

# Air Pollution Reduction Incentive Programs PROGRAM REVIEW REPORT

**South Coast Air Quality Management District  
Fiscal Years 2008-09 through 2014-15**

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**State of California  
Air Resources Board  
December 2019**

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## 1. Introduction

The California Air Resources Board (CARB) is responsible for oversight of the State of California's voluntary air pollution reduction incentives programs, which are implemented through California's 35 local air pollution control districts and air quality management districts (air districts). As part of this oversight responsibility, CARB staff in the Mobile Source Control Division and the Transportation and Toxics Division has conducted a review of the incentive programs implemented by the South Coast Air Quality Management District (South Coast AQMD or District).

CARB incentive program reviews serve the public interest for transparency and accountability, helping to ensure that expenditures of State funds achieve intended outcomes and are within legal requirements. Projects are selected for review following a risk evaluation. These projects represent a percentage of the funds expended during the years within the overall scope of the review. Unless noted, issues and findings reported here pertain to the individual circumstances described and do not apply to other projects, although they may be indicative of similar issues occurring with projects not reviewed.

The South Coast AQMD is the largest of California's local air districts and is responsible for air quality within Los Angeles County, Orange County, Riverside County and a portion of San Bernardino County. The District implements air pollution reduction incentive projects in the counties mentioned which are approximately 10,743 square miles and home to over 16.8 million people—about half the population of the whole state of California. Incentive programs are an important element of regional attainment strategies, reducing emissions to help meet requirements of the federal Clean Air Act Amendments and the California Clean Air Act.

CARB staff conducted the review that is the subject of this report between May 2018 and June 2019. CARB staff reviewed the District implementation of the following programs:

- The Air Quality Improvement Program [Assembly Bill (AB) 118] (AQIP)
- The Carl Moyer Memorial Air Quality Standards Attainment Program (Carl Moyer Program)
- The Proposition 1B: Goods Movement Emission Reduction Program (Goods Movement Program)
- The Lower-Emission School Bus Program (School Bus Program)

AQIP was established by the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (AB 118) to fund clean

vehicle and equipment projects that reduce criteria and toxic air pollutants. AQIP is funded by vehicle registration (smog abatement) fees, vehicle registration, and vessel registration fees. CARB develops the statewide implementation guidelines, distributes funds to air districts, and conducts periodic oversight. The statute lists eight broad categories for project types, of which the District has implemented a Lawn and Garden Program that replaces gas-powered lawn mowers with electric lawn mowers. The District has also implemented several Technology Demonstration Program including a Marine Advanced Technology Demonstration Project. The South Coast AQMD (like other large and medium-sized air districts) contributes match funds as required by AQIP.

The Carl Moyer Program funds the extra capital cost of cleaner-than-required vehicles and equipment to help achieve air pollution reductions that are surplus to regulations. Funds for the Carl Moyer Program come from tire replacement and vehicle registration (smog abatement) fees. CARB develops statewide implementation guidelines, distributes funds to air districts, and conducts periodic oversight. Air districts choose which project types to fund from a variety of eligible categories, including on-road and off-road vehicles and equipment, marine, shore power, locomotives, stationary agriculture pumps, emergency vehicles and equipment, infrastructure, lawn and garden equipment, and light duty vehicle scrappage. Funded projects must achieve early or extra emission reductions not otherwise required by law or regulation. The South Coast AQMD (like other large and medium-sized air districts) contributes match funds as required by the Carl Moyer Program.

The Goods Movement Program offers grants to owners of equipment used in freight movement to fund the purchase of cleaner technologies to reduce air pollution emissions and health risk from freight movement along California's trade corridors. The Goods Movement Program is funded by bonds authorized by Proposition 1B, and is implemented by local agencies that apply to CARB for grants to fund specific project categories. At the discretion of the implementing local agency, the project categories may include heavy duty trucks locomotives, ships at berth, commercial harbor craft, cargo handling equipment, and transport refrigeration units that operate in specific trade corridors. CARB develops guidelines, awards grants to fund projects proposed by air districts and seaports, and conducts periodic oversight. As with the Carl Moyer Program, the Goods Movement Program projects must achieve early or extra emission reductions that are not otherwise required by law or regulation. The Goods Movement Program does not require the District to contribute match funds toward this program.

The Lower-Emission School Bus Program (School Bus Program) helps clean up the school buses that serve California's public schools in order to reduce the exposure of school children to diesel exhaust. The School Bus Program is funded by bonds authorized by Proposition 1B, by local Assembly Bill 923 (AB 923) and Assembly Bill 2766 (AB 2766) funds, and by grants of federal Diesel Emission Reduction Act (DERA) funds. The program provides grants to purchase new school buses that replace older, high-emitting buses or to retrofit existing diesel bus engines with CARB-verified diesel

emission control systems. CARB develops statewide implementation guidelines, distributes State and federal funds to air districts, and provides oversight of program implementation. Air districts select and fund school bus projects with public school districts and transportation providers in their areas. The School Bus Program does not require the District to contribute match funds.

This review was conducted in accordance with CARB's policies and procedures for review of incentive programs, which are viewable at the following CARB website: <http://www.arb.ca.gov/msprog/moyer/audits/audits.htm>. The scope of the review includes grant agreements between CARB and the District made in fiscal years (FY) 2008-09 through 2014-15. The review began with an entrance conference held on May 15, 2018, at the District office. The results of the program review were presented during an exit meeting held with the District on August 7, 2019.

CARB's programmatic review was supplemented by a fiscal compliance review conducted by the State Controllers' Office (SCO). SCO staff finalized and presented their draft report at a separate exit meeting held with the District on May 24, 2019. The SCO final report dated November 26, 2019 determined that the District complied with all program and applicable accounting standards; however, the audit identified some weaknesses with the District's subsidiary ledgers. SCO's final report will be posted on the State Controller's Office and CARB websites. The Goods Movement Program was not subject to the fiscal compliance audit.

This report describes the scope of the programmatic review, the projects selected for review and site inspection, and any findings, recommendations, and commendable efforts. Under established policies and procedures for program reviews, the District has 30 days from the date of this report's cover letter to submit its comments. CARB and the State Controllers' Office reports will be posted with air district comments on CARB Incentive Program Oversight webpage, at: <http://www.arb.ca.gov/msprog/moyer/audits/audits.htm>.

## 2. Overall Assessment

CARB program review has concluded that the District's incentive programs are efficiently and effectively achieving their emission reduction objectives. A summary review of each program follows below.

### a. Air Quality Improvement Program

The District received approximately \$918,474 in AQIP funds for the years within the scope of review during FY 2010-11. While three projects (see Table 1) were funded in FY 2010-11, the largest grant was awarded for a Marine Advanced Technology Demonstration Project, which was selected for review. The grant of \$372,492.98, was used for demonstration of feasibility of a marine advanced technology to reduce main engine usage or demonstrate emission reducing technology while maintaining vessel operational requirements on a marine vessel. The District's proposal to retrofit a

Tugboat with HUG Nauticlean® diesel particulate filter/selective catalytic reduction (DPF/SCR) System was selected. The District also implemented a Lawn and Garden Equipment Replacement Project and a Demonstration Project of Cordless Zero-Emission Lawn and Garden Equipment for Commercial Use in FY 2010-11. However, this program review focused on the Marine Advanced Technology Demonstration Project.

*CARB staff identified no findings or recommendations for the District's implementation of the Air Quality Improvement Program.*

*b. Carl Moyer Program*

For the years within the scope of review, FYs 2009-10 through 2014-15, the District funded 3,053 projects and 26,554 engines with \$173,119,128 in State funds and District Match funds and \$10,139,317 in Multi-district/State Reserve funds. Project categories within the scope of review included Marine, Off-Road Equipment Construction and Off-Road Equipment Mobile Agriculture, On-Road Heavy Duty, On-Road Voucher Incentive Program, Infrastructure, Lawn and Garden, and Other projects.

*CARB staff identified no findings for the District's implementation of the Carl Moyer Program, but offers one recommendation following review of project files. The recommendation is discussed in Section 5 of this report.*

*c. Goods Movement Program*

For FYs within the scope of the review, the District accepted seven Goods Movement Program grants totaling \$372,049,895.00. This includes three FY 2008-09 grants (Year 2) for \$104,496,696; 2 FY 2011-12 grants (Year 2 and 3) for \$68,833,662; one FY 2013-14 grant (Year 4) for \$81,219,537 and one FY 2014-15 grant (Year 5) for \$117,500,000 covering multiple source categories. According to District reports, the FY 2008-09 and the FY 2011-12 truck grants funded the replacement of 1,522 heavy duty diesel trucks, the installation of CARB-certified Level-3 Retrofit devices on 386 diesel trucks, and the completion of 1 truck stop/distribution center electrification project. (CARB combined the FY 2008-09 and FY 2011-12 grants for the truck projects because these grants covered projects from the same statewide solicitation and the same ranked lists). The other FY 2008-09 grants funded the replacement of 6 old dirty medium horsepower line-haul locomotives, and the installation of shore power at 25 berths. FY 2011-12 drayage grant funded the replacement of 104 drayage trucks. FY 2013-14 grant funded the replacement of 1,809 heavy duty diesel trucks. FY 2015-16 grant is expected to fund the replacement of 1,069 heavy duty diesel trucks, 10 medium horsepower line-haul locomotives, 14 cargo handling equipment, 21 Transport Refrigeration Units (TRU), and the installation of 467 electric power plugs to enable TRUs to plug in at freight facilities.

*CARB staff identified no findings or recommendations for the District's implementation of the Goods Movement Program.*

d. School Bus Program

For the fiscal years within the scope of the review, FYs 2008-09 through 2014-15 the Proposition 1B bond-funded School Bus Program, the District was granted \$71,179,635 for implementation of its School Bus Program. In total for the years within the scope of this review, the District reported funding 470 school bus replacement projects and 467 retrofit projects using Proposition 1B funding. Local AB 923 and AB 2766 funds co-funded many of the school bus replacement projects and fully funded multiple compressed natural gas (CNG) tank replacements. This met School Bus Program goals for the District and reduced exposure to diesel exhaust for thousands of South Coast school children.

*CARB staff identified no findings for the District's implementation of the School Bus Program, but offers two recommendations following review of project files. The recommendations are discussed in Section 5 of this report.*

### **3. Scope of the Program Review**

The scope of the review covered the District's implementation of incentive programs associated with grants awarded from FYs 2008-09 through 2014-15. Scope varies somewhat by program, as discussed below.

a. Air Quality Improvement Program

The District utilized Air Quality Improvement Program funds to do three (two Lawn and Garden and one tug boat) projects within the review period. One of the two Lawn and Garden projects, was a demonstration project of a commercially used cordless zero-emission Lawn and Garden Equipment.

The tug boat project that the District conducted was a demonstration of a combined DPF/SCR system installed on both propulsion engines of a tug boat. The objective of this project was to demonstrate in-use durability as well as 4-way emission (PM, NO<sub>x</sub>, HC, CO) reduction efficiency. The original agreement was amended to May 30, 2014, to allow additional time for project completion. Due to project delays, the District was unable to meet some project milestones. Grant Agreement Amendment No. 2 was issued to reduce the grant amount by \$50,854.17 and revise project milestones.

Table 1 lists the projects and administration funding that the District received to implement the AQIP projects and specifies the District’s match funding commitment.

**Table 1: Air Quality Improvement Program Funds<sup>1</sup> for Fiscal Year 2010-11**

Grant Number	Project Name	Project Funds	Administration Funds	Total Grant	Matching Funds	Total
G10-AQIP-09	Lawn & Garden Equipment Replacement Project	\$444,883.00	\$49,431.00	\$494,314.00	\$0	\$494,314.00
G10-AQIP-10	Tug Boat Retrofit Project	\$346,580.00	\$41,565.83	\$372,492.98 (\$388,145.83) <sup>2</sup>	\$439,114.14	\$827,259.97
G10-AQIP-15	Demonstration of Cordless Zero-Emission Lawn and Garden Equipment for Commercial Use	\$51,667.00	\$0	\$51,667.00	\$52,872.00	\$104,539.00
<b>Totals</b>		<b>\$843,130.00</b>	<b>\$90,996.83</b>	<b>\$918,473.98</b>	<b>\$491,986.14</b>	<b>\$1,426,112.97</b>

<sup>1</sup> Interest earned by the District is not included in table.

<sup>2</sup> According to the final disbursement request, demonstration of DPF/SCR System was not completed by the time this contract ended; \$15,652.85 was not disbursed for this project and the total grant disbursed was \$372,492.98.

**b. Carl Moyer Program**

For the Carl Moyer Program, the scope of the review covered grants awarded in FYs 2009-10 through 2014-15. The review team selected 18 projects for full review. The source categories in the scope included the lawn and garden; marine commercial; infrastructure; on-road heavy-duty voucher incentive program; on-road fleet modernization; off-road construction, mobile agriculture, and cargo handling equipment listed in Appendix 2. Table 2 lists the project and administration funding that the District received to implement the program and lists the District’s match funding commitment for each year’s grant. Table 3 lists the Carl Moyer Program Multi-District funds and State Reserve funds.



**Table 2: Carl Moyer Program Grant Funds<sup>1</sup>**  
**Carl Moyer Program**

Fiscal Year	Grant Number	Project <sup>2</sup>	Administration	Total Grant	Matching Funds <sup>2</sup>	Total Carl Moyer Grant and Matching Funds
2009-10	G09-M028	\$25,161,511	\$1,324,290	\$26,485,801	\$3,972,870	\$30,458,671
2010-11	G10-M029	\$23,468,242	\$1,235,171	\$24,703,413	\$3,705,512	\$28,408,925
2011-12	G11-M028	\$24,992,165	\$1,315,377	\$26,307,542	\$3,946,131	\$30,253,673
2012-13	G12-M028	\$22,068,441	\$1,161,497	\$23,229,938	\$3,484,491	\$26,714,429
2013-14	G13-M028	\$23,081,534	\$1,214,818	\$24,296,352	\$3,644,453	\$27,940,805
2014-15	G14-M029	\$24,239,560	\$1,275,766	\$25,515,326	\$3,827,299	\$29,342,625
<b>Total</b>		\$143,011,453	\$7,526,919	\$150,538,372	\$22,580,756	\$173,119,128

<sup>1</sup> Interest earned by the District is not included in table.

<sup>2</sup> CARB waived the match requirement for the multi-district grants.

**Table 3: Carl Moyer Program—Multi-District/State Reserve**

Fiscal Year	Grant Number	Project <sup>1</sup>	Administration	Total Grant	Matching Funds <sup>1</sup>	Total Carl Moyer Grant and Matching Funds
2009-10	G09-M037	\$1,391,861	\$73,572	\$1,471,433	-	\$1,471,433
2010-11	G10-M038	\$2,607,583	\$137,241	\$2,744,824	-	\$2,744,824
2011-12	G11-M039	\$2,776,907	\$146,153	\$2,923,060	-	\$2,923,060
2012-13 <sup>2</sup>	-	-	-	-	-	-
2013-14	G13-M035	\$2,850,000	\$150,000	\$3,000,000	-	\$3,000,000
2014-15 <sup>2</sup>	-	-	-	-	-	-
<b>Total</b>		\$9,632,351	\$506,966	\$10,139,317	-	\$10,139,317

<sup>1</sup> CARB waived the match requirement for the multi-district grants.

<sup>2</sup> The District did not receive Multidistrict-State Reserve funds for FY 2012-13 and FY 2014-15

**c. Goods Movement Program**

For the Goods Movement Program, the scope of the review covered the FY 2008-09, FY 2011-12, FY 2013-14, and FY 2014-15 grants which provided funds for Year 2, Year 3, Year 4, and Year 5 projects (as defined on page 4). Table 4 lists the project and administration grant amounts for the District to implement the program.

**Table 4: Goods Movement Program Grants<sup>1</sup>**

Fiscal Year	Grant Number	Project	Administration	Total Grant
2008-2009	G08GMLT1	\$37,989,115.00	\$1,899,456.00	\$39,888,571.00
2008-2009	G08GMLS1	\$58,201,717.00	\$1,771,408.00	\$59,973,125.00
2008-2009	G08GMLL1	\$4,500,000.00	\$135,000.00	\$4,635,000.00
2011-2012	G11GMLT1	\$62,410,868.00	\$3,120,544.00	\$65,531,412.00
2011-2012	G11GMLP1	\$3,145,000.00	\$157,250.00	\$3,302,250.00
2013-2014	G13GMLT1	\$77,351,940.00	\$3,867,597.00	\$81,219,537.00
2014-2015	G14GMLT1	\$112,308,381.00	\$5,191,619.00	\$117,500,000.00
<b>Total</b>		<b>\$355,907,021.00</b>	<b>\$16,142,874.00</b>	<b>\$372,049,895.00</b>

<sup>1</sup>Interest earned by the District is not included in table.

*d. School Bus Program*

For the School Bus Program, the scope of the review covered FYs 2008-09 through FY 2014-15. Table 5 lists the School Bus Program project funds, administration funds and local funding the District received to implement the Program during the scope of the review.

**Table 5: Lower-Emission School Bus Funds<sup>1</sup> and FY 2008-09 through FY 2014-15 Proposition 1B and Local Funds**

Funding Source	Project Funds	Administration Funds	Total Funds
South Coast Air Quality Management District Grant G07-SB031	\$69,847,912.52	\$1,331,722.48	\$71,179,635.00
AB 923 <sup>2</sup>	\$16,602,442	\$0	\$16,602,442
AB 2766 <sup>2</sup>	\$1,498,769	\$0	\$1,498,769
<b>Totals</b>	<b>\$87,949,123.52</b>	<b>\$1,331,722.48</b>	<b>\$89,280,846.00</b>

<sup>1</sup>Interest earned by the District is not included in table.

<sup>2</sup>AB 923 and AB2766 funds reported here were used to co-fund Proposition 1B projects.

## 4. Projects Selected for Review and Site Inspection

In choosing specific projects for review, CARB staff considered the diversity of project types funded by the District within the scope of the program review. The funding sources considered in selecting the review sample included all grant and match funds listed in Table 1 through 5 above, as well as the interest earned on those grant funds and expended on projects.

The District also used \$2 Assembly Bill 923 motor vehicles fees to fund projects (match and non-match) during the time period covered by the review. Such projects were considered in selecting the review sample. CARB did select and evaluate one non-match \$2 Assembly Bill 923 funded project.

Below is an overview of projects within the scope for each program. CARB staff selected a total of nine projects for inspection. For the 18 Carl Moyer Projects, 4 were selected for site inspection, for the 10 School Bus Program projects, 2 were selected for inspection, and for the 48 Goods Movement Program projects, 3 were selected for inspection as identified in Appendix Tables 1 – 4.

### a. Air Quality Improvement Program

As discussed in Sections 2 and 3, and shown in Table 1, the tugboat project was selected for review; no AQIP projects were selected for inspection.

The District received approximately \$439,000 in AQIP funds for the years within the scope of review, FY 2010-11. Although the CARB grant ended due to some delays, the demonstration project was continued to complete 1000 in-use operating hours and final emissions tests for the (6 month) field demonstration of the DFP/SCR after treatment system to investigate the effectiveness of the system to reduce PM, NO<sub>x</sub>, HC, and CO emissions from a tug boat.

### b. Carl Moyer Program

Table 6 summarizes the overall source categories funded and the number of engines and projects funded for each Moyer Program fund source within the scope of the review. Although Table 6 is displayed on two pages (pages 10 and 11), the last 2 columns of Table 6 on page 11 provide the total number of engines and projects for all FYs reviewed. The review team selected 18 projects for full file review as shown in Table A2 of the Appendix. Following the file review and based on its results, the review team selected 4 projects for inspection in the field. The source categories in the scope included lawn and garden; marine commercial; infrastructure; on-road heavy-duty voucher incentive program; on-road fleet modernization; off-road construction, mobile agriculture, and cargo handling equipment. Because projects often include multiple engines, engines are shown in the table along with the total number of projects by source category.

**Table 6: Carl Moyer Program Engines and Projects\***

Fund Source	Source Category	2009-10 Engines	2009-10 Projects	2010-11 Engines	2010-11 Projects	2011-12 Engines	2011-12 Projects
Carl Moyer Program	Marine	107	38	139	56	90	38
	Off-Road Construction	133	25	107	20	78	21
	Off-Road Mobile Agriculture	0	0	2	1	19	3
	On-Road Heavy Duty	51	2	36	1	22	4
	Lawn and Garden	0	0	2,788	1	6,623	2
Carl Moyer Program Multi-District State Reserve	On-Road Voucher Incentive Program (VIP)	121	121	265	265	104	104
Match	Infrastructure	7	7	14	14	11	11
Match	Other	39	9	9	5	15	7
<b>Total</b>		<b>458</b>	<b>202</b>	<b>3,360</b>	<b>363</b>	<b>6,962</b>	<b>190</b>

\*Projects for which funding is split among multiple funding sources are shown in each source, but are counted as one project in the totals.

Source of Data: Carl Moyer Program Clean Air Reporting Log (CARL) database 4/30/ 2019.

**Table 6: Carl Moyer Program Engines and Projects (Continued)\***

Fund Source	2012-13 Engines	2012-13 Projects	2013-14 Engines	2013-14 Projects	2014-15 Engines	2014-15 Projects	Total Engines 2009-10 to 2014-15	Total Projects 2009-10 to 2014-15
Carl Moyer Program	89	43	67	31	517	260	1,009	466
	75	27	98	26	605	509	1,096	628
	19	4	61	9	135	135	236	152
	10	1	184	2	334	334	637	344
	1,613	1	0	0	11,024	4	22,048	8
Carl Moyer Program Multi-District State Reserve	9	9	42	42	552	552	1,093	1,093
Match	0	0	0	0	32	32	64	64
Match	98	85	16	6	194	186	371	298
<b>Total</b>	<b>1,913</b>	<b>170</b>	<b>468</b>	<b>116</b>	<b>13,393</b>	<b>2,012</b>	<b>26,554</b>	<b>3,053</b>

\* Projects for which funding is split among multiple funding sources are shown in each source, but are counted as one project in the totals.

Source of Data: Carl Moyer Program Clean Air Reporting Log (CARL) database 4/30/ 2019.

c. Goods Movement Program

Table 7 summarizes the Goods Movement Program grants, with the number of truck retrofit and truck replacements, TRU replacements, shore power and cargo handling equipment, and locomotives funded as of the entrance conference held on May 15, 2018. The review team selected 48 projects for full file review, as shown in Table A3 of the Appendix. Following the file review and based on its results, the review team selected 3 projects for inspection in the field.

**Table 7: Goods Movement Program Projects Funded**

Grant Number / Funding Category	Replacement	Retrofit	Infrastructure	Total Projects
G08GMLT1& G11GMLT1 <sup>1</sup> Heavy Duty Trucks	1,522	386	1 <sup>2</sup>	1,909
G08GMLL1 Locomotives	6	0	0	6
G08GMLS1 Ships at Berth & Cargo Handling Equipment	0	0	25 <sup>3</sup>	25
G11GMLP1 Drayage Trucks	104	0	0	104
G13GMLT1 Heavy Duty Trucks	1,809	0	0	1,809
GMB14-L11 <sup>1,4,5</sup> Heavy Duty Trucks	190	0	0	190
GMB14-L1 <sup>4</sup> Locomotives	10	0	0	10
GMB14-L1 <sup>4,6</sup> Transport Refrigeration Units	0	0	0	0
GMB14-L1 <sup>3,4,7</sup> Ships at Berth & Cargo Handling Equipment	0	0	0	0
<b>Total</b>	<b>3,641</b>	<b>386</b>	<b>26</b>	<b>4,053</b>

<sup>1</sup>CARB combined the FY2008-09 and FY20011-12 grants for the truck projects because these grants covered projects from the same statewide solicitation and the same ranked lists, although the funds are from different fiscal year appropriations. Additionally, the information for the FY2014-15 truck projects include funds reallocated from the FY2013-14 grant that were not utilized due to project fallout.

<sup>2</sup>Distribution center electrification project.

<sup>3</sup>Grid-based shore power at ports.

<sup>4</sup>Grant GMB14-L1 includes four source categories: Trucks, Locomotives, TRUs, and Ships a Berth/CHE.

<sup>5</sup>District Report shows additional 897 trucks under contract.

<sup>6</sup>District Report shows 764 TRUs and electric power plugs under contract.

<sup>7</sup>District Report shows 14 pieces of equipment including zero-emission yard trucks, RTG cranes, and lifts under contract.

*d. School Bus Program*

Table 8 summarizes the School Bus Program project types, the number of projects, and the individual buses funded by the District within the scope of the review. The review team selected 10 projects for full file review, as shown in Table A4 of the Appendix. Project types include funding sources and the different types of projects: retrofits of school bus diesel engines and replacements of old school buses with CNG or propane buses. The review team selected 10 projects that included 96 buses for

full file review. Following the review, 2 projects, which included 6 buses, were selected for inspection in the field.

**Table 8: Lower-Emission School Bus Program  
 Projects and Number of Buses Funded<sup>1,2</sup>**

Grant Name	Project Type	Retrofits	Replacements	Total
Grant G07-SB031 Fiscal Year 2008-09—FY 2014-15	Buses	467	470	937
	Projects	44	32	76

<sup>1</sup> Each contract with a public school or transportation provider is counted as a project; one project may include multiple buses

<sup>2</sup> Current as of November 1, 2014 (from Proposition 1B bond database)

## 5. Review Findings and Recommendations

“Findings” are district practices found to be inconsistent with one or more of the items below. “Conditions” are detailed descriptions of the District’s practices that resulted in findings as revealed by the review. “Required Actions” are the minimum actions the District must take to mitigate the findings.

CARB staff may offer “Recommendations” when district practices are found to be inconsistent with one or more items below and mitigation is not required, but a change in practices would improve program effectiveness, efficiency, or transparency.

- State requirements including those under Health and Safety Code sections as follows:
  - 39625 through 39627.5—Goods Movement Program.
  - 44275 through 44299.2—Carl Moyer Program.
  - 44299.90 through 44299.91—School Bus Program.
- Governor’s Executive Order S-02-07.
- Carl Moyer, School Bus, and Goods Movement Program Guidelines (2006 and newer versions) (<http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>) (<http://arb.ca.gov/bonds/schoolbus/guidelines/2008lesbp.pdf>)
- Goods Movement Program Guidelines [https://www.arb.ca.gov/bonds/gmbond/docs/prop\\_1b\\_goods\\_movement\\_2015\\_program\\_guidelines\\_for\\_implementation.pdf](https://www.arb.ca.gov/bonds/gmbond/docs/prop_1b_goods_movement_2015_program_guidelines_for_implementation.pdf)
- Carl Moyer Program 2005 Guidelines (January 6, 2006), California Air Resources Board
- Carl Moyer Program 2008 Guidelines (April 21, 2008), California Air Resources Board

- Carl Moyer Program 2011 Guidelines (December 31, 2014), California Air Resources Board
- Carl Moyer and School Bus Program advisories, Mail-outs, and other written communications
- Carl Moyer Program and School Bus Program advisories, Mail-outs, and other written communications
- Carl Moyer and School Bus Program Grant Award and Authorization requirements
- Goods Movement Program Local Agency Grant Agreements
- Goods Movement Program CARB Resolutions and Executive Orders
- Goods Movement Program Staff Reports
- District policies and procedures and forms, including contracts with the engine owners/grant recipients

CARB staff identified no findings for the District's implementation of incentive programs from either file review or project inspections. Note that the results of the SCO independent fiscal review is included in their separate report, to be posted on CARB's incentive program review website at <http://www.arb.ca.gov/msprog/moyer/audits/audits.htm>.

Following completion of project file reviews for the Carl Moyer Program and the School Bus Program, CARB offers two recommendations below. District staff has responded and acknowledged these recommendations, indicating the intent to review their file documentation procedures, and grant award agreements with additional detail and clarification for consistency.

a. *Recommendation for the Carl Moyer Program and School Bus Program*

*Development of additional project file procedures may ensure file completeness and agreement with reporting databases(s).* For four project files reviewed, staff found instances of incomplete information that required follow-up.

Further attention from District staff to file documentation may help to ensure file completeness. After discussion of the recommendation at pre-exit and exit meetings with District staff and management, the District has taken prompt action to respond proactively to correct all project file review requests from CARB as soon as they were aware of it.

b. *Additional Recommendations for the School Bus Program*

*Review Grant Award and Authorization Agreement (Agreement) language to ensure contractual requirements are consistent throughout, and consistent with the Lower Emission School Bus Program Guidelines.* During file review for one of the projects, contained several different requirements for the dismantling of old school buses and found in the multiple sections of the Agreement.



After discussion of the recommendations at pre-exit and exit meetings with District staff and management, the District has taken prompt action to respond proactively to clarify Agreement language and to correct all project file review requests from CARB as soon as they were aware of it. Further attention from District staff to file documentation may help to ensure file completeness.

## 6. Commendable Efforts

A commendable effort is an exceptional practice that goes beyond the basic requirements for implementing an incentive program. As a result of this review, CARB staff has identified four areas of commendable effort by the District.

a. Commendable Effort for the Air Quality Improvement Program

*CARB staff commends the District for maintaining documentation beyond the records retention period required by the Grant Agreement.*

b. Commendable Effort for the Carl Moyer Program, School Bus Program and Goods Movement Program

*CARB staff commends the District for the large number of projects and equipment funded for the Carl Moyer Program, Goods Movement Program and School Bus Program while servicing four counties in southern California and continuing a shared goal of creating emission reductions for the environment.*

c. Commendable Efforts for the School Bus Program

*CARB staff commends the District for its quick response and diligence in responding to requests for additional documentation that was not contained in the file.*

*CARB staff commends the District for their implementation of the School Bus Program which, since inception, has overseen 1,600 pre-1994 diesel bus replacements with clean alternative fueled buses as well as 3,400 diesel particulate filter retrofit installations. This important work has resulted in substantial emission reductions of diesel particulate matter and Oxides of Nitrogen. The emission reductions achieved have significantly helped to clean the air children breathe.*

## 7. Resources

1. California Air Resources Board Lower-Emission School Bus website  
<http://www.arb.ca.gov/msprog/schoolbus/schoolbus.htm>
2. California Air Resources Board Carl Moyer Program website  
<http://www.arb.ca.gov/msprog/moyer/moyer.htm>
3. California Air Resources Board Goods Movement Emissions Reduction Program website, <http://www.arb.ca.gov/bonds/gmbond/gmbond.htm>
4. California Air Resources Board Incentives Program Audit and Program Reviews website (includes previous reports and Policies and Procedures)  
<http://www.arb.ca.gov/msprog/moyer/audits/audits.htm>
5. California Air Resources Board AQIP and Low Carbon Transportation Advanced Technology Demonstration Projects website  
<https://www.arb.ca.gov/msprog/aqip/demo.htm>
6. *Lower-Emission School Bus 2008 Guidelines* (April 15, 2008), California Air Resources Board
7. *Lower-Emission School Bus 2006 Guidelines* (March 2, 2006), California Air Resources Board
8. *Carl Moyer Program 2005 Guidelines* (January 6, 2006), California Air Resources Board
9. *Carl Moyer Program 2008 Guidelines* (April 21, 2008), California Air Resources Board
10. *Carl Moyer Program 2011 Guidelines* (December 31, 2014), California Air Resources Board
11. *Proposition 1B: Goods Movement Emission Reduction Program, Final 2015 Guidelines for Implementation* (June 2015)
12. *Governor's Executive Order S-02-07*
13. Goods Movement Program Local Agency Grant Agreements
14. Goods Movement Program CARB Resolutions and Executive Orders
15. Goods Movement Program Staff Reports

Appendix 1  
Air Quality Improvement Program Projects Reviewed

**Table 1**  
**Projects Reviewed -- Air Quality Improvement Program**

Grantee	Contract Number	Project Inspected by CARB
South Coast Air Quality Management District: Retrofit a Tugboat with Hug Nauticlean® DPF/SCR System	G10-AQIP-10	No

Appendix 2  
 Carl Moyer Program Projects Reviewed  
**Table 2**  
 Projects Reviewed -- Carl Moyer Program

Fiscal Year		Project Number	Grantee	Source Category	Project Inspected by ARB (Yes/No )
1	2009-2010	San Pedro Bait Co.	Pamela Rose	Marine - Repower	No
2	2009-2010	Y12VIP-27213	1FUVDXYB6WP92713	On-Road VIP Heavy-Duty Vehicle -Tractor	No
3	2009-2010	12079	Y12-Waste Management Co.	On-Road Heavy-Duty Vehicle - Repower	Yes
4	2010-2011	10055	Y-13 Waste Management – Refueling Station	Infrastructure	No
5	2010-2011	12173-1	LA Sheriff Department	Emergency Vehicle	No
6	2010-2011	12266	Y13-Seaway Company Catalina-Marine	Marine – Tug Boat Repower	No
7	2010-2011	12221	Y13-HarleyMarineService	Marine – Tug Boat Repower	No
8	2010-2011	391861	Lawn Mower Exchange Program	Electric/Fuel Cell Mowers	No
9	2011-2012	13328	Y14-Thermiculture	Off-Road Construction Equipment Replacement	No
10	2011-2012	13466	SOON-JKM Equipment	Off-Road Construction Equipment Repower	No
11	2012-2013	14070	Y-15 Chandlers sand	Off-Road Mobile-Ag Replacement	No
12	2012-2013	14100	Cape Blanco Fishing	Marine - Repower	No
13	2012-2013	Y15VIP-83737	1NPALFOX17D683737	On-Road VIP Heavy-Heavy Duty Vehicle	No
14	2013-2014	16068	Y16-SUKUT	Off-Road Construction Equipment Repower	No
15	2013-2014	15443	Y16-OCTA	On-Road Heavy-Duty Vehicle - Repower	Yes
16	2014-2015	16149	Y17-PatriotGrad	Off-Road Construction Equipment Repower	No
17	2014-2015	16178	Oasis Ranch MGM-RPL	Off-Road Mobile-Ag Replacement	Yes
18	2014-2015	16186	Y17-Repower Diesel Trucks	Off-Road Equipment Cargo Handling	Yes

Appendix 3  
 Goods Movement Program Projects  
 Reviewed Fiscal Year 2008-2009 and  
 2011-2012

Project Number	Grantee	Project Type	Project Inspected by CARB (Yes/No)
G08GMLT1_01745	RRM Properties	Replacement	No
G08GMLT1_02476	Evel Ernesto Flores	Replacement	No
G08GMLT1_02475	Applebee Leasing, Inc.	Replacement	No
G08GMLT1_01579	Ecology Auto Parts, Inc.	Replacement	No
G08GMLT1_03838	Anthony George Sacre	Replacement	No
G08GMLT1_03457	Foster Poultry Farms LLC	Replacement	No
G08GMLT1_02141	Custom Alloy Metals	Replacement	No
G08GMLT1_01156	Lee Jennings Target Express, Inc.	Replacement	No
G08GMLT1_01528	Rockview Farms	Replacement	No
G08GMLT1_03379	Mountain Valley Express Co., Inc.	Retrofit	Yes
G08GMLL1_00018	BNSF Railway Company	Replacement	No
G08GMLS1_00030	Port of Hueneme	Infrastructure	No
G08GMLS1_00022	Port of Long Beach	Infrastructure	No

Goods Movement Program Projects  
 Reviewed Fiscal Year 2008-2009 and  
 2011-2012

Project Number	Grantee	Project Type	Project Inspected by CARB (Yes/No)
G11GMLP1_00128	Jose Julian Lara	Replacement	No
G11GMLP1_00151	Route 1 Transport	Replacement	No

Goods Movement Program Projects  
 Reviewed Fiscal Year 2013-2014

Project Number	Grantee	Project Type	Project Inspected by CARB (Yes/No)
G13GMLT1_01681	Jose A. Gutierrez dba Chicho's Delivery & Service	Replacement	Yes
G13GMLT1_01694	TCI Leasing & Rentals	Replacement	No
G13GMLT1_02275	CR&R Incorporated	Replacement	No
G13GMLT1_02600	Superior Ready Mix Concrete, L.P.	Replacement	No
G13GMLT1_02932	Dependable Highway Express	Replacement	No
G13GMLT1_04337	Alexis Trucking	Replacement	No
G13GMLT1_02660	Anthony H Osterkamp Jr	Replacement	No
G13GMLT1_02097	AJR Trucking Inc.	Replacement	No
G13GMLT1_03418	EA & A Company	Replacement	No
G13GMLT1_04601	Gonzalez Freightbusters	Replacement	No
G13GMLT1_00143	Telluric Petroleum	Replacement	No
G13GMLT1_04559	United Cargo Logistics, Inc.	Replacement	No

### Goods Movement Program Projects Reviewed Fiscal Year 2014-2015

Project Number	Grantee	Project Type	Project Inspected by CARB (Yes/No)
G14GMLT1_00520	Mountain Valley Express Co., Inc.	Replacement	No
G14GMLT1_00818	Penske Truck Leasing Co., LP	Replacement	No
G14GMLT1_00658	CalPortland Company	Replacement	No
G14GMLT1_00014	Nueva Vision Trucking, Inc.	Replacement	No
G14GMLT1_00773	Overseas Freight, Inc.	Replacement	No
G14GMLT1_00603	Matheson Postal Services, Inc.	Replacement	<b>Yes</b>
G14GMLT1_00781	Overseas Freight, Inc.	Replacement	No
G14GMLT1_01566	AJR Trucking Inc.	Replacement	No
G14GMLT1_01544	Quik Pick Express, LLC	Replacement	No
G14GMLT1_00897	United Parcel Service, Inc.	Replacement	No
G14GMLT1_00032	Sequoia Transportation	Replacement	No

Appendix 4  
 Projects Reviewed  
 Lower-Emission School Bus Program

<b>Fiscal Year</b>	<b>Project File Number</b>	<b>Grantee</b>	<b>Project Type</b>	<b>Projects Inspected by ARB (Yes/No )</b>
2008-09	G09221	Anaheim City School District	Retrofit	No
2008-09	G09216	Chino Valley Unified School District	Replacement	No
2009-10	G09207	Long Beach Unified School District	Replacement	Yes
2009-10	G09236	Newhall School District	Retrofit	No
2009-10	G09241	Rialto Unified School District	Retrofit	No
2009-10	G12141	Rim of the World Unified School District	Replacement	No
2010-11	G11568	Los Angeles Unified School District	Replacement	Yes
2011-12	G09228	Durham School Services	Retrofit	No
2011-12	G12137	Los Angeles Unified School District	Replacement	No
2012-13	G13211	Fullerton School District	Replacement	No