



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**San Joaquin Valley Air Pollution Control District**

**2015 Annual Report**

**Indirect Source Review Program**

**Reporting Period:  
July 1, 2014 to June 30, 2015**

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

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December 17, 2015**

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**SEYED SADREDIN**

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## I. EXECUTIVE SUMMARY

This “*2015 Annual Report on the District's Indirect Source Review Program*” was prepared by the San Joaquin Valley Unified Air Pollution Control District (District). This annual report covers the reporting period from July 1, 2014 to June 30, 2015.

District Rule 9510, (Indirect Source Review), 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 PM<sub>10</sub> and Ozone Attainment Demonstration Plans. 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.

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 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 a “Voluntary Emission Reduction Agreement” (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 are then used by the District to administer emission reduction projects on behalf of the project proponent. The District has entered into twenty-eight VERAs since 2005.

To date, in addition to avoiding approximately 9,300 tons of NO<sub>x</sub> and PM<sub>10</sub> emissions from new development through the incorporation of on-site mitigation and clean-air design measures into projects subject to Rule 9510, the District has confirmed approximately 6,000 tons of reductions in NO<sub>x</sub> and PM<sub>10</sub> emissions have been achieved through the investment of ISR and VERA off-site mitigation funds in its incentive programs.

During this 12-month reporting period, the District received 175 Air Impact Assessment (AIA) applications under the ISR program compared to 200 received during the previous 12-month reporting period, representing a 12.5% reduction. This is the second year of decline in the number of applications received. In 2013-2014, the number of applications received was 6% less than the year before. However, based on observations and discussions with land use agencies and consultants, construction and development in the San Joaquin Valley seems to be continuing at a steady rate. The two years of decline in applications appears to be due to the continued use of prior-year land-use approvals, as discussed in further detail in this report.

For this reporting period, the amount of off-site mitigation fees collected under the ISR-VERA program remained steady at \$3,808,892, compared to \$3,869,444 collected during the previous reporting period.

Projects funded by the District for the 2014-2015 reporting period achieved emission reductions totaling 596 tons NO<sub>x</sub> and 32 tons PM<sub>10</sub>, for a combined total of 628 tons at a cost effectiveness of \$7,231 per ton of emissions reduced.

## **II. INTRODUCTION**

The San Joaquin Valley is expected to be one of the fastest growing regions in the state from 2010 to 2020, despite recent downward revisions to growth projections. The Demographic Research Unit of the Department of Finance released interim revised population growth projections in December 2014 and expects approximately 13% growth in the Valley's population during the 2010 to 2020 period. This projection is lower than the 19% growth projected in January 2013. However, 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 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 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 in a given year represents the number of new projects subject to Rule 9510 proposed by developers in the San Joaquin Valley. The number of new development projects proposed each year since 2006, the first year of Rule 9510 implementation, is presented in Figure 1. Compared to the 2013-2014 reporting period, the ISR program experienced a 12.5% decrease in ISR AIA applications submitted to the District: 175 applications were received in 2014-2015 compared to 200 received during the previous reporting period. This is the second year of decline in the number of applications received. However, based on observations and discussions with land use agencies and consultants, construction and development in the San Joaquin Valley seems to be continuing at a steady rate.

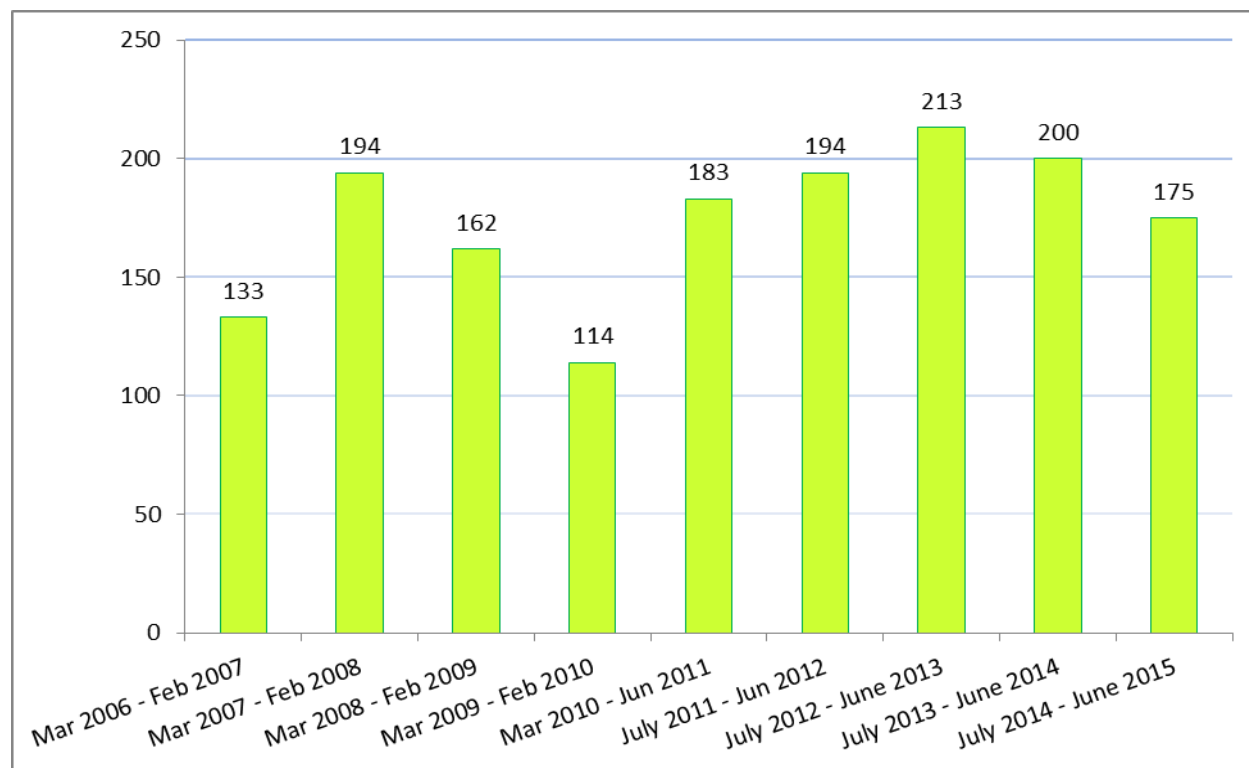
The decline in applications may be due to any combination of the following:

- **Previous Approvals:** Much of the construction that is now occurring relates to AIA applications and land-uses approved in prior years.
- **Lower than Expected Growth Rate:** The California Department of Finance lowered the expected growth rate in the Central Valley. In January of 2013, it was estimated that the Valley would experience a 19% increase in population from year 2010 to 2020. However, in December of 2014, this projection was reduced to 13%. This reduction in expected population growth may discourage or delay development.
- **Economic Uncertainty:** Due to the uncertainty of the pending Federal Reserve interest rate hikes and its impact on the growth of the Valley, developers may be hesitant to initiate new development projects.
- **Lack of ISR Compliance:** It is worth considering whether developers in the San Joaquin Valley lack awareness of the ISR rule, or for any number of other reasons may not be submitting applications as required. However, District staff believes this to be unlikely, in most cases, as the District's robust Regulation VIII dust control plan program generally ensures that developers of projects subject to the ISR rule submit the required AIA application.

By way of explanation, projects subject to ISR are also subject to District Regulation VIII dust control plan requirements. Internal District controls designed into the dust control plan approval process assure that all projects that apply for dust control plans also comply with the ISR rule. Therefore, we believe it unlikely that lack of ISR awareness or other noncompliance situation is a significant cause of a reduction in ISR applications being filed. Nevertheless, the District believes it prudent to continue its ISR and Regulation VIII awareness outreach efforts.

District analysis of these potential causes of the 2-year reduction in ISR application filings leads to a conclusion that most construction that is currently observed is associated with projects that had previously received approval and already confirmed compliance with the ISR rule, and that new development construction proposals remain slightly depressed due to continued uncertainty in expected population growth in the Valley and in the associated housing and infrastructure needs.

**Figure 1: Number of ISR AIA Applications Received From 2006 to June 30, 2015**



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. However, by the 2014-2015 reporting period, this percentage has risen to approximately 39%.

Another noteworthy change is that developers of large distribution centers have reduced operational emissions impacts through voluntarily committing to use newer, 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 Voluntary Emission Reduction Agreement 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 twenty-eight 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.

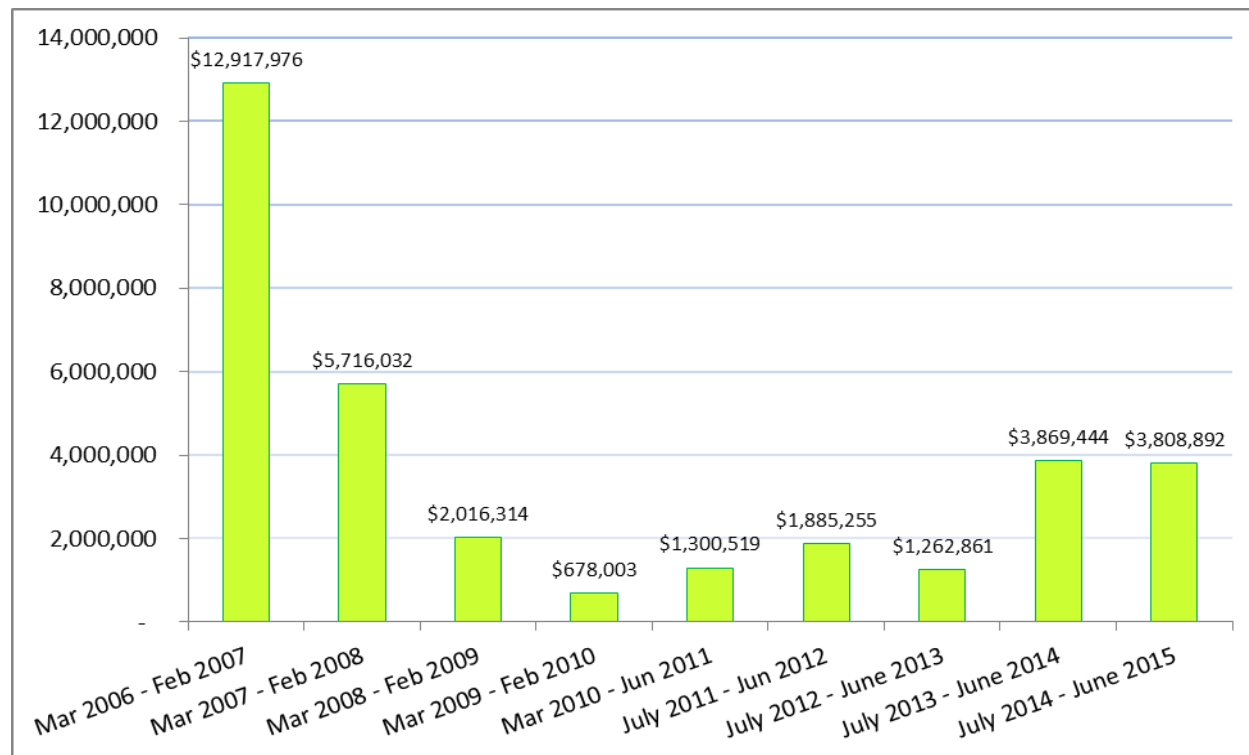
For development projects subject to Rule 9510, the developer must also comply with applicable rule provisions. Emission reductions achieved through implementation of a VERA are credited towards satisfying ISR requirements. This report therefore includes revenues and emission reductions achieved through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

### ISR-VERA Off-site Mitigation Fees

As presented in Figure 2 below, the District collected \$3,808,892 in ISR-VERA program off-site mitigation fees during this reporting period compared to \$3,869,444 collected during the previous reporting period.

In 2014-2015, two VERAs were adopted and \$1,311,901 was collected, compared to \$124,459 collected during the previous reporting period. Although the District and developers have entered into several VERAs, construction of some of these projects has not yet commenced and the associated mitigation funds have not been paid to the District. Typically, VERAs cover large development projects that have a multi-year construction build-out schedule. Therefore, the District expects to receive funds from the projects covered under these VERAs as developers commence construction in the upcoming years.

**Figure 2: ISR-VERA Program Off-site Mitigation Fees Received From 2006 to June 30, 2015**



#### IV. FISCAL SUMMARY

As presented in Table 1 below, the District's ISR-VERA account held a beginning balance of \$4,632,576. During this reporting period, the District received off-site mitigation fees totaling \$3,808,892. The District funded off-site emission reduction projects totaling \$4,541,298 during this period, and has encumbered \$867,590 in contracts for emission reduction projects in the process of being implemented, leaving an unencumbered balance of \$3,032,580.

**Table 1: ISR-VERA Fiscal Summary (July 1, 2014 – June 30, 2015)**

<b>ISR-VERA Fiscal Summary</b>	<b>ISR</b>	<b>VERA</b>	<b>Total</b>
<b><i>Beginning Fund Balance</i></b>	<b>\$3,795,414</b>	<b>\$837,162</b>	<b>\$4,632,576</b>
Off-Site Mitigation Fees Collected	\$2,496,991	\$1,311,901	\$3,808,892
Off-Site Mitigation Fees Refunded	\$0	\$0	\$0
Amount Spent	-\$3,733,409	-\$807,889	-\$4,541,298
Ending Fund Balance	\$2,558,996	\$1,341,174	\$3,900,170
Encumbered Amount	-\$745,826	-\$121,764	-\$867,590
<b><i>Ending Unencumbered Balance</i></b>	<b>\$1,813,170</b>	<b>\$1,219,410</b>	<b>\$3,032,580</b>

## **V. EMISSIONS REDUCTION SUMMARY**

### Achieved Off-Site Emission Reductions

During this reporting period, the District used ISR and VERA off-site mitigation fees to fund 183 emission reduction projects affecting 184 units. The fees were used to fund the replacement of old heavy-duty off-road vehicles with newer, cleaner versions.

Emission reduction projects achieved total reductions of 596 tons NO<sub>x</sub> and 32 tons PM<sub>10</sub>, for a combined total of 628 tons at a cost effectiveness of \$7,231 per ton (Table 2 below). Additionally, funded projects reduced emissions of reactive organic gases (ROG) by 97 tons.

Achieved emission reductions presented in the table below 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, 2014 – June 30, 2015)**

Achieved Emission Reductions				Amount Spent (\$)	Cost Effectiveness (\$/ton)
Source	NOx	PM <sub>10</sub>	Total		
ISR	466 tons	26 tons	492 tons	\$3,733,409	\$7,588/ton
VERA	130 tons	6 tons	136 tons	\$807,889	\$5,940/ton
<b>Grand Total</b>	<b>596 tons</b>	<b>32 tons</b>	<b>628 tons</b>	<b>\$4,541,298</b>	<b>\$7,231/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 985 tons of NOx and 1,397 tons of PM<sub>10</sub> (Table 3 below).

**Table 3: Emission Reductions from Approved ISR Projects (July 1, 2014 – June 30, 2015)**

Projected Emission Reductions (tons)			
Source	NOx	PM <sub>10</sub>	Total
On-site Emission Reductions	372 tons	467 tons	<b>839 tons</b>
Off-site Emission Reductions	613 tons	930 tons	<b>1,543 tons</b>
<b>Total</b>	<b>985 tons</b>	<b>1,397 tons</b>	<b>2,382 tons</b>