



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

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## **Biennial Report: 2020-2021**

### **Massachusetts Enhanced Emissions and Safety Test Inspection and Maintenance Program**

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**BIENNIAL REPORT  
MASSACHUSETTS ENHANCED EMISSIONS AND SAFETY TEST  
INSPECTION AND MAINTENANCE PROGRAM  
2020-2021**

**1. Introduction**

The Massachusetts Department of Environmental Protection (MassDEP) has prepared this report for the U.S. Environmental Protection Agency (EPA) in compliance with the requirements of 40 CFR 51.366 (e). The information in this report covers the reporting period of calendar years 2020 and 2021, and supplements the program information that is contained in the 2020 and 2021 Annual Reports (these reports are available on the Mass Vehicle Check Program web site: <https://www.mavehiclecheck.com/motorists-resources>).

In June 2020 EPA released “Guidance on Biennial Performance Evaluation Requirements for Enhanced Vehicle Inspection and Maintenance (I/M) Program” which clarifies and updates options for performing biennial performance evaluations. The guidance describes how the MOVES model can be used to determine the benefits of an I/M program and satisfy EPA’s biennial performance evaluation requirements. Results from that evaluation are presented in section 4 of this report.

The Massachusetts Inspection and Maintenance (I&M) Program is an important tool for improving air quality in the Commonwealth. The program also ensures that Massachusetts cars are safe to drive. The program was established in M.G.L. c. 111, §§142J and 142M, c.21A, §§2(28) and 16, and c. 90, §§7A, 7V, 7W, 7X, 7Y, 7Z, 20 and 31. Implementing regulations were initially adopted in January 1999 by MassDEP at 310 CMR 60.02, and the Massachusetts Department of Transportation’s Registry of Motor Vehicles Division (RMV) at 540 CMR 4.00-4.09.

The Massachusetts I&M Program is designed to balance three goals:

- *Pollution reductions* - Vehicles with high emission levels (or in unsafe operating condition) must be identified and repaired using test equipment appropriate for today’s high-tech vehicles.
- *Motorist convenience* – The test must be as convenient as possible for Massachusetts motorists.
- *Fitting in with the automotive service industry* – Attractive business opportunities must be provided to the program’s private sector partners: the inspection stations and repair shops that test and fix vehicles.

MassDEP and RMV (the Agencies) jointly administer the Massachusetts Vehicle Check Program. In November 2016, the Agencies contracted with Applus Technologies (Applus or Contractor) to manage and implement the I&M program starting on October 1, 2017. Contractor responsibilities include developing and managing the Inspection Station network; developing and implementing inspection protocols; and acquiring, providing, and maintaining inspection station workstations and data systems. The Contractor also trains inspectors and repairers and provides

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communications to the public, inspectors, and repairers. Emissions and safety inspections are performed through a decentralized network of public inspection stations. Inspection stations and individual inspectors are licensed by RMV. This network is supplemented by stations that are specially licensed to conduct inspections for their own vehicle fleets.

Since October 1, 2008, the program has employed only on-board diagnostic (OBD) testing for all vehicles required to receive an emissions test, with the exception of diesel vehicles with a Gross Vehicle Weight Rating (GVWR) greater than or equal to 10,000 pounds that are not equipped with OBD. These diesel vehicles receive an opacity test based on the SAE J-1667 Snap Acceleration Smoke Test Procedure.

To help motorists whose vehicles need emissions repairs, the program includes a network of registered repair technicians who are specially trained to diagnose emissions problems and repair modern vehicles effectively. The Program provides waivers of emission standards if some repairs are completed by a registered repairer, the repair expenditures exceed program requirements, and certain other conditions are met.

For vehicles that failed the emissions test and require replacement of a major (and expensive) component(s) to pass, a one-time economic hardship exemption is available that gives the vehicle owner one year to finance repairs or replace the vehicle.

Table 1 provides statistics describing the Massachusetts Inspection and Maintenance Program “at a glance” in 2020 and 2021.

**Table 1: Summary Statistics: Massachusetts Inspection and Maintenance Program  
 2020 and 2021**

	<b>PROGRAM COMPONENT</b>	<b>2020 TOTAL</b>	<b>2021 TOTAL</b>
<b>Vehicles and Inspections</b>	Number of vehicles in the Massachusetts fleet	5.15 million	5.51 million
	Number of unique vehicles tested for safety or for safety and emissions	4,566,171	4,646,136
	Number of unique vehicles receiving an initial emissions test	3,569,655	3,606,392
	Types of emissions tests:		
	OBD	97.8%	97.8%
	Opacity	2.2%	2.2%
	Non-diesel vehicles: (e.g., gasoline, natural gas, etc.):		
	• Number that received initial OBD emissions tests	3,454,168	3,488,981
	• Number that failed initial OBD emissions tests	140,447 (4.1%)	138,942 (4.0%)
	Diesel vehicles:		
	• Number that received initial OBD emissions tests	35,441	36,407
	• Number that failed initial OBD emissions test	4,502 (12.7%)	4,852 (13.3%)
	• Number that received initial opacity tests	80,046	81,004
• Number that failed initial opacity emissions test	1,281 (1.6%)	1,257 (1.6%)	
Number of Waivers issued	3	7	
Number of Economic Hardship Extensions issued	30	26	
No Known Outcome			
Number of non-diesel vehicles that failed an initial OBD test and did not pass a subsequent retest or obtain a waiver or an economic hardship	13,312	23,134*	
Percent of non-diesel vehicles receiving an initial OBD test with no known outcome	0.4%	0.7%	

\*No Known Outcome for 2021 was calculated using the new method described in the May 2020 EPA document “Guidance on Vehicle Inspection and Maintenance (I/M) Test Data Statistics as Part of Annual I/M Reporting Requirements”

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	<b>PROGRAM COMPONENT</b>	<b>2020 TOTAL</b>	<b>2021 TOTAL</b>
<b>Stations and Inspectors</b>	Inspection Stations		
	• Number of stations inspecting vehicles throughout the period	1,519	1,554
	• Number of RMV site audits of inspection stations (most stations were audited multiple times)	6,812	6,807
	• Number of adverse RMV enforcement actions (license revoked, license suspended, warning)	278	421
	Inspectors		
	• Number of licensed inspectors that performed at least one test during the period	6,836	6,696
	• Number of adverse RMV enforcement actions (license revoked, license suspended, warning)	334	421
	Totals penalties assessed against stations and inspectors	\$0	\$0
	Amount of penalties stayed (Penalties stayed as long as stations and inspectors comply with all program requirements during the period covered by the settlement)	\$0	\$0
	Number of covert vehicle audits	915	900
Number of covert vehicles audits that falsely passed OBD	0	0	
Number of covert visual audits	2,000	2,000	

## **2. Program Changes Implemented in 2020-2021**

As required by EPA's regulations<sup>1</sup> defining biennial reporting requirements, the following summarizes the 2020 and 2021 changes made in program design, funding, personnel levels, procedures, regulations, and legal authority. 2020 and 2021 were the twelfth and thirteenth full years under the current program design. The new program beginning October 1, 2017 includes several new features to aid with program oversight described in the "procedures" section below.

Program Design: No changes to program design were made in 2020 and 2021.

Funding: The program funding structure was unchanged for 2020 and 2021. The inspection fee remained \$35, with the inspection stations retaining \$23.50 of the fee and the remaining \$11.50 deposited into the Commonwealth's Inspection and Maintenance Trust Account.

Effective October 1, 2017, the Contractor's per-inspection fee became \$1.343 for the first 4.4 million "paid" inspections, and \$0.43 for each additional "paid" inspection thereafter. On October 1, 2019, the Contractor's per-inspection fee became \$1.366 for the first 4.4 million "paid" inspections, while the additional fee remained unchanged. The Trust Account funds remaining after payments to the Contractor were available to MassDEP and RMV for program oversight and management. MassDEP was provided with funds from the Trust Account through an Inter-Agency Service Agreement with RMV, updated annually.

Funding levels from the Inspection and Maintenance Trust for the program continued to be adequate to fund program costs. In FY 2021, Applus was paid \$6.4 million, RMV's expenditures were \$4.6 million, and MassDEP's expenditures were \$1.6 million. MassDEP expenditures were consistent with expenditures reported in the 2018-2019 biennial report.

Personnel Levels: Staffing levels for the Massachusetts Inspection and Maintenance Program have been generally stable since the program's inception. In FY2021, RMV assigned 33 staff (full time equivalents) to the Program, and MassDEP had 7 staff assigned during the fiscal year. MassDEP staffing was consistent with staffing levels reported in the 2018-2019 biennial report.

Procedures: While the basic OBD and opacity inspection procedures were largely unchanged during 2020 and 2021, there were some program-related changes associated with inspections conducted under the new contract that started October 1, 2017.

*Cameras:* The use of cameras for monitoring inspection quality is now required. Starting on October 1, 2017 at the start of each inspection, a digital image of the inspector is captured to verify inspector identity. Also, the following four images of the vehicle are required: 1) front of the vehicle, 2) rear of the vehicle, 3) vehicle identification number (VIN) tag, and 4) odometer reading. These images help verify the vehicle being inspected and its mileage.

Starting in February 2018 the three cameras installed in each inspection bay are required to capture still images at various times during the inspection and to record a video of the entire inspection.

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<sup>1</sup> 40 CFR § 51.366 (e)

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All images and video are automatically uploaded to the Vehicle Inspection Database and become part of the inspection record.

*Test Interruptions:* Starting in March 2018 the program implemented a test interruption procedure in the software that automatically stops an inspection when certain anomalies are found, including:

- the vehicle is a kit car and may require a special inspection at a MAC to check for EPA kit car compliance.
- the inspector does not sign on the signature pad following a commercial safety inspection.
- the inspector changes VIN-decoded vehicle information, such as GVWR, that changes the type of safety test received (i.e., commercial vs. non-commercial).
- the inspector changes VIN-decoded vehicle information, such as fuel type or GVWR, that changes the type of emissions test received (i.e., OBD vs. opacity) or makes the vehicle exempt from emissions testing.
- the vehicle's OBD data indicates the vehicle is different than the one entered by the inspector to begin the inspection

In 2021 the following test interruption was added:

- the vehicle registration entered by the inspector is from a state other than Massachusetts, but the vehicle VIN and plate number match a registered vehicle in Massachusetts.

During normal business hours when the interrupt occurs the inspector must communicate with a program representative to determine if the action or change is valid in order to proceed. If it is not valid, the inspection is aborted and the inspector must begin the inspection again. After hours the inspection is allowed to complete but is flagged for investigation by Agency personnel.

*Diesel OBD Readiness Exemptions:* In 2015 inspection procedures were changed in response to readiness issues related to diesel-powered vehicles with advanced emissions controls. These changes are related to the issues that lead to the development of EPA's "Best Practices for Addressing OBD Readiness in IM Testing of Diesel Vehicles Under 14,000 lbs. Gross Vehicle Weight Rating." Because the IM Program currently does not have software that would allow the implementation of the recommended best practices, MassDEP continues to exclude the following difficult-to-set readiness monitors from readiness determinations for these vehicles:

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Model Years	Make/Model	Exempt Monitor
2010-2012	Sprinter 2500/3500	NMHC Cat
2013-2022	Sprinter 2500/3500	Exhaust Gas Sensor
2010-2012	Dodge/Ram Cummins	NOx After-treatment
2013-2022	Dodge/Ram Cummins	PM Filter
2014-2022	Fiat 3L V6 Diesels*	NMHC Cat

These vehicles will still pass the program readiness requirements even with one monitor Not Ready in addition to those listed above (other vehicles are only allowed one monitor to be Not Ready to pass the program readiness requirement).

*OBD Communication Problems:* Starting in 2020, the program experienced OBD communication problems with the following vehicles:

- 2020-2021 Ford Escape and Escape Hybrid
- 2020-2021 Lincoln Corsair
- 2021 Ford Bronco Sport
- 2021-2022 Ford E-Series Chassis vehicles

Agency and Contractor personnel worked with Ford engineers to investigate the problems in 2020 and 2021. The investigation team determined the problem was with the Ford vehicles, not the program’s emission test equipment. Ford developed a software update to fix the OBD communication problem and made it available to dealerships in 2022. During 2020 and 2021, a total of 548 test exceptions were created to skip the OBD test for individual vehicles experiencing this particular OBD communication problem.

Program Authority (Legislation and Regulations): No changes to program legislation or regulations were made in 2020 and 2021.

### **3. Program Issues Identified and Corrected**

During 2020 and 2021, MassDEP and RMV worked with the Contractor to address program issues.

*Database and Workstation Software Revisions:* During 2020 and 2021, the Agencies worked with Applus to continue to make minor improvements to the database and workstation software based on recommendations from program stakeholders.

*RMV’s Automated License and Registration System (ALARS) replacement:* In 2013, RMV began planning the replacement of the aging ALARS system with a new system called ATLAS. Due to the large scope of the project, the implementation was split into multiple phases. The first phase, R1, focused on drivers’ and inspectors’ licenses and was completed in March 2018. The second



phase, R2, focused on vehicle titles and registrations and was completed in November 2019. Since the roll out was completed, RMV continues to focus on improvements and new features for ATLAS to support day to day operations.

*Registration Enforcement:* Massachusetts did not start a state-wide registration enforcement program in 2020 and 2021. Currently, responsibility for enforcement against motorists who fail to get their vehicles inspected or fail to pass their inspection is shared by RMV and local and state police. Since the program's inception, RMV's enforcement efforts have focused primarily on ensuring that inspectors and inspection stations properly administer the test, while local and state police have issued citations to motorists found to be driving vehicles without proper inspection stickers.

While state and local police continue to issue tickets for vehicles they find on the road without proper inspection stickers, RMV's registration enforcement program had not been implemented by the end of 2021. RMV recognizes the need to have a registration enforcement program to enhance its efforts to ensure that motorists comply with the requirements of the Massachusetts I&M Program. Much of 2020 and 2021 was spent focusing on providing core services during the COVID pandemic. Initial meetings regarding registration enforcement were held with the ATLAS team in 2020 and it was determined that registration enforcement development was more complex than anticipated. The first stage of registration enforcement will focus on registration renewal denial for vehicles that do not have a valid inspection. Once a schedule is set, stakeholder communication will begin.

RMV continues to be committed to the registration enforcement requirement and is anxious to see it implemented. At the same time, RMV observes that Massachusetts enjoys a compliance rate of 92 – 93% in database surveys, which is similar to the rates found in many other states.

*Malware Incident:* Starting Tuesday, March 30, 2021, a malware attack temporarily interrupted the process of conducting vehicle inspections in Massachusetts. Inspections resumed at most inspection stations at 7:00 a.m. on Saturday, April 17, 2021, with the remaining stations gradually resuming testing in the following weeks. While the malware outage delayed inspections, it did not reduce the number of vehicles inspected. For further information, see <https://www.mass.gov/news/update-on-massachusetts-motor-vehicle-inspections-0>.

#### **4. Program Evaluation Using Mobile Source Modeling**

In June 2020 EPA released “Guidance on Biennial Performance Evaluation Requirements for Enhanced Vehicle Inspection and Maintenance (I/M) Program” which describes how the MOVES model can be used to determine the benefits of an I/M program. Using this guidance, MassDEP performed the following runs using MOVES version 3.0.3 for calendar year 2021 for the 14 counties in Massachusetts:

- Runs using actual Massachusetts I/M program details
- Runs as if there were no Massachusetts I/M program

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The difference in emissions between the No I/M run and the Actual I/M run is the emissions benefit of the I/M program in each Massachusetts county for the purposes of the biennial program evaluation.

A critical factor in performing the I/M run is determining the “Compliance Factor” for the I/M program. This is defined in MOVES by the following equation, weighted for the two years covered by the biennial report as detailed below:

$$\text{Compliance Factor} = \% \text{ Compliance Rate} \times (100\% - \text{Waiver Rate}) \times \text{Regulatory class coverage adjustment}$$

- **Compliance rate** – the guidance states this is “the percentage of vehicles in the fleet covered by the I/M program that complete the I/M program and receive either a certificate of compliance or a waiver. The sampled fleet can be compared to the state’s vehicle registration database and emission inspection databases to estimate the percentage of the sampled fleet that completed the I/M Program during the inspection cycle covered by this evaluation period.”

In Massachusetts, monthly comparisons of registered vehicles vs. vehicles with expired, failed, or missing inspections are used to determine the compliance rate and are presented in section 3.2 of the 2020 and 2021 EPA Annual Reports.

2020 Compliance Rate = 92.4%  
2021 Compliance Rate = 93.2%

- **Waiver Rate** – the guidance states this is “the percentage of initially failed vehicles receiving a waiver. The waiver rate should be calculated as the number of initially failed (OBD or tailpipe tested) vehicles receiving a waiver divided by the total number of vehicles initially failing.” Massachusetts offers two types of waivers: emission waivers and repair extensions.

2020 Waiver Rate = (3 waivers + 30 extensions)/144,949 initial failed = 0.02%  
2021 Waiver Rate = (7 waivers + 26 extensions)/143,794 initial failed = 0.02%

- **Regulatory Class Coverage Adjustment** – the guidance states “I/M programs entered in MOVES can only be applied by source types. However, I/M programs and source type may be inconsistent with state I/M program regulations that define I/M programs by the vehicle weight classes. The MOVES Technical Guidance contains a table of regulatory class coverage adjustments to account for this discrepancy.”

The 2021 Massachusetts program covers MOVES source types 21, 31, and 32 with light-duty OBD testing up to 8,500 lbs. for vehicle model years 2007 – 2020 and MOVES source types 31, 32, 43, 51, 52, 53, and 54 with medium-duty OBD testing from 8,501 to 14,000 lbs. GVWR for vehicle model years 2008 - 2020. The corresponding regulatory

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class coverage adjustments from the 2014 MOVES Technical Guidance are in the table below:

MOVES Source Type	MOVES Source Description	GVWR range	Adjustment
21	Gas Passenger cars	<=8,500 lbs.	1.00
31	Gas Passenger trucks	<=8,500 lbs.	0.98
31	Gas Passenger trucks	8,501 - 10,000 lbs.	0.02
32	Gas Light commercial trucks	<=8,500 lbs.	0.93
32	Gas Light commercial trucks	8,501 - 10,000 lbs.	0.07
43	Gas School bus	8,501 - 14,000 lbs.	0.01
51	Gas Refuse Trucks	8,501 - 14,000 lbs.	0.11
52	Gas Single Unit Short-haul trucks	8,501 - 14,000 lbs.	0.43
53	Gas Single Unit Long-haul trucks	8,501 - 14,000 lbs.	0.48
54	Gas Motorhome	8,501 - 14,000 lbs.	0.27

- **Compliance Factor Calculations** – The following tables contains compliance factor calculations per the equation above. The light- and medium-duty OBD programs have different begin model years as noted below.

Program Year 2020

MOVES Source Type	GVWR range (lbs.)	Begin Model Year	Compliance Rate	Waiver Rate	Regulatory Class Coverage Adjustment	Compliance Factor
21	<=8,500	2006	92.4%	0.02%	1.00	0.9238
31	<=8,500	2006	92.4%	0.02%	0.98	0.9053
31	8,501 – 10,000	2008	92.4%	0.02%	0.02	0.0185
32	<=8,500	2006	92.4%	0.02%	0.93	0.8591
32	8,501 – 10,000	2008	92.4%	0.02%	0.07	0.0647
43	8,501 – 14,000	2008	92.4%	0.02%	0.01	0.0092
51	8,501 – 14,000	2008	92.4%	0.02%	0.11	0.1016
52	8,501 – 14,000	2008	92.4%	0.02%	0.43	0.3972
53	8,501 – 14,000	2008	92.4%	0.02%	0.48	0.4434
54	8,501 – 14,000	2008	92.4%	0.02%	0.27	0.2494

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Program Year 2021

MOVES Source Type	GVWR range (lbs.)	Begin Model Year	Compliance Rate	Waiver Rate	Regulatory Class Coverage Adjustment	Compliance Factor
21	<=8,500	2007	93.2%	0.02%	1.00	0.9318
31	<=8,500	2007	93.2%	0.02%	0.98	0.9132
31	8,501 – 14,000	2008	93.2%	0.02%	0.02	0.0186
32	<=8,500	2007	93.2%	0.02%	0.93	0.8666
32	8,501 – 14,000	2008	93.2%	0.02%	0.07	0.0652
43	8,501 – 14,000	2008	93.2%	0.02%	0.01	0.0093
51	8,501 – 14,000	2008	93.2%	0.02%	0.11	0.1025
52	8,501 – 14,000	2008	93.2%	0.02%	0.43	0.4007
53	8,501 – 14,000	2008	93.2%	0.02%	0.48	0.4473
54	8,501 – 14,000	2008	93.2%	0.02%	0.27	0.2516

- 2020/2021 Weighted Compliance Factors** – the guidance states “Because a biennial performance evaluation covers the span of two years, the compliance factor used in the MOVES “Actual I/M run” should be a weighted average based on the total number of unique vehicles tested in the respective years covered by the biennial program evaluation.” The guidance provides the following formula for this calculation:

$$\text{Compliance Factor} = \left( \text{Year 1 Compliance Factor} \times \frac{\text{Year 1 Number of unique vehicles}}{\text{Total number of unique vehicles tested (Year 1 + Year 2)}} \right) + \left( \text{Year 2 Compliance Factor} \times \frac{\text{Year 2 Number of unique vehicles}}{\text{Total number of unique vehicles tested (Year 1 + Year 2)}} \right)$$

The number of unique vehicles tested is presented in section 3.1 of the 2020 and 2021 EPA Annual Reports.

2020 Unique Vehicles Tested = 4,566,171

2021 Unique Vehicles Tested = 4,646,136

The following table shows the results of the weighted calculations:

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Source Type	GVWR range (lbs.)	Begin Model Year	2020 Compliance Factor	2021 Compliance Factor	2020/2021 Weighted Compliance Factor
21	<=8,500	2007	0.9238	0.9318	0.9278
31	<=8,500	2007	0.9053	0.9132	0.9093
31	8,501 – 10,000	2008	0.0185	0.0186	0.0186
32	<=8,500	2007	0.8591	0.8666	0.8629
32	8,501 – 10,000	2008	0.0647	0.0652	0.0649
43	8,501 – 14,000	2008	0.0092	0.0093	0.0093
51	8,501 – 14,000	2008	0.1016	0.1025	0.1021
52	8,501 – 14,000	2008	0.3972	0.4007	0.3990
53	8,501 – 14,000	2008	0.4434	0.4473	0.4454
54	8,501 – 14,000	2008	0.2494	0.2516	0.2505

- **Summary of 2021 MOVES Inputs** – the following table describes the source of the various inputs required to run the model:

MOVES input	Source of data
hpmsVTypeVMT	2019 MassDOT Data, projected for 2021
sourceVTypeVMT	2019 MassDOT Data, projected for 2021
sourceTypePopulation	2019 MassDOT and MassDEP Data, projected for 2021
sourceTypeAgeDistribution	2019 MassDOT Data, projected for 2021
IMCoverage	Current MassDEP I&M Program description
Met	2020 Climate data from NOAA
rampFraction	Default from MOVES
dayVMTFraction	Default from MOVES
roadTypeDistribution	2019 MassDOT Data
monthVMTFraction	Default from MOVES
hourVMTFraction	Default from MOVES
aveSpeedDistribution	Default from MOVES
zoneRoadType	Default from MOVES
fuelSupply	Default from MOVES
fuelFormulation	Default from MOVES

Note: Due to effects from the COVID pandemic, vehicle miles traveled (VMT) for 2021 were lower than 2019 while vehicle populations remained the same from 2019 to 2021.

The complete 2021 IMCoverage file is included as Attachment A.

- **Summary of 2021 MOVES results** – the following table presents a summary of results from the model runs and calculated I/M program benefits for the entire Commonwealth of Massachusetts:

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Year	Pollutant	No IM	IM	Difference	Difference
		(ton/yr)			%
2021	Total Gaseous Hydrocarbons	15,665	15,084	581	3.7%
2021	Carbon Monoxide	204,118	189,915	14,203	7.0%
2021	Oxides of Nitrogen	23,474	23,125	349	1.5%

MOVES results from the 14 individual Massachusetts counties are presented in Attachment B.

It should be noted there are several features of the Massachusetts I/M program that provide an emissions benefit but are not accounted for in the MOVES model:

- Diesel OBD testing for model year 2007 and newer vehicles up to 14,000 lbs. GVWR.
  - 36,407 vehicles tested in 2021
- Diesel opacity testing for vehicles from model year 1984 through 2006 greater than 10,000 lbs. GVWR.
  - 28,375 vehicles tested in 2021
- Diesel opacity testing for vehicles model year 2007 and newer greater than 14,000 lbs. GVWR.
  - 52,629 vehicles tested in 2021
- Gasoline OBD testing for model year 2008 and newer vehicles from 8,501 to 14,000 lbs. GVWR.
  - 123,480 vehicles tested in 2021

*Reports Referenced*

- Annual Reports to the U.S. Environmental Protection Agency describing the implementation of the Massachusetts Enhanced Emissions and Safety Test Program for 2009 through 2020 can be found at the program’s web site:

<https://www.mavehiclecheck.com/motorists-resources>

- Biennial Reports to the U.S. Environmental Protection Agency describing the program in 2008-09, 2010-11, 2012-13, 2014-15, 2016-2017 and 2018-19 can also be found at the same web site.