GOAL

Promote Environmental Stewardship Minimize and Mitigate the Environmental Effects of Transportation

KEY OUTCOMES: By utilizing environmentally focused strategies and setting sustainability goals, MDOT will work to protect Maryland's natural, historic, and cultural resources and minimize the impacts of fossil fuel consumption and other environmentally harmful practices.

Since the passing of the Climate Solutions Now Act (CSNA) in 2022, Maryland has two climate change mitigation goals. First, Maryland is leading the nation with an interim goal of reducing carbon emissions by 60% from 2006 levels by 2031. Second, Maryland has set a goal to progress to net-zero emissions by 2045. At the end of 2023, MDOT released its Climate Pollution Reduction Plan, which lays a framework for the Department to support the State's achievement of its carbon reduction goals.

To reduce greenhouse gas (GHG) emissions, MDOT employs a multi-pronged approach. First, MDOT supports the use of transportation technology to lower vehicle emissions per mile. MDOT also uses many strategies to encourage a reduction in trips by carbon intensive modes of transportation by providing alternatives to single occupancy vehicles. Third, MDOT mitigates congestion that causes inefficient travel. And, lastly, MDOT advances sustainable design and materials through strategies such as advancing clean energy and carbon capture through tree planting.

In 2025, changing federal priorities are calling long-standing federal vehicle emission regulations into question that impact Maryland's ability to mitigate the environmental impacts of transportation. The Environmental Protection Agency (EPA) has proposed rescinding various vehicle GHG standards including the Advanced Clean Cars II (ACC II) and Advanced Clean Trucks (ACT) by repealing California's waiver under the Clean Air Act to set stricter standards. The EPA has also proposed repealing the 2009 Endangerment Finding, a move that would dismantle the legal foundation for regulating climate pollutants under the Clean Air Act. These actions threaten electric vehicle (EV) manufacturer sales targets enacted in the ACC II and ACT regulations that Maryland adopted in 2023. Despite this shift, MDOT remains committed to advancing clean transportation for Maryland and mitigating climate change impacts to reach the CSNA goals. MDOT continues to invest in EV infrastructure, expand charging networks, and collaborate with automakers and regional partners to accelerate the EV market statewide.

OBJECTIVE: Protect and Enhance the Natural Environment Through Avoidance, Minimization, and Mitigation of Adverse Impacts Related to Transportation Infrastructure

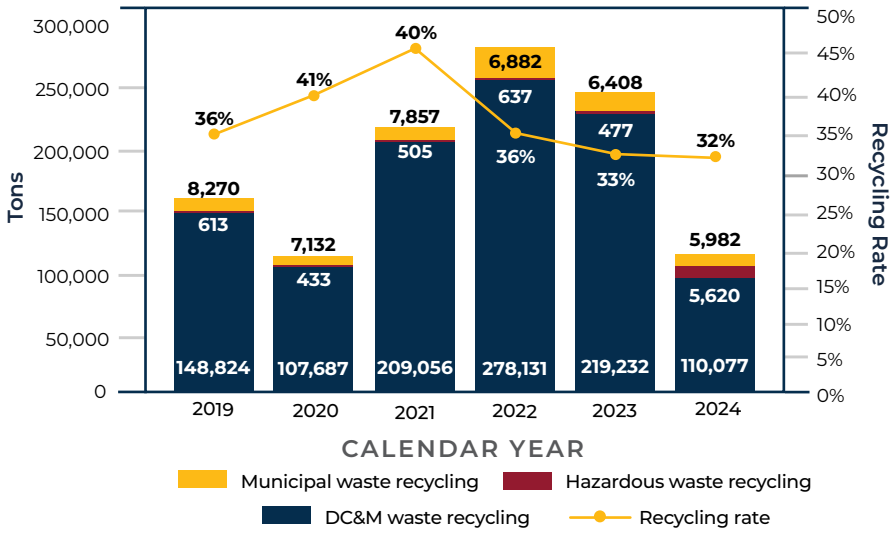
MDOT remains a recognized leader in protecting and enhancing the natural environment from adverse impacts related to the transportation system. All modal administrations and offices play a role in environmental protection and restoration. SHA's Office of Environmental Design manages six different divisions that fulfill its mission of environmental compliance and stewardship. One of these divisions, the Water Programs Division, oversees programs and projects for planning, design, and construction of new restoration best management practices and also addresses challenges from previously built restoration best management practices. Restoration goals are established for SHA and enforced by the Maryland Department of the Environment (MDE) in accordance with Maryland's Final Phase III Watershed Implementation Plan for the Chesapeake Bay and local watershed total maximum daily loads approved and established by the EPA. Additionally, SHA works in coordination with the Chesapeake Bay Critical Area Commission to establish a regional banking program to address mitigation needs by enabling projects—such as resilience improvements—to be designed and executed more efficiently and responsibly.

The Urban Tree Grant Program supports tree planting in areas affected by previous tree removal due to transportation projects. MDOT has invested more than $164,000 in grants through the end of FY 2025. So far these funds have enabled the planting of almost 2,600 trees across more than 40 communities since the program's commencement.

In 2025, MPA and the U.S. Army Corps of Engineers continued progress with the Mid-Bay Island Ecosystem Restoration Project. Phase 1 construction of the Barren Island portion of the project was completed in 2024, and Phase 2 began in 2025. Design efforts for James Island progressed and workshops were held with stakeholders to discuss natural and nature-based solutions that could potentially be incorporated into the design. MPA and the corps continued design efforts for the James Island portion of the project (construction is estimated to begin in 2026) and coordinated with the natural resource agencies to discuss final alternative selections for the natural and nature-based solutions modeling.

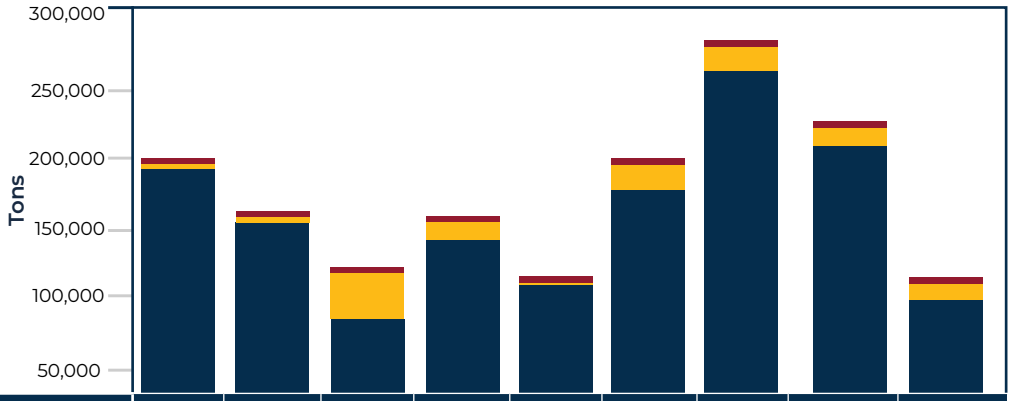
OBJECTIVE: Employ Resource Protection and Conservation Practices in Project Development, Construction, Operations, and Maintenance of Transportation Assets

DIVERSION RATE AND COST OF DISPOSING CONSTRUCTION, DEMOLITION AND MAINTENANCE MATERIALS IN LANDFILLS AND INCINERATORS



TARGET: NONE

RECYCLED/REUSED MATERIALS FROM MAINTENANCE ACTIVITIES AND CONSTRUCTION/DEMOLITION PROJECTS



Calendar Year	2016	2017	2018	2019	2020	2021	2022	2023	2024
Metals	5,975	2,604	1,707	1,408	1,077	1,642	1,882	1,213	1,308
Concrete	3,629	2,531	31,358	9,085	532	22,019	19,897	7,844	14,675
Asphalt	194,399	158,929	85,332	138,332	106,078	185,394	256,351	210,169	94,095

TARGET: NONE

What Is the Trend?

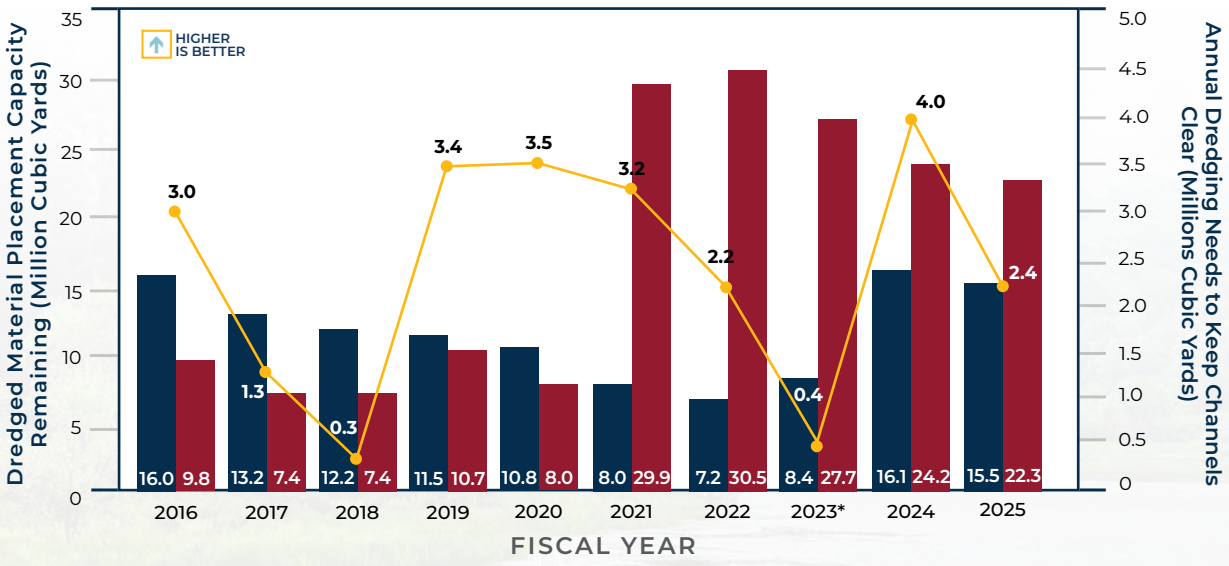
- The recycling rate has dropped in recent years, highlighting an area for improvement in waste management. From CY 2023 to CY 2024, the total amount of recycled/reused materials decreased by nearly 50%, from 219,232 total in CY 2023 to 110,077 total in CY 2024.
- Trash tonnage hit a seven-year low in 2020 but has gradually risen over the past five years as more people shift from remote to office work. Meanwhile, shifts in recycling markets—such as fewer recyclable commodity choices and lower commodity prices—have limited some MDOT recycling efforts. At BWI Marshall Airport, waste contamination and the absence of bag-shredding facilities at Maryland material recovery facilities have further hindered recycling, as bagging is required to prevent foreign object debris hazards on the airfield.
- In CY 2023, the SHA Dayton Maintenance Shop in Howard County completed a widening project along MD 108 and a resurfacing project along MD 94, generating over 48,000 tons of asphalt waste. By comparison, in CY 2024, the Dayton Shop completed a roadway operations enhancement project along MD 103 that focused on pedestrian and bicyclist safety. While large in scope, this project generated roughly 30 tons of asphalt waste; a 99.94% reduction to demolition, construction, and maintenance (DC&M) waste from CY 2023.
- In 2024, diverted hazardous waste increased greatly from years prior. During this year, MDTA completed oil water separator and tunnel throughway cleanings at the Fort McHenry Tunnel, which created over 5,000 tons of fuel-contaminated "sewage sludge." This type of cleaning must be performed every few years, so this spike in hazardous waste is expected.

What Are Future Strategies?

- MDOT, in coordination with MDE, is actively working on solutions and continues to maintain a recycling rate above 30%. The MDOT Waste Reduction and Action Plan is under development and expected to be published in 2026. The plan's scope has evolved to incorporate EV battery recycling and bans on single-use disposable items.
- MDOT will identify MDOT facilities with low recycling rates and high waste tonnages to support facility management efforts to improve onsite recycling options and program awareness.
- Diverted municipal waste and demolition, construction, and maintenance materials has been decreasing in recent years and MDOT will focus on using more durable materials to help reach waste reduction goals.

ANNUAL DREDGED MATERIAL CAPACITY REMAINING FOR HARBOR AND BAY MATERIAL (MILLION CUBIC YARDS)

MAKING PROGRESS



TARGET: **TARGET: THE 20-YEAR DREDGING DEMAND (FROM JUNE 30, 2024) FOR MARYLAND BAY CHANNELS AND BALTIMORE HARBOR IS 65 MILLION CUBIC YARDS (MCY)**

** 2023 data has been revised from the previous report.*

*** Harbor capacity is the total remaining volume at the Cox Creek and the Masonville Dredged Material Containment Facilities (DMCFs).*

What Is the Trend?

- Maintaining the shipping channels for safe, unimpeded access to the Port remains a priority. The annual dredged material for FY 2025 was 2.4 MCY, demonstrating a 1.6 MCY decrease from 2024.

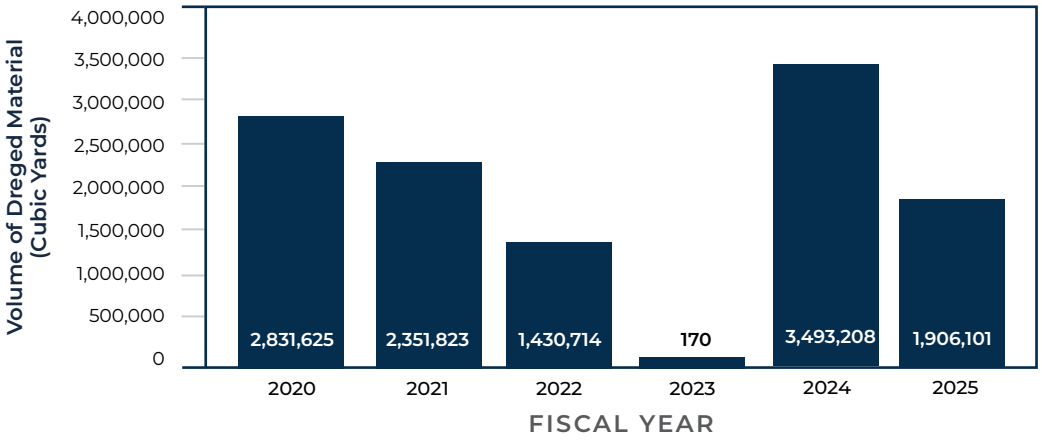
What Are Future Strategies?

- MPA, in partnership with the U.S. Army Corps, completed the Seagirt Loop Feasibility Study in 2023, recommending deepening and widening the channel to 50 feet. The Pre-Construction Engineering and Design phase began in October 2024, with construction expected in October 2026, pending funding. These improvements will enhance navigation and support future capacity at the Port of Baltimore.
- Cox Creek base dike widening was completed in FY 2021, and the dike raising was completed in 2023 to the +60-foot level (60 feet above the average daily low tide mark), adding 8.2 MCY of capacity. The +80-foot raise is in design, with construction expected in FY 2029 to add another 6.2 MCY.
- Safety and mobility efforts to ensure unimpeded shipping access to the Port have been effective; the Port of Baltimore compares extremely well with the other fully functioning U.S. East Coast ports with 50-foot deep channels.

INCREASE IN THE BENEFICIAL USE AND INNOVATIVE REUSE OF DREDGED MATERIALS

TARGET ACHIEVED

MPA leads nationally in innovative reuse of dredged materials through demonstration-scale projects and research as well as restoration of aquatic ecosystems and island habitats using dredged sediments. To support the Port of Baltimore's long-term success, MPA aims to implement sustainable reuse programs to address capacity recovery and manage Maryland's Dredged Material Management Program.



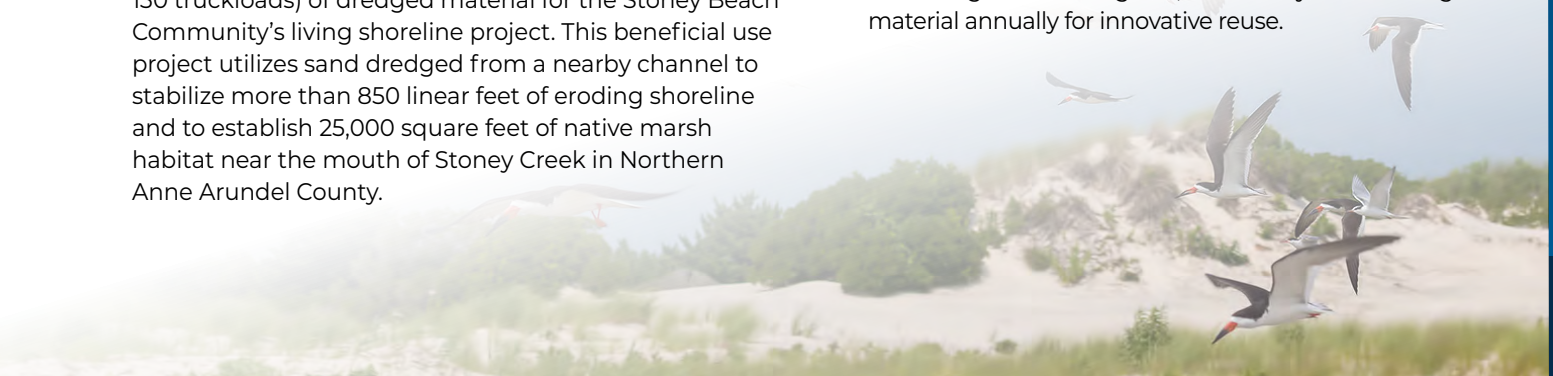
TARGET: 500,000 CUBIC YARDS ANNUALLY

What Is the Trend?

- In FY 2025, the use and innovative reuse of dredged materials reached nearly two MCY; this is nearly four times the annual target (set at 500,000 cubic yards annually). Compared to FY 2024, the annual volume of dredged material decreased by 1.5 MCY.
- From August 2024 through May 2025, MPA actively supported a local, community-led nature-based solutions initiative by providing over 1,600 cubic yards (more than 130 truckloads) of dredged material for the Stoney Beach Community's living shoreline project. This beneficial use project utilizes sand dredged from a nearby channel to stabilize more than 850 linear feet of eroding shoreline and to establish 25,000 square feet of native marsh habitat near the mouth of Stoney Creek in Northern Anne Arundel County.

What Are Future Strategies?

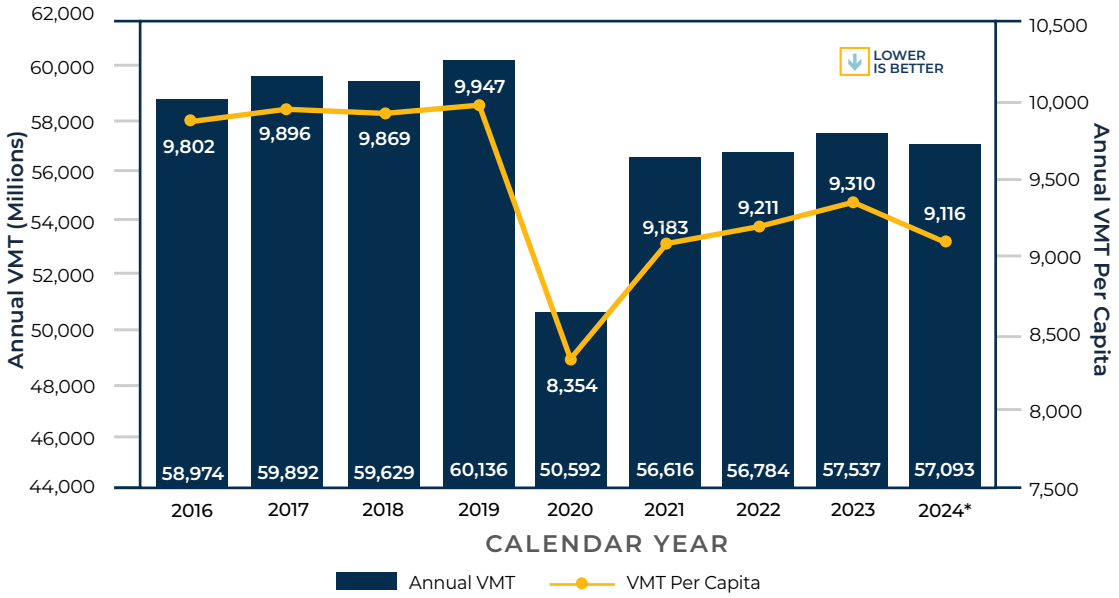
- All bay channel dredged material is currently placed at Poplar Island to be beneficially used for island restoration and will be placed at Mid-Bay Island once Poplar reaches capacity. MPA will begin to scale up innovative reuse of harbor channel dredged material at the Cox Creek Sediment Technology site starting in FY 2026 and increasing over a five-year period. MPA continues to investigate other uses of dredged material to meet its ultimate goal of reusing 500,000 cubic yards of dredged material annually for innovative reuse.



OBJECTIVE: Minimize Fossil Fuel Consumption, Reduce GHG Emissions, and Improve Air Quality and Support the Growth of Alternative Fuels

VEHICLE MILES TRAVELED (VMT)/VMT PER CAPITA

ON TARGET



TARGET: 10% DECREASE OF VMT PER CAPITA BY 2030 AND 20% DECREASE BY 2050 (FROM 2019 BASELINE)

** CY 2024 is updated from last year from estimate to actual.*

What Is the Trend?

- The annual VMT in CY 2024 decreased by nearly 500 million miles. Similarly, the VMT per capita in CY 2024 is 2% lower than CY 2023.
- VMT remains below pre-pandemic levels due to changing travel patterns since the pandemic. Medium- and heavy-duty vehicle (MHDV) VMT in particular has remained stagnant in recent years due to the broader freight recession from economic conditions that have reduced freight demand across multiple sectors.

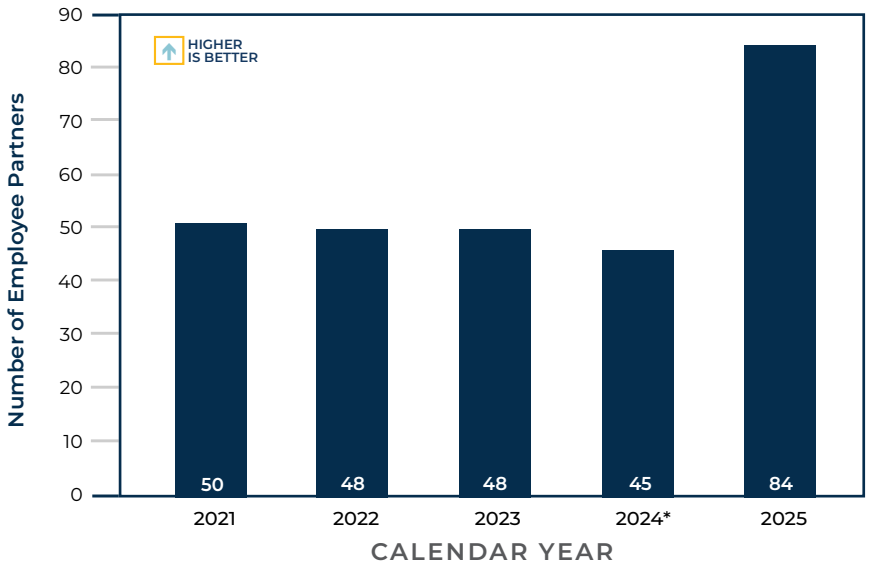
What Are Future Strategies?

- SHA's Pedestrian Safety Action Plan (PSAP) includes two rounds of projects with 13 total corridors statewide at various stages of project development. By providing safe, reliable, and accessible options for pedestrians and bicyclists, there may be a shift from personal vehicles to walking/biking which would reduce VMT and by extension on-road mobile source emissions.
- SHA is developing a mode choice model to estimate walk and bike trips in the statewide transportation model. This ongoing research effort aims to determine ways to accurately estimate the demand of walking and biking behavior and provide practical evidence to decision making on improving the traffic environment for active travel modes. While this is still in the research phase, as the project progresses, the goal is to accurately estimate the mode shift of various infrastructure improvements. The research project contributes to effort to reduce VMT by providing data to determine shifts from personal vehicles to walking/biking.
- MDOT continues to support a multimodal transportation system by expanding transit services statewide, enhancing existing routes, and implementing active transportation policies and infrastructure. The agency also promotes Transit-Oriented Development (TOD) as a key state priority to reduce reliance on personal vehicles and encourage more sustainable travel choices, while promoting economic development.

NUMBER OF EMPLOYEE PARTNERS IN STATEWIDE TDM PROGRAMS

MAKING PROGRESS

Travel Demand Management (TDM) strategies and policies are an impactful and cost-effective way to offset vehicle congestion and reduce VMT by promoting alternatives to driving alone, such as taking transit, ridesharing, walking, biking, teleworking and flexible work hours. Commuter Choice Maryland is MDOT's TDM program and provides options to maximize travel choices and deliver solutions that can reduce congestion, conserve energy, facilitate economic opportunity and enhance the life of all Marylanders. Commuter Choice Maryland's Employer Partner Program recognizes Maryland employers and organizations for their leadership in offering transportation benefits and creative commuting incentives to their employees.



TARGET: 500 PARTNERS BY CY 2030 AND 1,000 PARTNERS BY CY 2050

** CY 2024 value is updated from last year from estimate to actual.*

*** CY 2025 value includes data through December 2025.*

What Is the Trend?

- Participation in the program has significantly increased during the past year. New employers have been added through the Maryland Commuter Tax Credit registration, Baltimore Commutes Ride Together Rewards Incentive program, and through outreach efforts. In 2025, MDOT conducted outreach at conferences to reach new companies, including the annual Society for Human Resources conference. As of December 2025, there are 84 employer partners, which is an increase of 39 partners from 2024. To ensure MDOT achieves the targeted 500 partners by CY 2030, the number of employee partners must annually increase more than in the past.

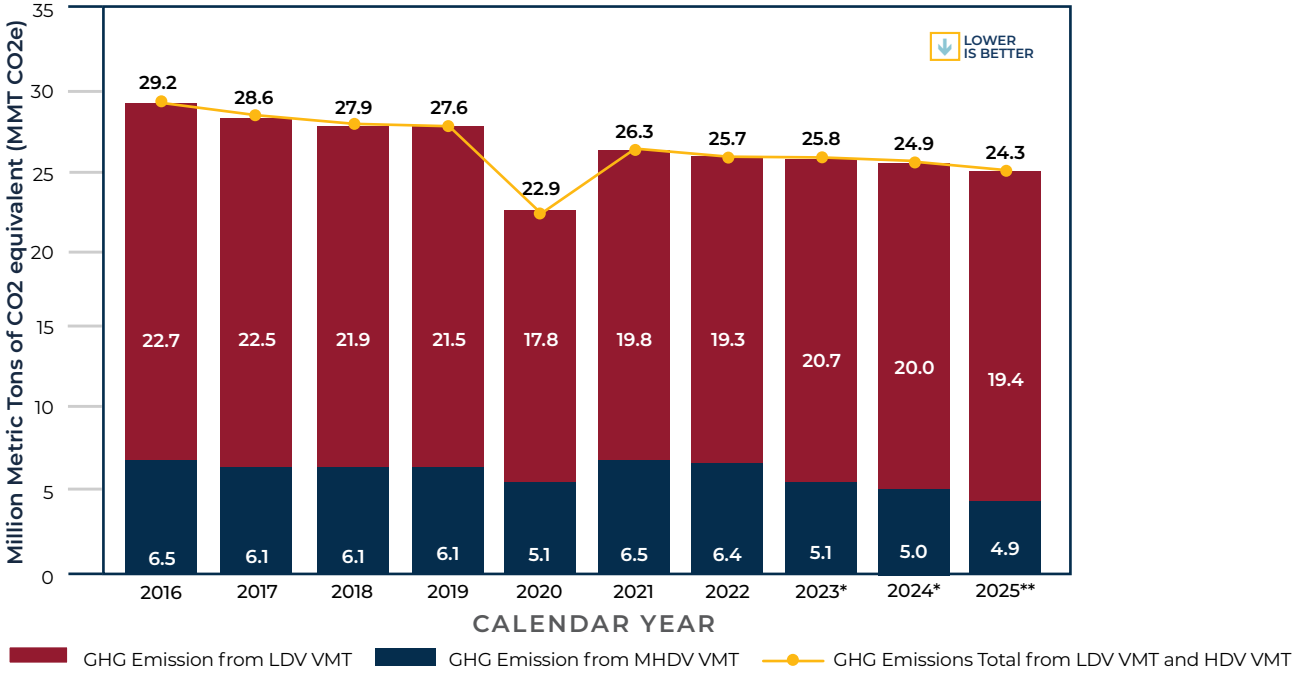
What Are Future Strategies?

- Leveraging the momentum from the past year, Commuter Choice Maryland will continue working collaboratively with the local TDM ridesharing coordinators to connect with employer contacts and sign-up new employer partners. All employers who participate in the Baltimore Commutes Ride Together Reward Incentive Programs or file for the Maryland Commuter Tax Credit will also continue to be automatically added as partners. In addition, Commuter Choice Maryland will engage with employers at outreach events and will invite them to join the Employer Partner Program.

GHG EMISSIONS FROM LIGHT-DUTY VEHICLE (LDV) VMT AND MEDIUM/HEAVY-DUTY VEHICLE (MHDV) VMT

MAKING PROGRESS

Two factors contribute primarily to the reduction of GHG emissions from on-road vehicles: VMT reduction and increased vehicle efficiency.



TARGET: CONTINUED REDUCTION IN GHG EMISSIONS FROM ON-ROAD LDV AND MHDV, WITH THE GOAL OF ACHIEVING A 42% REDUCTION BELOW THE 2006 BASELINE.

* Data has been revised from previous report.

** 2025 data is preliminary using a projection for 2025 VMT.

What Is the Trend?

- From CY 2023 to CY 2024, the total GHG emissions from on-road vehicles decreased by 0.6 million metric tons of CO2 equivalent. There have been continued improvements in vehicle efficiency and fuel type contributing to this decrease in emissions.

What Are Future Strategies?

- The Carbon Reduction Program provides federal funding for MDOT strategic investment to achieve carbon reduction. The first round of the Carbon Reduction Program, which includes $55 million in funding, has been awarded for State and local government projects that will reduce transportation carbon dioxide emissions and round two is currently underway.
- MDOT and MDE, as part of the Clean Corridor Coalition, were awarded a Climate Pollution Reduction Implementation Grant from the EPA. This grant will provide $78 million for MDOT, in coordination with MDE, to deploy medium- and heavy-duty zero emission vehicle charging hubs along Maryland's segment of the I-95 corridor.
- MDOT Commuter Choice Maryland launched two new rewards programs: the Baltimore Vanpool Incentive Program and the Baltimore Carpool Incentive Program. These new programs along with other ongoing TDM efforts support reducing VMT on Maryland roads.
- MDOT continues to improve the efficiency and technology of its own fleet of vehicles. For example, seven battery electric buses continue to operate in MTA's core bus service with over 1.1 million pounds of GHG emissions reduction modeled over the lifecycle of each zero-emission bus that replaces a diesel bus.

STATEWIDE VEHICLE EMISSIONS INSPECTION PROGRAM (VEIP) TESTING COMPLIANCE RATE

MAKING PROGRESS

The VEIP compliance rate of vehicles registered in non-attainment Maryland counties was

92.4%

in FY 2025, a small decrease from 93.0% in FY 2024.

TARGET: 100% COMPLIANCE

What Is the Trend?

- The compliance rate in FY 2025 was 92.4%, demonstrating a 0.6% decrease from FY 2024. This trend is slightly moving further away from the 100% compliance target.
- VEIP tests improve Maryland's air and water quality. By keeping cars and trucks properly maintained in accordance with manufacturer recommendations, and having vehicles tested on their recommended schedule, VEIP is playing an important role in the ongoing efforts to create a healthier Maryland. MVA is committed to maintaining test compliance to improve air quality.

What Are Future Strategies?

- MVA will deploy new inspection systems and software in all centralized lanes, as well as at all the 24-hour kiosks, allowing for advanced and timely testing. MVA will also implement a Motorist Assistance Center lane at each centralized location to provide customers assistance, ensuring the correct repairs to their vehicles, and the sharing of information with certified inspection stations to ensure better compliance and identify more widespread emissions-related issues.
- MVA will identify more opportunities to engage with customers about the VEIP program and their due dates.

OBJECTIVE: Support the Widespread Adoption of Alternative Fuels, Electric Vehicles, and Innovative Technologies

PERCENTAGE OF MDOT LIGHT DUTY VEHICLE FLEET COMPRISED OF ELECTRIC VEHICLES (EVs)

MAKING PROGRESS

FY	Number of EVs, all MDOT modes	Percentage of MDOT Light-Duty Fleet comprised of EVs	Number of LDV, all MDOT modes
2024	42	3.80%	1,106
2025	45	4.22%	1,067

TARGET: 100% OF LDVS TO BE ZEV BY 2036

Note: Tracking of LDV Fleet Electrification performance data began in 2024. Prior year metrics utilized various methodologies.

What Is the Trend?

- The LDV Fleet Electrification Strategy for MDOT Modal Fleets was completed by MDOT's Fleet Electrification Working Group in 2025. It establishes a five-part strategy framework, and identifies specific actions needed for MDOT to meet the LDV fleet electrification targets defined in the CSNA.
- MDOT adopted a policy guiding the use of electric vehicle supply equipment owned, operated, maintained, and managed by MDOT. The policy addresses fleet charging, workplace charging, and public charging on MDOT sites.
- Fleet charging capacity was added or expanded at the Shaefer Tower for MTA vehicles, the TSO building, and SHA District Offices 1 and 2. With this added capacity, MDOT has 12 fleet charging locations, with 20 additional locations planned or in procurement.
- In continuation from last year, all MDOT modal administrations have begun to purchase EVs in accordance with the goals and targets established in the CSNA. EVs in operation include the Ford F-150 Lightning, Ford Mustang Mach-E, Chevrolet Bolt, and Nissan Leaf.

What Are Future Strategies?

- With MVA and SHA, TSO will pilot a focused study of personnel procedures and workforce development and training needs, to ensure the MDOT workforce is prepared for fleet electrification. Workforce development to support fleet electrification was identified in the LDV Fleet Electrification Strategy (2025) as a near-term need.

PERCENTAGE OF TOTAL REGISTERED VEHICLES THAT ARE EVS*

MAKING PROGRESS

Fiscal Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
BEV + PHEV	6,988	9,369	13,207	20,722	25,742	34,841	52,319	75,861	108,584	139,460
Battery Electric Vehicle (BEV)	2,643	3,745	5,495	10,938	14,930	21,076	33,230	52,008	76,587	100,993
Plug-in Hybrid Electric Vehicle (PHEV)	4,345	5,624	7,712	9,784	10,812	13,765	19,089	23,853	31,997	38,467
% EVs of Total Registered Vehicles	0.1%	0.2%	0.3%	0.4%	0.5%	0.7%	1.1%	1.6%	2.2%	2.8%

TARGET: 1.1 MILLION EVS IN 2030

** Percent EVs of total registered vehicles have been updated from previous report for FY 2022 - FY 2024.*

What Is the Trend?

- 30,876 EVs were registered in Maryland in the 12-month period between July 2024 and July 2025, representing 28% growth in the number of EVs on the road during that time period. EVs now represent nearly 3% of all registered vehicles in Maryland, which is above the national average. Maryland's goal of registering 1.1 million EVs by 2030 is increasingly more difficult with the elimination of federal tax credits and infrastructure funding.
- MVA continues to administer the Excise Tax Credit for Plug-in Electric Vehicles. This State incentive has continued to be fully subscribed and is currently authorized through FY 2027.

What Are Future Strategies?

- MDOT conducts educational outreach to consumers by maintaining the MarylandEV online platform. Through the MarylandEV platform, MDOT presents an introduction to EVs and EV charging and amplifies incentives and other resources available to consumers through State, utility, and federal programs.

LEVEL 2 AND DIRECT CURRENT FAST CHARGING (DCFC) PORTS PER 1,000 RESIDENTS

The expansion of public charging infrastructure in Maryland is necessary to support Maryland's goal of 1.1 million EVs registered by 2030. The growing number of EVs is a component of ensuring that Maryland can meet air quality and GHG reduction goals. A reliable and convenient charging network in Maryland supports these goals by serving existing EVs and by encouraging future EV adoption.

	FY 2023*	FY 2024*	FY 2025**
Level 2 Charging Ports	3,037	3,753	3,961
DCFC Ports	782	995	1,209
Total Charging Ports	3,819	4,748	5,170
Charging Ports Per Thousand Residents* **	0.62	0.77	0.84

TARGET: A 2031 PORTS PROJECTION FOR THREE POLICY SCENARIOS IS CURRENTLY IN DEVELOPMENT FOR THE ZERO EMISSION VEHICLE INFRASTRUCTURE PLAN (ZEVIP)

** Charging ports data: Alternative Fuels Data Center 6/30/2023 and 6/30/2024*

*** Charging ports data: Alternative Fuels Data Center 7/31/2025.*

**** Population estimates are from the U.S. Census, MD Population: 6,164,660*

What Is the Trend?

- By July 31, 2025, there were more than 1,600 publicly accessible charging station locations in Maryland with more than 5,000 total charging ports. From 2024 to 2025, there was an increase in total publicly accessible charging ports by more than 400.
- Construction for National EV Infrastructure (NEVI) Round 1 stations began in June 2025, with the first station in Grantsville opening on October 22, 2025. Under Round 1, MDOT is investing NEVI funding for 19 fast charging projects with up to 118 DCFC ports. All Round 1 stations will be open to the public by fall 2026.

What Are Future Strategies?

- MDOT announced conditional awards for Round 2 of its NEVI Program on October 28, 2025, funding 12 additional fast charging projects for installation along Maryland's EV Alternative Fuel Corridors.
- MDOT will continue to work on the ZEVIP and Multi-Agency Strategy to help maximize future public infrastructure deployment across the State.
- The Maryland-New Jersey-Pennsylvania-West Virginia Charging Ahead Partnership, led by MDOT, was awarded $18.6 million through Round 2 of the Charging and Fueling Infrastructure Grant Program. This funding was awarded to deploy medium- and heavy-duty charging infrastructure along the I-81 to I-78 corridors from Maryland through New Jersey.