



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**San Joaquin Valley Air Pollution Control District**

**2013 Annual Report**

**Indirect Source Review Program**

**Reporting Period:  
July 1, 2012 to June 30, 2013**

**San Joaquin Valley Unified  
Air Pollution Control District**

**Governing Board  
December 2013**

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## I. EXECUTIVE SUMMARY

This “2013 Annual Report on the District’s Indirect Source Review Program” was prepared by the San Joaquin Valley Unified Air Pollution Control District (District). District Rule 9510, (Indirect Source Review, or ISR), was adopted by the District’s Governing Board to reduce the impacts of growth in emissions resulting from new land development in the San Joaquin Valley. Rule 9510 is a commitment in the EPA approved PM<sub>10</sub> Attainment Demonstration Plan. The objective of the rule is to reduce emissions of nitrogen oxides (NO<sub>x</sub>) and particulate matter smaller than ten microns in aerodynamic diameter (PM<sub>10</sub>) associated with construction and operational activities of development projects occurring within the San Joaquin Valley. When it was adopted, District staff anticipated that the rule would reduce development project impacts on air quality by approximately 10.1 tons per day (NO<sub>x</sub>+PM<sub>10</sub>) by 2010. In spite of the downturn in the global economy and construction in the US, California, and the San Joaquin Valley, as of the date of this report the District has confirmed 13.2 tons per day of emissions reductions achieved through the implementation of this rule since 2006 (including mitigation resulting from “Voluntary Emission Reduction Agreements, or VERAs, as discussed later in this report).

District Rule 9510 applies to new development projects that would equal or exceed specific size limits called “applicability thresholds”. The applicability thresholds were established at levels intended to capture projects that emit at least two tons of NO<sub>x</sub> or two tons of PM<sub>10</sub> per year. The rule contains provisions exempting stationary source projects that are subject to the District’s stationary source permitting requirements.

Developers of projects subject to ISR must reduce a portion of the emissions occurring during construction and operational phases through on-site measures, or pay off-site mitigation fees. One hundred percent (100%) of all offsite mitigation fees are used by the District to fund emission reduction projects through its Incentives Programs, achieving emission reductions in behalf of the project. Additionally, developers pay an administrative fee equal to four percent (4%) of the required off-site fees. This fee is to cover the District’s cost of administering the off-site emission reduction projects.

In addition to reducing a portion of the development project’s impact on air quality through compliance with District Rule 9510, a developer can further reduce the project’s impact on air quality by entering into a VERA with the District to address the mitigation requirements under California Environmental Quality Act (CEQA). Under a VERA, the developer may fully mitigate project emission impacts by providing funds to the District, which funds are then used by the District to administer emission reduction projects on behalf of the project proponent. The District has entered into eighteen VERAs since 2005.

Following the 2007-2010 recession, the housing development sector is apparently making a steady recovery. The number of ISR applications received during the 2012-2013 reporting period is up 87% compared to the 2009-2010 reporting period, which was the year the District received the lowest number of ISR applications.

Compared to the prior reporting period, the ISR program experienced a 10% increase in the number of Air Impact Assessment (AIA) applications submitted to the District: 213 applications received during this 12-month reporting period versus 194 received during the previous 12-month reporting period.

During the same period, the amount of off-site mitigation fees collected under the ISR-VERA program decreased by 33%, to \$1,262,861 for 2012-2013, compared to \$1,885,255 collected during the previous reporting period. The factors leading toward a reduction of off-site fees collected through the implementation of ISR are great for improved air quality: project proponents are more frequently using clean construction fleets and are incorporating more and better project design elements resulting in overall lower-emitting development projects. Some of the decrease is also caused by project proponents deferring payment of the off-site mitigation fees until the project is ready to move into the construction phase, as allowed by the rule.

For the 2012-2013 reporting period, the District's ISR-VERA account held a beginning balance of \$7,944,530. During this reporting period, the District received off-site mitigation fees totaling \$1,262,861 resulting in a grand total of \$9,207,391 available funds. Under the ISR-VERA program, the District funded off-site emission reduction projects totaling \$4,251,342 during this period and has encumbered \$3,039,998 in contracts for emission reduction projects that have not yet been implemented, leaving an unexpended balance of \$1,916,051. Projects funded by the District achieved emission reductions totaling 1,282 tons NO<sub>x</sub> and 70 tons PM<sub>10</sub>, for a combined total of 1,230 tons and a cost effectiveness of \$5,393 per ton of emissions reductions.

## **II. INTRODUCTION**

The San Joaquin Valley is expected to be one of the fastest growing regions in the state from 2010 to 2020. The Population Research Unit of the Department of Finance released interim revised population growth projections in May 2012 and expects approximately 18% growth in the Valley's population during that period. In contrast, the total population for the State of California is projected to increase by only 9% over the same period of time.

Population growth results in increased area source emissions from activities such as consumer product use, fuel combustion for heating and cooking, and landscape maintenance. The total number of vehicle miles traveled (VMT) also increases with population growth, resulting in more emissions due to the combustion of vehicle fuels. The projected growth in these so called "indirect source" emissions erodes the benefits of emission reductions achieved through the District's stationary source program and the state and federal mobile source controls.

The District has longstanding statutory authority to regulate indirect sources of air pollution. Pursuant to this authority, the District made a federally enforceable commitment to regulate indirect sources when it adopted its PM<sub>10</sub> Attainment Plan in June 2003. Subsequently, the California State Legislature passed Senate Bill 709, Florez, in the fall of 2003, which Governor Gray Davis subsequently signed and codified

into the Health and Safety Code in §40604. This additional legislation required the District to adopt, by regulation, a schedule of fees to be assessed on area wide or indirect sources of emissions that are regulated by the District.

District Rule 9510 was adopted by the District's Governing Board on December 15, 2005, and became effective March 1, 2006. The rule was adopted to reduce the impacts of growth in emissions resulting from new land development in the San Joaquin Valley. The rule applies to new residential and non-residential development projects, including transportation and transit projects, which equal or exceed established applicability thresholds. The applicability thresholds are established at levels intended to capture projects that emit at least two tons of NO<sub>x</sub> or two tons of PM<sub>10</sub> per year.

Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases through on-site measures, or pay off-site mitigation fees. One hundred percent of all offsite mitigation fees are used by the District to fund emission reduction projects through its Incentives Programs, achieving emission reductions in behalf of the project. Additionally, developers pay an administrative fee equal to four percent (4%) of the required off-site fees. This fee is to cover the District's cost of administering the off-site emission reduction projects.

This report was prepared pursuant to provisions of Rule 9510 that require the District to prepare an annual report regarding expenditure of received funds and achieved emission reductions. Pursuant to Rule 9510, Section 10.4, the annual report should include the following:

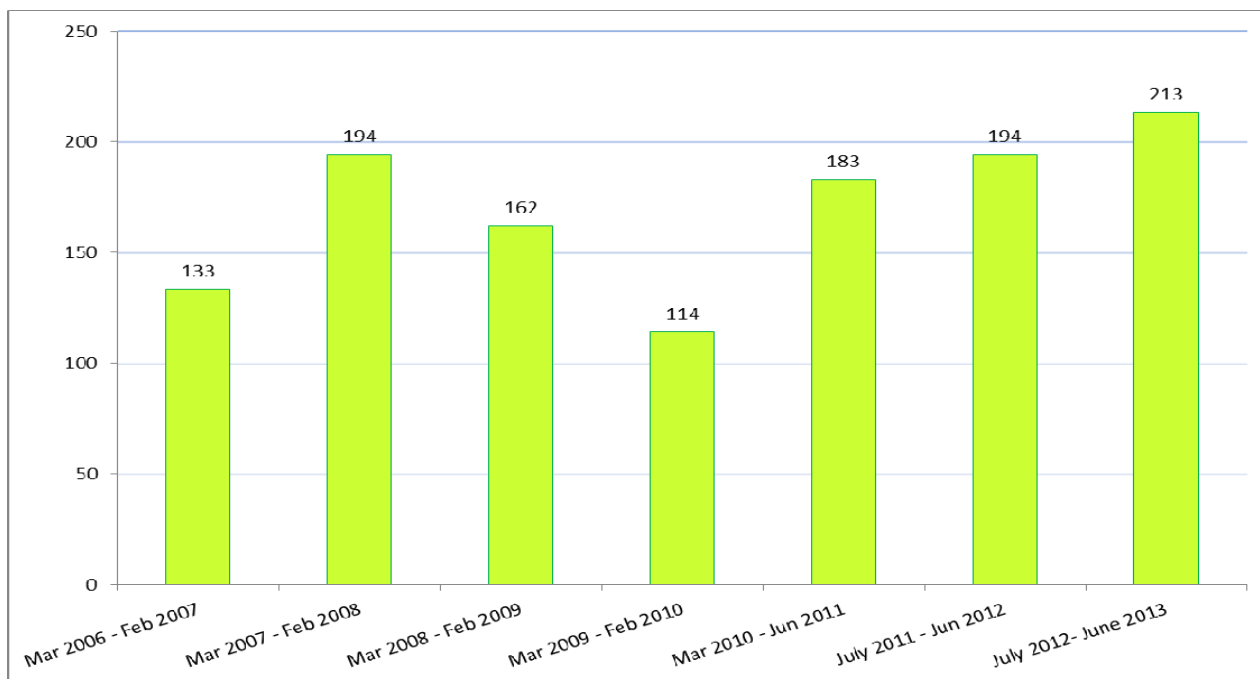
- Total amount of Off-Site Fees received;
- Total monies spent;
- Total monies remaining;
- Any refunds distributed;
- A list of all projects funded;
- Total emissions reductions realized; and
- The overall cost-effectiveness factor for the projects funded.

### **III. IMPLEMENTATION**

#### District Rule 9510 (Indirect Source Review)

The number of Air Impact Assessment (AIA) applications received since 2006, the first year of Rule 9510 implementation, is presented in Figure 1. Compared to the 2011-2012 reporting period, the ISR program experienced a 10% increase in ISR Air Impact Assessment applications submitted to the District: 213 applications were received in 2012-2013, the most ever received, versus 194 received during the previous reporting period.

**Figure 1: Number of ISR AIA Applications Received From 2006 to June 30, 2013**



Through implementation of the ISR rule, District staff is seeing positive changes in development practices. Since adoption of the rule, developers have voluntarily begun to incorporate many air-friendly design changes into their projects. For instance, significant reductions in emissions have occurred through the use of a “clean construction equipment fleet”, which is defined as a construction fleet mix cleaner than the State fleet average. In 2006, the first year of implementation, only 14.3% of approved projects reduced construction exhaust impacts through use of a clean construction equipment fleet while during the 2012-2013 reporting period, this percentage reached approximately 50%.

Another noteworthy change is that developers of large distribution centers have reduced operational emissions impacts through voluntarily committing to use newer trucks and other on-road fleet vehicles and maintaining a fleet replacement schedule that ensures older vehicles are replaced in a timely manner. Many lesser but still cumulatively significant reductions in emissions have been garnered by a whole range of effective design principles. Examples include installation of solar power, integrated mixed-use development design, bike lanes, high-efficiency housing design, and many others.

### Voluntary Emission Reduction Agreements

VERAs are air quality mitigations by which a developer can voluntarily enter into a contractual agreement with the District to fully mitigate a development project's impact on air quality, going beyond reductions achieved by compliance with District Rule 9510. Under the agreement, the developer provides funds to the District to administer the

implementation of the VERA. The District then identifies emissions reductions projects, funds those projects, and verifies that the specified emission reductions have been successfully achieved.

Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors. Since 2005 the District has entered into eighteen VERAs. It is the District's experience that implementation of a VERA is a feasible mitigation measure under CEQA, effectively achieving emission reductions necessary to reduce impacts to a less than significant level.

For development projects subject to Rule 9510, the developer must also comply with applicable rule provisions. Emission reductions achieved through implementation of a VERA are credited towards satisfying ISR requirements. This report therefore includes revenues and emission reductions achieved through the VERA process.

#### ISR-VERA Off-site Mitigation Fees

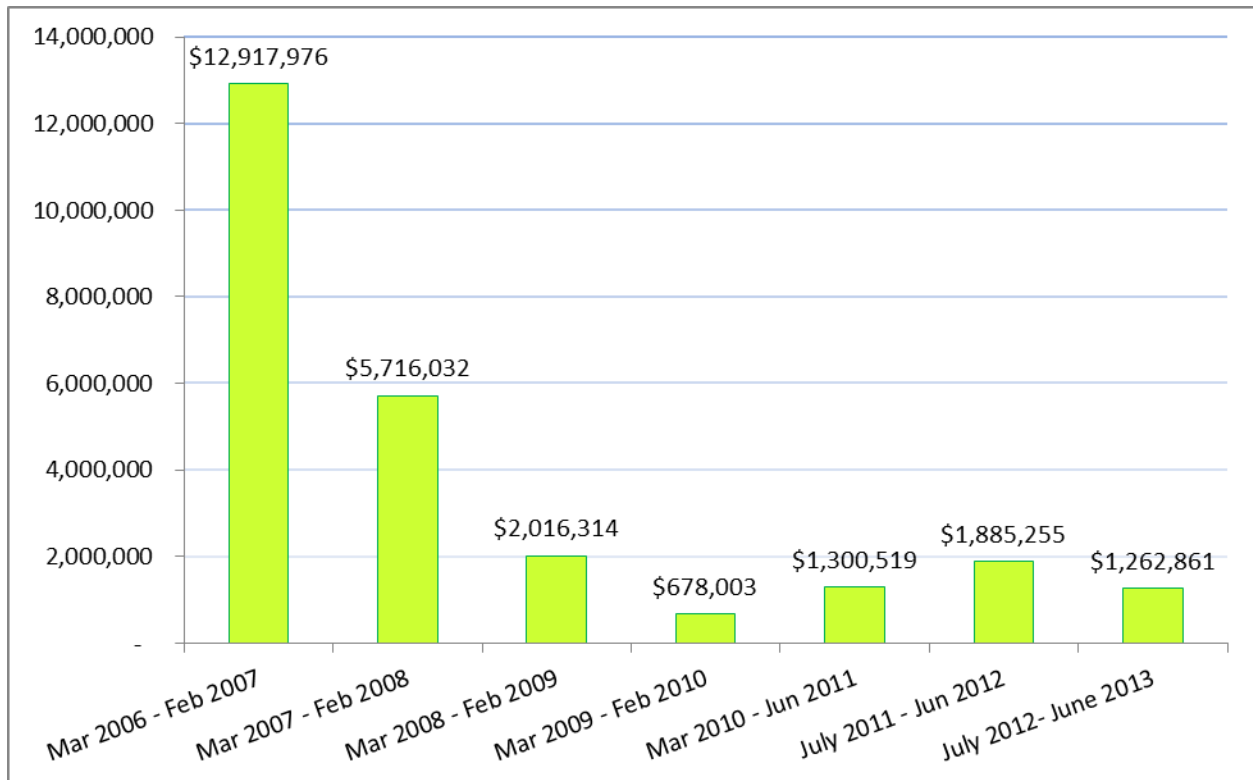
As presented in Figure 2 below, the District has collected \$1,262,861 in ISR-VERA program off-site mitigation fees during this reporting period compared to \$1,885,255 collected during the previous reporting period.

This decrease in fees collected under the ISR-VERA program from this 2012-2013 reporting year compared to the prior reporting year resulted from several factors. The factors observed through the ISR implementation are:

- a more frequent use of clean construction fleet: The use of a clean construction fleet as a mitigation measure reduces project emissions and assists in meeting Rule 9510 requirements for construction emission reductions, and therefore no off-site mitigation fees would be required;
- the incorporation of better project design elements: Incorporating better project design elements reduces operational emissions associated with the project thus reducing the need for off-site mitigation fees; and
- the use of the Fee Deferral Schedule option: in accordance with Rule 9510, the Fee Deferral Schedule option allows the project proponent to defer payment of applicable off-site mitigation fees to a date prior to starting construction rather than paying the total amount of off-site mitigation fees upon finalization of the ISR Air Impact Assessment.



**Figure 2: ISR-VERA Program Off-site Mitigation Fees Received From 2006 to June 30, 2013**



#### IV. FISCAL SUMMARY

As presented in Table 1 below, the ISR-VERA off-site mitigation fee account held a beginning balance of \$7,944,530 in July 2012. During this reporting period, the District received off-site mitigation fees totaling \$1,262,861 resulting in a grand total of available fees of \$9,207,391 for this reporting period. The District completed funding for off-site emission reduction projects totaling \$4,251,342, and has encumbered \$3,039,998 in contracts for emission reduction projects that have not yet been implemented, leaving an unexpended balance of \$1,916,051.

**Table 1: ISR-VERA Fiscal Summary (July 1, 2012 – June 30, 2013)**

<b>ISR-VERA Fiscal Summary</b>	<b>ISR</b>	<b>VERA</b>	<b>Total</b>
Beginning Balance	\$6,799,402	\$1,145,128	\$7,944,530
Off-Site Mitigation Fees Collected	\$958,245	\$304,616	\$1,262,861
Off-Site Mitigation Fees Refunded	\$0	\$0	\$0
Off-Site Mitigation Fees Available after Refunds	\$958,245	\$304,616	\$1,262,861
Amount Spent	-\$3,868,692	-\$382,650	-\$4,251,342
Encumbered Balance	-\$3,039,998	\$0	-\$3,039,998
Ending Balance	\$848,957	\$1,067,094	\$1,916,051

## V. EMISSIONS REDUCTION SUMMARY

### Achieved Off-Site Emission Reductions

During this reporting period, the District used ISR and VERA fees to fund 2,120 emission reduction projects affecting 2,157 units. Funded projects include providing vanpool subsidies, repowering offroad mobile equipment, and replacing wood burning stoves with natural gas fired inserts. Significant reductions were achieved through replacement of diesel powered agricultural tractors. Emission reduction projects achieved total reductions of 1,282 tons NO<sub>x</sub> and 70 tons PM<sub>10</sub>, for a combined total of 1,352 tons and a cost effectiveness of \$5,393 per ton (Table 2). Additionally, funded projects reduced emissions of reactive organic gases (ROG) by 193 tons.

A complete list of project types funded is presented in Appendix A.

**Table 2: ISR-VERA Off-Site Emission Reductions (July 1, 2012 – June 30, 2013)**

<b>Achieved Emission Reductions</b>				<b>Amount Spent (\$)</b>	<b>Cost Effectiveness (\$/Ton)</b>
<b>Source</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>Total</b>		
ISR	1,231 tons	64 tons	1,295 tons	\$6,908,690	\$5,335/ton
VERA	51 tons	6 tons	57 tons	\$382,650	\$6,713/ton
<b>Grand Total</b>	<b>1,282 tons</b>	<b>70 tons</b>	<b>1,352 tons</b>	<b>\$7,291,340</b>	<b>\$5,393/ton</b>

Projected Emission Reductions

Projected emission reductions are a combination of emission reductions to be achieved in the future through implementation of project design elements at full project build out and through funding off-site emission reductions projects, using off-site mitigation fees. For this reporting period, implementation of ISR resulted in combined projected on-site and off-site emission reductions totaling 1,680 tons of NO<sub>x</sub> and 1,831 tons of PM<sub>10</sub> (Table 3).

**Table 3: Emission Reductions from Approved ISR Projects  
(July 1, 2012 – June 30, 2013)**

<b>Projected Emission Reductions (Tons)</b>			
<b>Source</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>Total</b>
On-site Emission Reductions	1,116 tons	1,188 tons	<b>2,304 tons</b>
Off-site Emission Reductions	564 tons	643 tons	<b>1,207 tons</b>
<b>Total</b>	<b>1,680 tons</b>	<b>1,831 tons</b>	<b>3,512 tons</b>

## APPENDIX A

### List of emission reduction project-types funded by ISR-VERA Program

EMISSION REDUCTION PROJECT TYPES  
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Project Type	Total # of Projects	Total # of Units	Total NOx (Tons/Project life)	Total PM10 (Tons/Project life)
Agricultural Tractor	202	220	1,072.70	51.75
Drive Clean	158	159	0.96	0.11
Forklift	2	2	4.24	0.31
Irrigation Pump	15	20	34.42	0.92
Light-Med. Duty Vehicle	5	5	0.02	0.03
New Insert	27	27	0.00	3.11
New Stove	1	1	0.00	0.30
Public Transit	1	1	6.84	4.36
Switcher (Locomotive)	1	2	154.05	3.85
Van Pool Subsidy	1,708	1,720	8.89	5.68
<b>Grand Total</b>	<b>2,120</b>	<b>2,157</b>	<b>1,282</b>	<b>70</b>