



# GEORGIA

DEPARTMENT OF NATURAL RESOURCES

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## ENVIRONMENTAL PROTECTION DIVISION

### **2017 and 2018 Biennial Report**

Submitted July 2019

## Introduction

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The biennial report submitted to EPA by July 1 satisfies the reporting requirements of 40 CFR 51.353 by addressing the emissions reductions of NOx, providing evaluation methodology and showing program effectiveness through after repair test pass/fail rates.

## Program Evaluation

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Georgia's Inspection & Maintenance (I/M) Program covers 13 counties within the metro Atlanta area and include Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding and Rockdale counties. For the reporting years of 2017 and 2018, Georgia's I/M Program used the same method for evaluating program effectiveness as in years past based on 40 CFR 51.353(c).

During the reporting period, the I/M program reduced NOx emissions by about 12% per year from light duty gasoline powered vehicles in the 13-county metro Atlanta area based on MOVES2014a modeling analysis.

	2017	2018
<b>NOx emissions reduction<sup>1</sup></b>	3,448 tons	2,740 tons
<b>Vehicles Tested (Initial)<sup>2</sup></b>	2,849,261	2,915,645
<b>Overall Pass Rate<sup>2</sup></b>	90.9%	91.3%
<b>Vehicles Tested After Initial Fail<sup>2</sup></b>	248,424	243,904
<b>Percent Pass After Repair Rate<sup>2</sup></b>	82.4%	82.3%
<b>Failing Vehicles Repaired and now Clean</b>	204,750	200,707

<sup>1</sup>Total reduction of NOx due to Georgia's I/M program based on the MOVES2014a model. Numbers were calculated by multiplying the daily NOx reductions for 2017 (10.1 tons/day) and 2018 (8.0 tons/day) by the number of workdays in each year.

<sup>2</sup>Includes On-Board Diagnostic (OBD)/Accelerated Simulation Mode (ASM) /Two Speed Idle (TSI) testing methods.

The I/M program achieved a total NOx emissions reduction of 6,188 tons over the two-year reporting period. Although significant, the program impact on NOx reduction decreased from 2017 to 2018. This decrease combined with a high measured pass rate (91%) may be attributed to motor vehicles being manufactured with better emissions control technology with each new model year. However, the inspection portion of the I/M program remained effective because it detected over 200,000 polluting vehicles each year that were repaired and ultimately passed their emissions test. The stringent maintenance portion of the I/M program also ensures that vehicle owners keep their vehicles well maintained and repair them prior to emissions testing.

The following table provides the testing volume for the years covered by this reporting period. **Testing Volume for the 2017 – 2018**

**Data taken from Appendix A in the annual report of the year indicated**

<b>Initial</b>					<b>After Repair</b>			
	<b>Test Type</b>	<b>All</b>	<b>Pass</b>	<b>Fail</b>	<b>Test Type</b>	<b>All</b>	<b>Pass</b>	<b>Fail</b>
	<b>2017</b>	<b>OBD</b>	2,797,187	2,548,433	248,754	<b>OBD</b>	235,162	197,108
<b>ASM</b>		48,562	38,057	10,505	<b>ASM</b>	12,779	7,317	5,462
<b>TSI</b>		3,512	3,188	324	<b>TSI</b>	483	325	158
<b>Total</b>		2,849,261	2,589,678	259,583	<b>Total</b>	248,424	204,750	43,674
<b>Rate:</b>			90.9%	9.1%	<b>Rate:</b>		82.4%	17.6%
<b>2018</b>	<b>Test Type</b>	<b>All</b>	<b>Pass</b>	<b>Fail</b>	<b>Test Type</b>	<b>All</b>	<b>Pass</b>	<b>Fail</b>
	<b>OBD</b>	2,883,247	2,634,369	248,878	<b>OBD</b>	236,577	196,373	40,204
	<b>ASM</b>	30,009	24,092	5,917	<b>ASM</b>	7,052	4,124	2,928
	<b>TSI</b>	2,389	2,176	213	<b>TSI</b>	275	210	65
	<b>Total</b>	2,915,645	2,660,637	255,008	<b>Total</b>	243,904	200,707	43,197
<b>Rate:</b>		91.3%	8.7%	<b>Rate:</b>		82.3%	17.7%	
<b>Biennial</b>	<b>Test Type</b>	<b>All</b>	<b>Pass</b>	<b>Fail</b>	<b>Test Type</b>	<b>All</b>	<b>Pass</b>	<b>Fail</b>
	<b>OBD</b>	5,680,434	5,182,802	497,632	<b>OBD</b>	471,739	393,481	78,258
	<b>ASM</b>	78,571	62,149	16,422	<b>ASM</b>	19,831	11,441	8,390
	<b>TSI</b>	5,901	5,364	537	<b>TSI</b>	758	535	223
	<b>Total</b>	5,764,906	5,250,315	514,591	<b>Total</b>	492,328	405,457	86,871
<b>Rate:</b>		91.1%	8.9%	<b>Rate:</b>		82.4%	17.6%	

## **Program Changes**

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This section of the biennial report reflects the reporting requirements of 40 CFR 51.366(e) by addressing:

- (1) Any changes made in program design, funding, personnel levels, procedures, regulations, and legal authority, with detailed discussion and evaluation of the impact on the program of all such changes; and
- (2) Any weaknesses or problems identified in the program within the two-year reporting period, what steps have already been taken to correct those problems, the results of those steps, and any future efforts planned.

The Georgia Enhanced I/M Program is part of the Environmental Protection Division's Mobile and Area Source (MAS) Program. The MAS program had an administrative change. Program Manager, Pamela Earl retired and Michael Odom was appointed as the new MAS Program Manager. The Georgia Enhanced I/M Program was in maintenance mode<sup>1</sup> under the state contractor during the reporting period of calendar year 2017 and 2018. Multiple enhancements and program upgrades occurred and are outlined below.

### **Task 1 – Data System Requirements**

The following enhancements were implemented to improve the data system deliverables of Task 1:

- 10 Dashboard software releases were executed with 112 items that aided all tasks and improved user experience. The Dashboard is a software platform used to store program data, generate reports, audit data, compliance documentation, financial reporting and contains a station interface for purchasing e-certs (electronic emissions certificates), viewing audit history and managing station applications and inspector assignments.
- Vehicle Information Database (VID) changes included monthly maintenance activities meant to reclaim storage space.

### **Task 2 – Audit Requirements**

The following enhancements were implemented to improve audit requirement deliverables of Task 2:

- A new audit result of “Deficient” was added to overt audit types.
- Three priority tier levels were added to overt audits to allow EPD to focus more heavily on actions that will lead to more direct air quality improvements.
- SOP changes were made to remove any audit tasks that could be considered as subjective assessments and replace with objective measures to ensure true pass/fail results.
- A process change that allows stations to show electronic copies of documents as proof they have the Repair*Watch* Public Report, Certificate of Liability, Traction Control Chart, Inspector Training Manual, or the Fuel Cap Adapter Manual.

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<sup>1</sup> Maintenance mode refers to no program changes to the state's testing parameters such as rolling model years tested, newer model year exemptions, Gross Vehicle Weight Rating (GVWR) parameters.

### **Task 3 – Public Information and Consumer Protection**

The following enhancements were implemented to improve the public information and consumer protection deliverables of Task 3:

- New educational campaigns were launched with the use of press releases, infographics, infographic video, and web banners. The campaigns covered allergy season, Earth Day, Clean Air Month, “Check Engine” light awareness, back-to-school driving tips, the Clean Air Force Elite Program, and Fall Car Care maintenance tips.
  - Georgia’s Clean Air Force<sup>2</sup> began creating videos of its infographics for increased educational opportunities.
  - The website home page for GCAF was redesigned with the addition of new banners to promote seasonal educational campaigns and to highlight the most visited online resources.
- Social media marketing efforts included the continuation of Facebook, Twitter and YouTube. Paid Facebook ads were added as part of the annual advertising campaign.
- Media relations were enhanced with the use of new topics and infographic videos, in addition to the use of proactive pitching, press releases and infographics.
- The annual advertising campaign was enhanced with new creatives and the use of new mediums, including Pandora ads, Facebook ads, and solar-powered kiosks, in addition to outdoor digital billboards, gas station pump toppers, :10 and :15 radio traffic spots, MARTA taillight displays and a rail video, and online display ads.
- The annual training of tag office personnel was provided via online video presentation, along with a Google Docs link that included accompanying training material.
- The Clean Air Force Elite Program was launched to educate station owners, managers, and inspectors on best practices for customer service and inspection scenarios. The program included 288 participating stations who were promoted via the website, media relations, social media, and Repair*Watch* Public Report.

### **Task 4 – Training and Certification**

The following enhancements were implemented to improve the training and certification deliverables of Task 4:

- The Dashboard was enhanced to allow station owners to submit Station Recertification Applications and Station Update Requests through their Dashboard access.
- Initial inspector training was made available to all program applicants, even those not affiliated with a station. This allows students to apply for employment with stations using their inspector certification as a benefit towards employment in the industry.
- Inspector training manuals were revised to reflect changes in the program that occurred during the reporting period (includes the Emissions Inspector

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<sup>2</sup> Georgia’s Clean Air Force is the name of Georgia’s Enhanced Inspection & Maintenance Program and refers to the partnership between Georgia’s Environmental Protection Division and the management contractor, Applus Technologies, Inc.

Certification Training Program manual and the Inspection Equipment Hands-On Training manual).

### **Task 5 – Customer Service, and Waivers, Exemptions and Extensions**

The following enhancements were implemented to improve the customer service deliverables of Task 5:

- The Repair Waiver limit was updated in the Dashboard in 2017 and 2018.
- A PowerPoint training presentation was created to train tag office personnel on creating Senior Exemptions and Renewals in the Dashboard.
- A more in-depth Repair Waiver visual inspection training was put into place to include training by the L1<sup>3</sup> & Assistant.

### **Task 6 – Administration and Reporting**

The following enhancements were implemented to improve the deliverables of Task 6:

- The Daily Credit Card Transaction report in the Dashboard was improved by identifying and displaying the individual user that made transactions. Individual user IDs are better for auditing and tracking credit card transactions.
- Authorize.Net (our credit card processor) disabled TLS 1.0 and TLS 1.1. .Net 4.5 was installed and code was written to support Authorize. Net's new TLS 1.2 protocol. TLS 1.2 is a more secure protocol than 1.0 or 1.1, it reduces the risk of cyber attacks. TLS 1 risks man in middle attacks because of its age and weaker encryption/hash strength. Credit card processing is more secure and less exposed to risk by using the newer/stronger protocol.

## **Program Weaknesses or Problems**

During the two-year reporting period of 2017 and 2018, the program, as required, was monitored for any weaknesses or problems. No significant weaknesses or problems in the program that would warrant program changes were identified.

In June 2018, EPD completed a project to streamline compliance protocols to focus on infractions with the greatest potential impact to air quality. The project resulted in greater efficiencies in both compliance and enforcement activities and a more effective use of staff man-hours. Combined with enhanced facility education and compliance assistance, the project led to a 20% reduction in overall infractions.

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<sup>3</sup> A L-1 certified mechanic has passed a national exam and considered an Advanced Engine Performance Specialist, who is able to diagnosis emissions and drivability problems.

## **Conclusion**

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During the two-year reporting period of 2017 and 2018, the I/M program reduced NOx emissions by 6,188 tons in 13 metro Atlanta counties. Over 500,000 vehicles were identified as needing repairs to reduce emissions as a result of the I/M program during the two-year reporting period.