting	10.1 - Direct resources to prioritize tree coverage	 *	BART is collaborating with the City of Oakland and other non-profits to plant trees near Coliseum Station. Several transit-oriented development, modernization, and expansion projects at and around stations include tree planting as part of design. Trees are also considered and prioritized during planning for new stations. However, funding and staffing for maintaining existing and newly established trees have been identified as obstacles. *
	10.2 - Include tree requirements in the BART Facilities Standards (BFS) as possible		Updates added to landscape and vegetation control section of BFS.



\* Status Updated  
for 2024

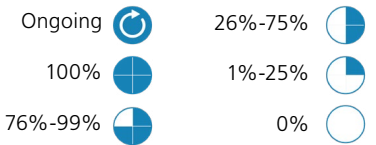


ACTION	SUB-ACTION	STATUS	SUMMARY
EP11 - Replace Gas Powered Tools with Electric	11.1 - Prioritize landscaping tool replacement		BART replaces tools on an ongoing basis. Electric tools are tested prior to implementation to ensure they meet BART's needs.
	11.2 - Develop policy of purchasing electric (battery) tools		BART replaces tools on an ongoing basis. Electric tools are tested prior to implementation to ensure they meet BART's needs.
	11.3 - Outfit high rail crew trucks with outlets and areas to charge batteries		All hi-rail crew trucks have generators and outlets.



# MATERIALS AND CONSTRUCTION OPERATIONS OPTIMIZATION

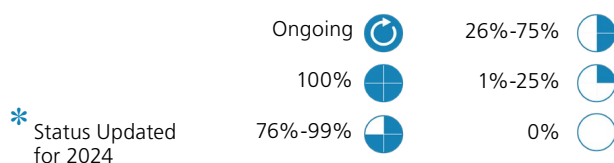
\* Status Updated  
for 2024














ACTION	SUB-ACTION	STATUS	SUMMARY
MC1 - Select Green, Sustainable Materials and Products	1.1 - Green Purchasing Policy	*	Working with Procurement to understand procurement methods and how a policy could be enforced. *
	1.2 - Department-specific procurement guidelines	*	When possible, green products are prioritized in online catalogs. Developed process to evaluate greener cleaners. *
MC2 - Update BFS for Construction Activities	2.1 - Develop tools for BART Facilities Standards (BFS) Sustainable Practices		Not every company produces an Environmental Product Declaration so BART is unable to make this a requirement. At this time, BART is including sustainability in construction specifications where practical.
	2.2 - Update BFS Construction Standard Specification		Not started.
	2.3 - Modify BFS design standards to ensure resilient infrastructure design		Not started.
MC3 - Improve BART Facilities Standards (BFS) Sustainability Guidance, Criteria and Standards	3.1 - Update guidelines and incorporate performance-based specifications		BART Facilities Standards Sustainability Guidelines have been revised.
MC4 - Incorporate Sustainability into Operations and Maintenance Procedures	Identify operations and maintenance procedures		When possible, green products are prioritized in online catalogs. Developed process to evaluate greener cleaners. *
MC5 - Sustainable Contractual Tools (Capital Projects)	Explore contracting tools to best leverage sustainability	*	Discussed possible paths forward with Procurement based on services or construction. *
MC6 - Develop Sustainability Design Guidance	6.1 - Project guidance (sustainability targets, financial resource allocation)		BFS Section 01 81 13 provides mechanism to guide project development stages, including spreadsheets to track materials and costs, and other submittals that address energy use, water use, and waste management.
	6.2 - Experience with green building and LEED certification in new contracts		BART includes LEED experience as a desired qualification in requests for proposals (RFPs) for On-Call Agreements.
	6.3 - Pilot project with INVEST or Envision		Provided information about third party sustainability certifications and cost premiums in internal "Sustainability in Project Delivery" training. VTA staff is pursuing Envision for BART Silicon Valley Phase II. BART staff is supporting their work and learning from the experience.



# EXTREME WEATHER ADAPTATION AND RESILIENCE



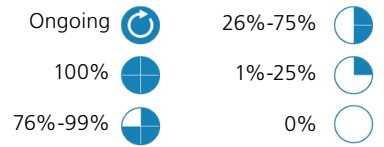
ACTION	SUB-ACTION	STATUS	SUMMARY
EWA1 - Coordinate with Regional Agencies in Climate Adaptation Planning and Implementation	1.1 - Consider climate change impacts as a part of project design		Design of BART projects are required per BART Facilities Standards to account for climate change impacts.
	1.2 - Seek funding or partner to adopt adaptation strategies		~\$6.5 million awarded in grants for rail destressing and station access improvements that address extreme heat concerns. *
	1.3 - Modify design standards in BART Facility Standards (BFS) to ensure resilient infrastructure design		Included requirements in BFS for climate change adaptation.
EWA2 - Conduct Hazard Mitigation Planning	2.1 - Incorporate 2016 Local Hazard Mitigation Plan (LHMP) considerations into capital improvement plans		As part of LHMP update, LHMP actions are integrated into District's capital improvement need inventories and programs.
	2.2 - Update Local Hazard Mitigation Plan (LHMP) every 5 years		District LHMP updated and adopted LHMP in 2022.
EWA3 - Expand the Water Intrusion program to respond to sea level rise and extreme weather events	3.1 - Upgrade systems that track water inundation		Sump pump systems provide alert to Operations Control Center of water in the system. System is adequate. Upgrade not warranted at this time.
	3.2 - Expand Water Intrusion Program to identify vulnerable assets; develop risk mitigation program		Measure RR-sponsored projects mitigating water intrusion are in progress.
	3.3 - Partnerships with local watershed jurisdictions for runoff analysis		Flood-prone areas were evaluated in the Local Hazard Mitigation Plan (LHMP) using FEMA Flood Insurance Rate Maps. Findings included in LHMP.
	3.4 - Partner with jurisdictions to protect around Transbay Tube portals		BART has continued collaborating with the Port of San Francisco on the Embarcadero structure and started the BART Embarcadero Structure Long-Term Adaptation Project with the Caltrans' grant. The project aims to develop a conceptual plan to protect the structure from flooding caused by sea-level rise and extreme storm events. *
	3.5 - Waterproof venting structures and entrances for underground stations		Various water intrusion related work identified and in progress under Measure RR. *
EWA4 - Train Control Resiliency	Implement the Train Control Modernization Program		Completed Hayward Test Track installation for CBTC. Construction to replace new CBTC to began in January 2025.



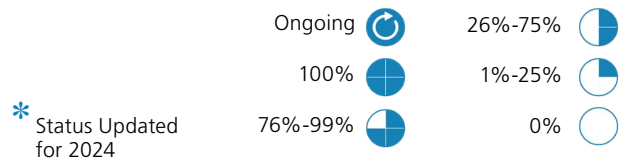






# SMART LAND USE AND LIVABLE NEIGHBORHOODS

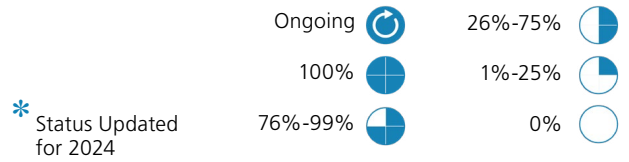
\* Status Updated for 2024







ACTION	SUB-ACTION	STATUS	SUMMARY
SLU1 - Improve Station Character and Community Fit	1.1 - Implement the "Connect & Create Great Places" work plan		Overall, 14 capital projects identified: 5 complete, 5 in progress, 3 on hold, 1 not started.
	1.2 - Seek funding for place-making investments via grants, bonds, etc.		699 Ygnacio Valley Road project received \$34,672,661 Affordable Housing and Sustainable Communities (AHSC) grant to install 2.1 miles of bike lanes and pedestrian enhancements that will connect residents at a TOD site with Downtown Walnut Creek. El Cerrito Plaza received a \$39,141,077 AHSC grant to provide 70 units of affordable housing near El Cerrito Plaza BART station, in addition to investments in a new BART Traction Power Sub Station. *
	1.3 - Partner to implement complementary improvements on city streets		BART is developing a new action plan for safer roadways to address potential improvements on the roads surrounding BART properties. Collaborated with UC Berkeley to conduct research on the parallel road network surrounding BART stations. *
SLU2 - Continue to Lead the Region in Transit Oriented Development (TOD)	2.1 - Implement TOD Policy		1 TOD completed: Fruitvale Phase IIB. 1 TOD in construction: Lake Merritt Block 1. 4 TODs in predevelopment: Walnut Creek, El Cerrito Plaza, West Oakland, West Dublin. 2 TODs under negotiation: North Berkeley, Lake Merritt Block 2. *
	2.2 - Coordinate with local partners on Specific Plans or Station Area Plans		BART Station Planners check in periodically if jurisdiction rezones and will update conformance findings accordingly.
	2.3 - Activate stations in coordination with system expansion		System Development Policy adopted by Board of Directors* in September 2023. Any major new system development project must provide clear, measurable benefits to the system and its riders, as well as demonstrate the ability to address the region's goals to grow transit ridership, address the climate emergency, improve mobility, and ensure equitable outcomes.



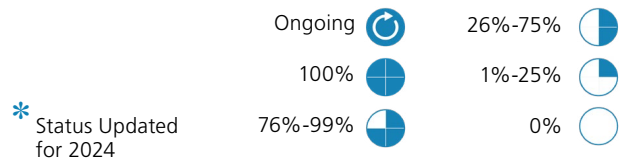
ACTION	SUB-ACTION	STATUS	SUMMARY
SLU3 - Station Access – Connect to Community	3.1 - Implement the Station Access Policy		Completed construction of the Measure RR Safe Routes to BART (SR2B) program-funded Iron Horse Trail bridge for Dublin/Pleasanton station access and the Walnut Avenue/ Liberty Street protected intersection near the Fremont BART Station. Construction is advancing on additional SR2B projects improving pedestrian and bike access to Pittsburg Center, El Cerrito Del Norte, and Fremont stations. Additionally, six new projects have been initiated in the program's third and final round to enhance access to Fruitvale, North Berkeley, Pittsburg Bay Point, Lake Merritt, 12th Street, 19th Street, Embarcadero, and Union City stations. BART completed the Ashby BART Bicycle Access Improvement Project. Bike stairway channels were completed at 12th Street and Walnut Creek stations. Significant construction progress continued at North Berkeley BART, including completing the two-way cycle tracks on the access roads, a new speed table in front of the station entrance, and widening the Ohlone Greenway on BART property to further improve pedestrian and bicycle accessibility. Several other Measure RR-funded projects are in the design phase. *
	3.2 - Implement the BART Bike Plan and Bike Parking Capital Program		Deployed new Bay Wheels bikeshare station at Daly City Station; installed bicycle stairway channels at 12th Street and Walnut Creek stations; completed BART Bicycle Preferred Path of Travel (PPoT) Capital Plan Phase 1; applied for funding for detailed design and construction of PPoT improvements at Coliseum Station; deployed larger, double-decker eLockers at North Berkeley; completed Ashby BART Bicycle Access Improvement Project; completed plans, specifications and estimates (PS&E) phase for construction of Lafayette bike station. *
	3.3 - Incorporate Multimodal Access Design Guidelines into the BART Facilities Standards (BFS)		The guidelines are listed as an appendix in the BART Facilities Standards.
	3.4 - Improve multi-modal transfers; fund access upgrades		Through MTC's Regional Mapping & Wayfinding project, BART installed new regional transit prototype signs and maps at the El Cerrito del Norte Station. *










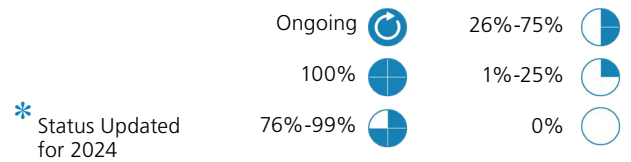
ACTION	SUB-ACTION	STATUS	SUMMARY
SLU4 - Participate in Local/ Station and Regional Partnerships	4.1 - Identify opportunities for effective Plan Bay Area implementation		BART is a participant on the Core Project Management Team for Transit 2050+, comprehensive plan for the regional transit network as part of Plan Bay Area 2050+.
	4.2 - Serve on Technical Advisory Committees, lend expertise		BART staff served on several technical advisory committees and planning advisory committees for regional and citywide efforts. This included master plans related to biking, pedestrians, neighborhood/community improvement, VMT mitigation, and subregional planning.
	4.3 - Participate in state legislation and rule making to support transit-oriented development (TOD)		The BART Board supported legislation including AB 930 (Friedman). BART submitted comments on proposed amendments to the California Air Resources Board regarding Low Carbon Fuel Standard (LCFS) Fixed Guideway system credit generation. *
SLU5 - Support Affordable Fares	Continue to explore strategies to support affordable fares		BART participates in Clipper START, a regional fare discount pilot program for riders with lower incomes. The pilot program was extended to 2025, and BART increased its discount to 50% starting in January 2024 along with all other agencies on Clipper, resulting in a twofold increase in applications and trips within the program. BART and Metropolitan Transportation Commission (MTC) co-lead regional fare coordination and integration efforts, including: *
			Clipper BayPass, a pilot program for an unlimited regional transit pass. The program initially partnered with four local universities and twelve affordable housing sites, and has now grown to include 10 institutional partners with over 30,000 participants.  Free and Discounted Transfers pilot, which will offer standardized transfer discounts between all agencies so that riders can use all services as one network without paying extra. The 18-24 month pilot will begin with the rollout of Next Gen Clipper.











## RIDER EXPERIENCE



ACTION	SUB-ACTION	STATUS	SUMMARY
RE1 - Create Clean Station Environments	1.1 - Invest in the Station Brightening Program and increase staff		Program currently on hold pending future hiring and funding.
	1.2 - Additional grounds maintenance crews to improve parking lot cleanliness		Additional positions on the maintenance crew to be considered in the future.
RE2 - Create Safer Station Environments	2.1 - Support community-based policing		Continued Zone Commander leadership for engaging participation by Sergeants and frontline personnel. Examples of projects that were completed include Progressive Policing and Community Engagement Bureau (PPCEB) support for enhanced presence at Civic Center, addressing quality of life issues at the Mission station plazas, homeless encampment abatement on BART property, high visibility train patrols to address quality of life concerns from riders and employees, and support for strategic train inspections during nights and weekends. The PPCEB was fully staffed for civilian positions, although the police officers who had been assigned to the Bureau were transferred to the Operations Bureau to address staffing issues. Re-deployed 7 vehicle beats to train patrol to maximize officer presence on trains.
	2.2 - Analysis of high crime stations; leverage data to optimize police presence and support equitable policing practices		BART Police Dept has been able to increase presence through focusing efforts of employees towards high visibility patrols of trains and stations. The Department used data-driven practices to identify where to focus efforts. The Department is also providing strategic high visibility patrols at locations that are experiencing high levels of criminal activity or quality of life issues, including during nights and weekends. The high visibility patrols included PPCEB staff to ensure that the outcomes were not entirely focused on punitive measures. Community Service Officers were re-deployed from parking lots to provide visible presence in stations and on trains.
	2.3 - Update audibility of Public Address (PA) announcement system		The Stations PA Improvement project involves improvements at Powell St, Lafayette, Ashby and Castro Valley Stations. Construction estimated for Lafayette and Powell in 2025. Design scheduled to be completed for Ashby and Castro Valley in 2026.
	2.4 - Improve real-time display messages to communicate safety messages		30 real-time displays installed at downtown Oakland and SF stations.
RE3 - Support Art in Transit	Develop an art program master plan		In 2020, BART completed an art collection analysis that details maintenance and cleaning. The Arts Master Plan, which includes guidelines, procedures, and metrics is now complete. Funding is currently on a project-by-project basis.



ACTION	SUB-ACTION	STATUS	SUMMARY
RE4 - Invest in Employee Health and Wellness	Implement programs to enhance worker safety and wellness		Claremont Employee Assistance Program offers Health & Wellness resources for employees, including online classes and workshops. *
RE5 - Design Stations for Patron Comfort	Develop guidelines and other procedural tools to promote quality of life at stations		Rider comfort addressed in various guidelines and requirements including the Station Experience Design Guideline, Powell Station Improvement Guideline, and the BART Facility Standards (BFS).
RE6 - Attenuate Noise	6.1 - Determine feasibility of piloting a physical barrier to mitigate local noise impacts		Upon analysis, a physical barrier at West Oakland was deemed infeasible.
	6.2 - Continue regular wheel and rail maintenance to mitigate noise		BART converted 95 percent of our fleet wheels and 40 percent of the rails to a new profile that together help to reduce the screeching noise frequently heard on BART. In the worst areas of the system, interior train car noise measurements decreased from 95dB to 75dB.
	6.3 - Specify materials in BART Facilities Standards (BFS) that help noise attenuation		BFS architecture criteria passenger station section includes noise attenuation requirements.
RE7 - Support an Enhanced Wayfinding Program	Update Wayfinding Program; expand the use of electronic signs with real-time information	 *	Phase 4 Wayfinding Program improvements are under construction and nearly complete at MacArthur and Ashby Stations including 4 RTDs at each station. Funding secured, design complete and preparation of contract drawings has begun for wayfinding improvements at Rockridge, North Berkeley, and Fruitvale stations including 3 RTDs at each station. *
RE8 - Build Awareness: Transit's Relationship to Public Health	8.1 - Explore opportunities for healthy behaviors, e.g. public art		For Earth Day 2024, BART introduced new educational marketing campaign on ad space in trains and stations that highlights some of the environmental benefits of taking BART. BART participated in the California Clean Air Day Pledge, encouraging employees to take steps to reduce their emissions. BART also organized several volunteer events, including a tree planting, coastal cleanup event, and urban farming. *
	8.2 - Reflect public health benefits in emerging guidance for station design		BART Facilities Standards architecture criteria for passenger stations includes requirements for bike stair channel to promote bike usage. BART hosts the Blue Sky Festival to promote clean air.





Let's go.