



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT



San Joaquin Valley Air Pollution Control District

2014 Annual Report

Indirect Source Review Program

**Reporting Period:
July 1, 2013 to June 30, 2014**

**SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL DISTRICT**

**Governing Board
November 2014**

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I. EXECUTIVE SUMMARY

This “2014 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), was adopted by the District’s Governing Board to reduce the impacts of growth in emission resulting from new land development in the San Joaquin Valley. Rule 9510 is a commitment in the PM₁₀ and Ozone Attainment Demonstration Plans. The objective of the rule is to reduce emissions of nitrogen oxides (NO_x) and particulate matter smaller than ten microns in aerodynamic diameter (PM₁₀) 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_x + PM₁₀) by 2010. In spite of the downturn in the global economy and construction in the US, California, and the San Joaquin Valley, the District met that goal. As of the date of this report the District has confirmed 13.8 tons per day of emissions reductions (NO_x and PM₁₀) achieved through the implementation of this rule since 2006 (including emissions reductions resulting from implementation of “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_x or two tons of PM₁₀ 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 Rule 9510 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 off-site 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 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 over twenty VERAs since 2005.

The housing development sector is apparently continuing to recover from the 2007-2010 industry recession. While the Indirect Source Review (ISR) program experienced a slight decrease in the number of Air Impact Assessment (AIA) applications received during this reporting period compared to the prior reporting period (200 applications

received during this 12-month reporting period versus 213 received during the previous 12-month reporting period), the District has observed a surge in developers initiating construction of projects approved in prior years. In addition, the number of ISR applications received during the 2013-2014 reporting period is up 75% compared to the 2009-2010 reporting period, which was the year the District received the lowest number of ISR applications.

For this reporting period, the amount of off-site mitigation fees collected under the ISR-VERA program increased by approximately 200%, to \$3,869,444, compared to \$1,262,861 collected during the previous reporting period.

Projects funded by the District for the 2013-2014 reporting period achieved emission reductions totaling 151 tons NO_x and 14 tons PM₁₀, for a combined total of 165 tons and a cost effectiveness of \$6,974 per ton of emissions reductions.

II. INTRODUCTION

The San Joaquin Valley is expected to be one of the fastest growing regions in the state through at least 2020. The Population Research Unit of the Department of Finance released interim revised population growth projections in January 2013 and expects approximately 19% growth in the Valley's population during the 2010 to 2020 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 PM₁₀ 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 of

sufficient size to 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_x or PM₁₀ 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 off-site mitigation fees are used by the District to fund emission reduction projects through its Emissions Reduction Incentive Programs, achieving emission reductions on 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 includes the following:

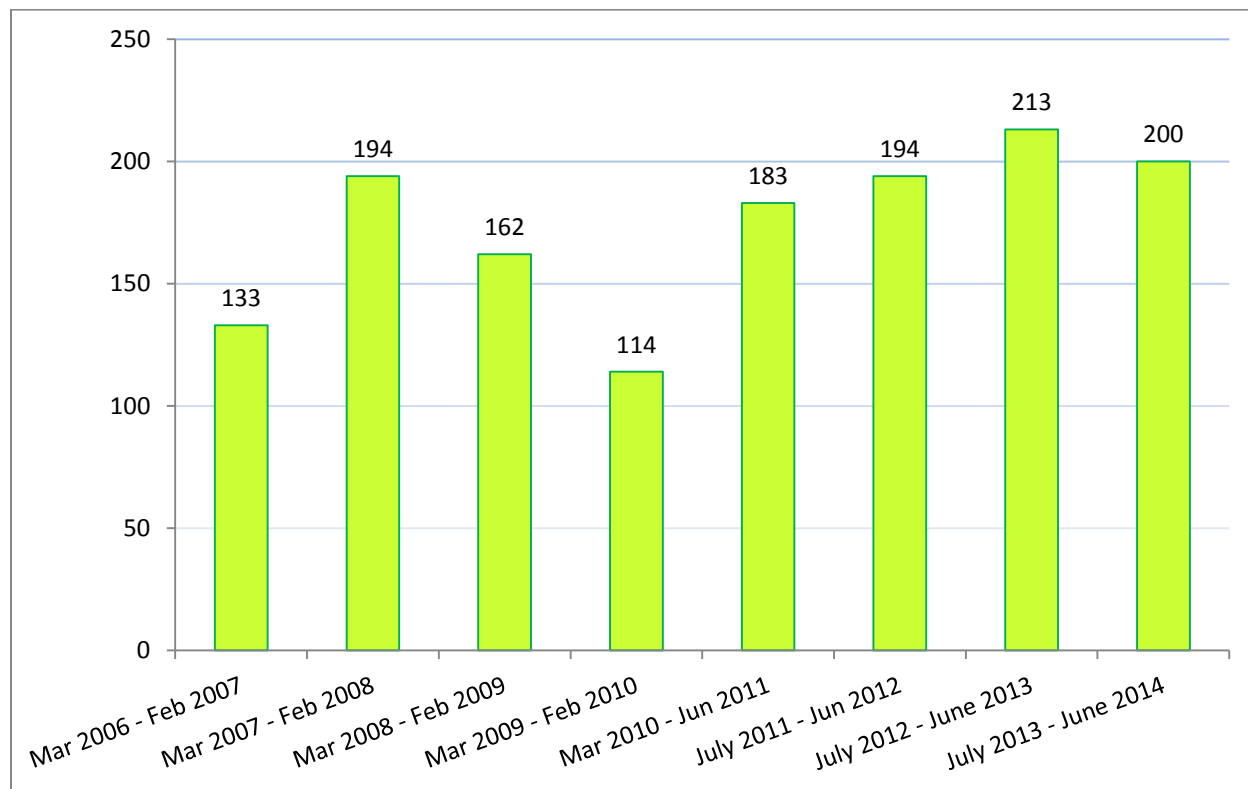
- Total amount of Off-Site Fees received;
- Total monies spent;
- Total monies remaining;
- Any refunds distributed;
- A list of all projects funded;
- Total emissions reductions realized; and
- The overall cost-effectiveness factor for the projects funded.

III. IMPLEMENTATION

District Rule 9510 (Indirect Source Review)

The number of AIA applications received since 2006, the first year of Rule 9510 implementation, is presented in Figure 1. Compared to the 2012-2013 reporting period, the ISR program experienced a 6% decrease in ISR AIA applications submitted to the District: 200 applications were received in 2013-2014, versus 213 received during the previous reporting period.

Figure 1: Number of ISR AIA Applications Received From 2006 to June 30, 2014



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. During the 2013-2014 reporting period, approximately 43% of projects used clean fleets.

Another noteworthy change is that developers of large distribution centers have reduced operational emissions impacts through voluntarily committing to use newer, heavy-heavy duty 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

A VERA is an air quality mitigation measure by which a developer can voluntarily enter into a contractual agreement with the District to 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 over twenty 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.

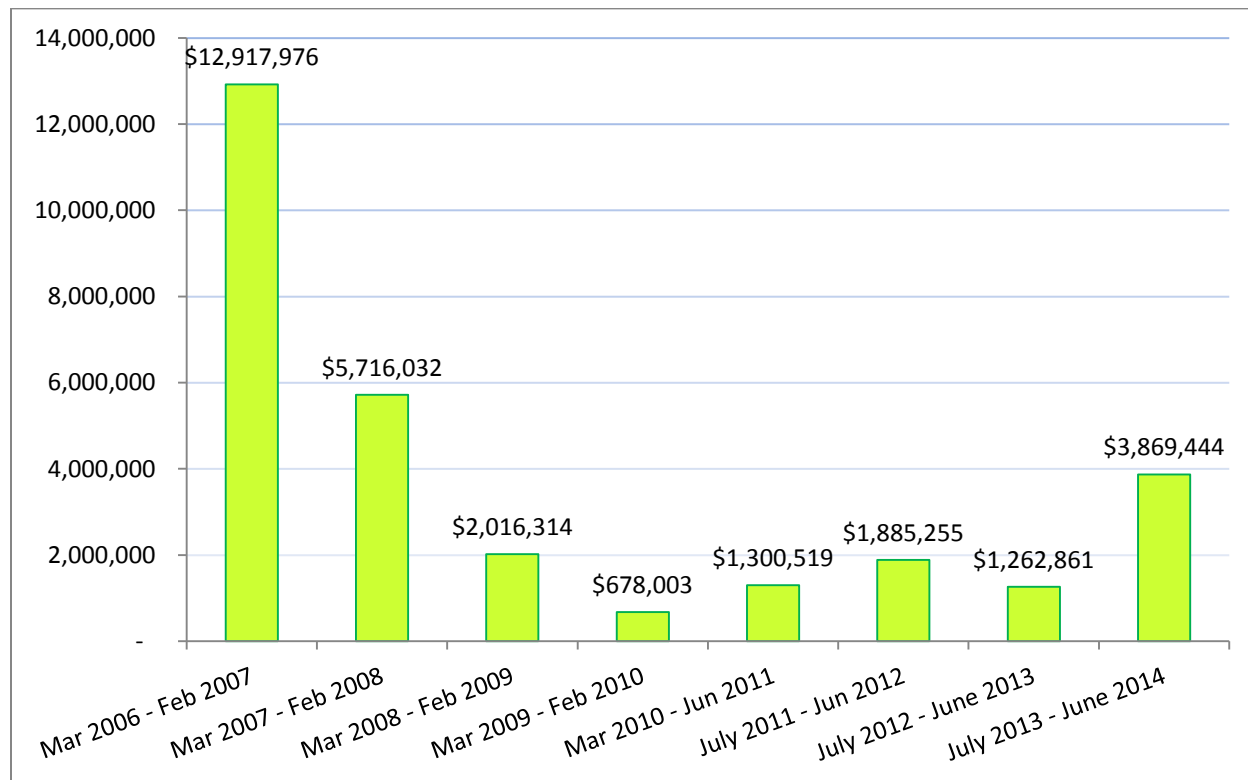
For development projects subject to Rule 9510, the developer must also comply with applicable rule provisions. Emission reductions achieved through implementation of a VERA are credited towards satisfying ISR requirements. This report therefore includes revenues and emission reductions achieved through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

ISR-VERA Off-site Mitigation Fees

As presented in Figure 2 below, the District has collected \$3,869,444 in ISR-VERA program off-site mitigation fees during this reporting period compared to \$1,262,861 collected during the previous reporting period. The substantial increase in fees collected is primarily due to large development projects, such as warehouses, that provided \$2.3 million in off-site mitigation fees.

One VERA was adopted during the previous reporting period with \$124,459 collected during the 2013-2014 reporting period, compared to \$304,616 collected during the previous reporting period. Typically, VERAs cover large development projects that generally have a multi-year construction build-out schedule. The District expects at least \$1.3 million in the next reporting period due to the recently executed and expected VERAs for upcoming projects.

Figure 2: ISR-VERA Program Off-site Mitigation Fees Received From 2006 to June 30, 2014



IV. FISCAL SUMMARY

As presented in Table 1 below, the District's ISR-VERA account held a beginning balance of \$1,916,051. During this reporting period, the District received off-site mitigation fees totaling \$3,869,444 resulting in a grand total of \$5,785,495 of available funds. Under the ISR-VERA program, the District funded off-site emission reduction projects totaling \$1,152,919 during this period and has encumbered \$3,354,948 in contracts for emission reduction projects in the process of being implemented, leaving an unexpended balance of \$1,277,628.

**Table 1: ISR-VERA Fiscal Summary
(July 1, 2013 – June 30, 2014)**

ISR-VERA Fiscal Summary	ISR	VERA	Total
<i>Beginning Fund Balance</i>	\$848,957	\$1,067,094	\$1,916,051
Off-Site Mitigation Fees Collected	\$3,744,985	\$124,459	\$3,869,444
Off-Site Mitigation Fees Refunded	\$0	\$0	\$0
Amount Spent	-\$798,528	-\$354,391	-\$1,152,919
Ending Fund Balance	\$3,795,414	\$837,162	\$4,632,576
Encumbered Amount	-\$2,595,559	-\$759,389	-\$3,354,948
<i>Ending Unencumbered Balance</i>	\$1,199,855	\$77,773	\$1,277,628

V. EMISSIONS REDUCTION SUMMARY

Achieved Off-Site Emission Reductions

During this reporting period, the District used ISR and VERA fees to fund 920 emission reduction projects affecting 7,813 units. Funded projects include providing vanpool subsidies, drive clean rebates, replacing wood burning stoves with natural gas fired inserts, and others. A complete list of all projects funded and paid is presented in Appendix A.

Significant reductions were also achieved through replacement of diesel-powered agricultural tractors and engines. Emission reduction projects achieved total reductions of 151 tons NO_x and 14 tons PM₁₀, for a combined total of 165 tons and a cost effectiveness of \$6,974 per ton (Table 2). Additionally, funded projects reduced emissions of reactive organic gases (ROG) by 11 tons.

Achieved emission reductions represent only emission reductions from projects that have been paid, and the cost effectiveness is based on those paid projects.

**Table 2: ISR-VERA Off-Site Emission Reductions
(July 1, 2013 – June 30, 2014)**

Achieved Emission Reductions				Amount Spent (\$)	Cost Effectiveness (\$/ton)
Source	NOx	PM ₁₀	Total		
ISR	79 tons	9 tons	88 tons	\$798,528	\$9,074/ton
VERA	72 tons	5 tons	77 tons	\$354,391	\$4,602/ton
Grand Total	151 tons	14 tons	165 tons	\$1,152,919	\$6,987/ton

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 1,413 tons of NOx and 1,381 tons of PM₁₀ (Table 3).

**Table 3: Emission Reductions from Approved ISR Projects
(July 1, 2013 – June 30, 2014)**

Projected Emission Reductions (Tons)			
Source	NOx	PM ₁₀	Total
On-site Emission Reductions	636 tons	856 tons	1,492 tons
Off-site Emission Reductions	777 tons	525 tons	1,302 tons
Total	1,413 tons	1,381 tons	2,794 tons

APPENDIX A

List of all emission reduction projects funded by the ISR-VERA Program

EMISSION REDUCTIONS PROJECTS
ISR Annual Report / July 2013 – June 2014

Project Type	Total # of Projects	Total # of Units	Total NOx (Tons/Project life)	Total PM10 (Tons/Project life)
Agricultural Tractor	13	13	64.81	3.81
Ag Engine	3	3	46.20	0.24
Burn Cleaner	6	6	0.00	4.62
Drive Clean	189	191	1.36	0.23
New Insert	9	9	0.00	0.86
Off-Road Repower	1	1	2.78	0.10
Tractor Replacement	1	1	24.30	0.52
Van Pool Subsidy	697	7,588	4.85	3.15
Wheel Loader	1	1	7.18	0.30
Grand Total	920	7,813	151	14