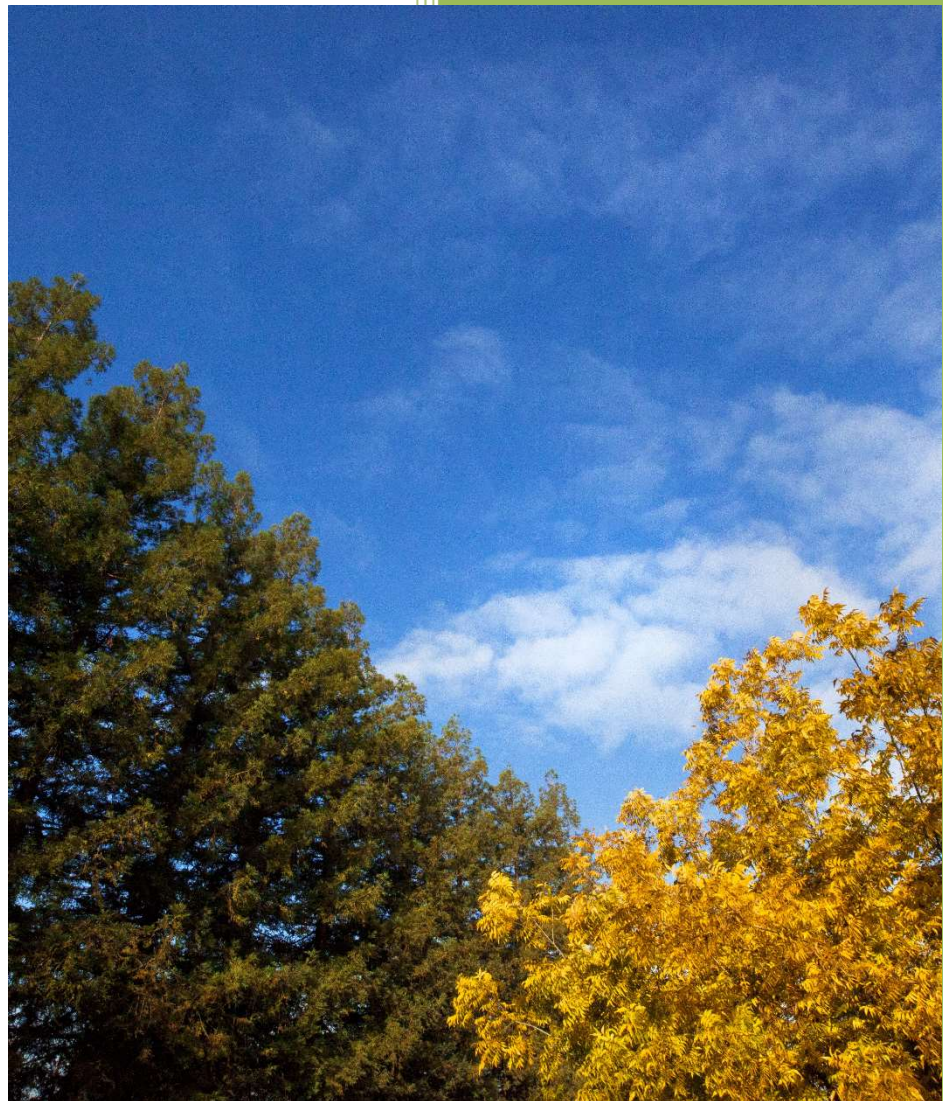


2021

Annual Air Toxics Report



March 17, 2022

Executive Summary

The San Joaquin Valley Air Pollution Control District has spent nearly three decades implementing and integrating a wide variety of methods reducing toxic air contaminant emissions in the San Joaquin Valley. Based on the latest [California Toxics Inventory \(CTI\)](#) available from ARB, 14% of all air toxics in the San Joaquin Valley are now emitted from stationary sources of pollution under the direct control and regulation of the District, while 52% comes from mobile sources such as cars and trucks, and the remaining 34% is emitted from area-wide sources like road dust, paints, solvents, and other consumer products. Mobile and area-wide sources of emissions are generally under the regulatory authority of the State of California and the federal government.

The District's integrated approach to addressing and reducing risks from toxic air contaminants has taken three main paths: reducing air toxic emissions from existing stationary sources of emissions; preventing the creation of new or modified stationary sources of significant risk; and finding creative and cooperative methods of reducing risk from emissions sources that the District does not typically regulate.

The District's implementation of AB 2588, California's *Air Toxics "Hot Spots" Information and Assessment Act*, has resulted in dramatic reductions in emissions of air toxics from existing sources in the San Joaquin Valley. Under this right-to-know law, the District has worked with Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report emissions and any significant risks through written public reports and neighborhood public meetings, and take steps to reduce such risks. As a result of this effort, and the resulting emissions reductions, no Valley facility currently poses a significant risk under this program.

The state Hot Spots Act, however, is only one part of the District's comprehensive program to regulate air toxics. To achieve maximum efficiency and effectiveness, the District operates an integrated air toxics program that harmonizes local, state, and federal mandates wherever possible.

A number of regulations have also been adopted by the District, the state, and the federal government, and implemented through the District's integrated air toxics program, to directly reduce existing emissions from specific types of facilities and sources of air toxic compounds. Examples of emissions sources that have drastically reduced toxic air contaminant emissions in the San Joaquin Valley because of such rules include dry cleaners, chrome platers, gas stations, and diesel internal combustion engines.

In addition to the above efforts to reduce emissions from existing sources of air pollution, the District also performs comprehensive and conservative emissions evaluation and computer modeling before issuing permits to new sources of emissions to assure the District does not allow the creation of a new significant health risk.

These risk evaluation processes were revised in 2015 as the District implemented the state Office of Environmental Health Hazard Assessment's (OEHHA's) revised Guidance on Preparation of Health Risk Assessments that was adopted by OEHHA in early March 2015 (see Appendix A). The District's health risk assessment processes and policies were updated accordingly and implemented July 1, 2015. This revised guidance was designed to incorporate the Governing Board's guidance to implement all of the OEHHA's revisions to provide enhanced protection of children, and the public overall, while preventing unreasonable restrictions on permitting actions.

OEHHA's revised guidance is also being incorporated into the District's implementation of the AB 2588 Hot Spots Program. Since the calculated health risk under the new methodologies is higher than previous estimates, air toxics facilities subject to the AB 2588 Air Toxics "Hot Spots" program are being reassessed. Under this health risk reassessment process, facilities are surveyed to determine applicability to the Air Toxics "Hot Spots" program. Facilities determined to be subject to the Air Toxics "Hot Spots" program are required to prepare a revised Toxic Emission Inventory Plan (TEIP) and a Toxic Emission Inventory Report (TEIR) in order to provide site-specific inventories of air emissions of toxic substances.

Under its integrated air toxics program, the District has also implemented numerous methods of reducing emissions from mobile sources and other sources of emissions that the District does not traditionally regulate. For instance, the District developed the first Indirect Source Review rule in the nation, designed to reduce emissions from construction equipment and mobile sources associated with new land use development projects. The District also provides assistance and guidance to the cities and counties in the San Joaquin Valley so that they can be assured that land-use decisions are based on a full understanding of the potential for increasing emissions of air toxics and new air toxics risks can be avoided. One of the most effective methods of reducing emissions of air toxics from emissions sources not directly regulated by the District has been the incentive grant programs that have leveraged billions of dollars in reducing emissions from diesel internal combustion engines on trucks, tractors and agricultural irrigation operations.

Finally, the District's "Health-Risk Reduction Strategy" to prioritize air pollution control measures that provide the most health-protective result is the cornerstone in developing and implementing future risk-reduction efforts that provide the maximum public health benefit.

This 2021 Annual Air Toxics Report describes the District's ongoing efforts to regulate and reduce air toxic emissions. An electronic version of this report may be found at: http://www.valleyair.org/busind/pto/air_toxics_annual_reports.htm.

Questions regarding the District's integrated air toxics programs may be directed to:

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Summary of Toxic Air Contaminants in the San Joaquin Valley

The U.S. EPA and the California Air Resources Board have identified over 700 substances that are emitted into the air that may affect human health. Some of these substances are considered to be carcinogens (cancer-causing), while others are known to have other adverse health effects. As part of ongoing efforts to identify and assess potential health risks to the public, the District has collected and compiled air toxics emissions data from industrial and commercial sources of air pollution throughout the Valley. The State has developed similar inventories for mobile sources of air pollution. These District and State inventories have been combined into the California Air Resources Board's CTI, which provides the latest emissions estimates available for hazardous air pollutants of concern from all sources. A summary of the CTI data for key pollutants is presented in Table 1 below.

Table 1: Primary San Joaquin Valley Hazardous Air Pollutant Emissions

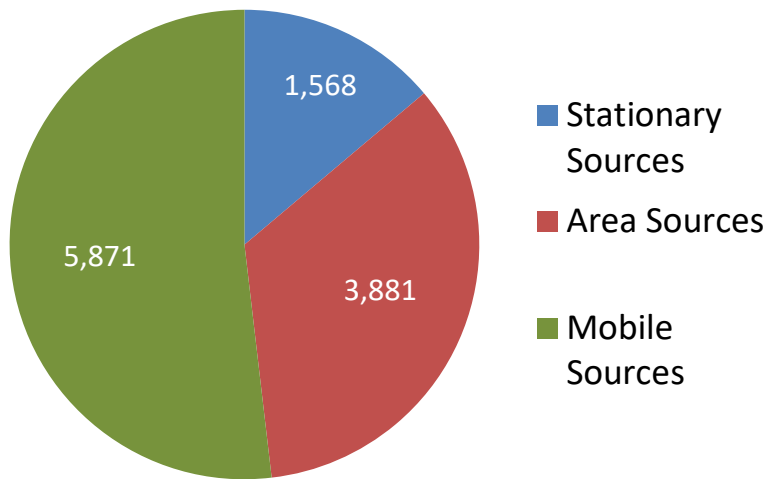
Pollutant	Inventory (tons/yr)
Acetaldehyde	3,512
Diesel Particulate Matter	2,520
Formaldehyde	2,318
Benzene	1,020
Perchloroethylene	448
1,3-Butadiene	269
Methylene Chloride	247
p-Dichlorobenzene	130
Carbon Tetrachloride	0
Chromium, Hexavalent	0

A more detailed summary of CTI emissions estimates for the San Joaquin Valley is provided in Table B1 in Appendix B.

Toxic Air Contaminants (TACs), otherwise known as "air toxics", are emitted from mobile sources (i.e., cars, trucks, buses, tractors, etc.), which are primarily regulated by the State and U.S.EPA; area sources (i.e., consumer products, dry cleaners), which are regulated the State, U.S.EPA, and the District; and from stationary sources regulated primarily by the District. Figure 1 below shows a comparison of mobile, area and stationary sources emissions of hazardous air pollutants in the San Joaquin Valley. Of these sources approximately 86% of hazardous air pollutant emissions occurring in the Valley are from mobile sources and area sources.

Stationary sources include point source emissions provided by facility operators and/or air districts and aggregated point source emissions estimated by the ARB and/or air districts. This stationary source information is included in the CTI pursuant to the [Air Toxics "Hot Spots" Act of 1987](#) (AB 2588). Area-wide sources are sources without specific locations such as paved or unpaved roads or consumer products, which spread out over large areas.

Figure 1: Mobile, Area, and Stationary Source Air Toxics Emissions (tons) in the Valley



Stationary Area sources were reported with the Stationary Point sources, and the “Area Sources” category contains only area-wide sources as defined above and by the California Air Resources Board (CARB). The District and CARB continued their collaborative efforts to improve the toxics emissions inventories in 2021.

The District has developed grant and incentive programs to assist in risk reduction from these sources. For example, the Heavy-Duty Engine Program, which is the District's largest and most successful incentive program, utilizes incentive funds to repower, replace, or retrofit existing high-polluting diesel equipment or vehicles. Over the years in California, diesel particulate matter emissions have decreased. This program has significantly reduced diesel particulate matter and associated public health risk in the Valley.

The National Air Toxics Assessment (NATA)

The National Air Toxics Assessment (NATA) is the federal EPA's ongoing program for evaluating air toxics in the United States. The NATA provides estimates for communities of the risk of developing cancer or other serious health effects from breathing toxic air contaminants. This program is intended to help identify sources of pollution that result in potential health risks for the public, but does not identify or quantify the actual health risk generated by any individual source of air toxics.

As part of this program, the District coordinates with the EPA to ensure that the NATA data is as accurate as possible. In response to past NATA reports from EPA that contained numerous errors and misstatements regarding emissions and associated health risk, the District has investigated and provided multiple corrections to EPA. EPA's latest NATA Reports incorporates many corrections from the District, and shows that the Valley has few facilities with the potential to cause adverse health impacts from toxic emissions. More information on the NATA can be found at this link: <http://www.epa.gov/national-air-toxics-assessment>.

Assembly Bill (AB) 617 – Community Air Protection Program

The implementation of AB 617 (C. Garcia, 2017) has brought additional clean air resources and strategies to Valley communities. Despite the significant reductions in emissions of criteria and toxic air pollutants that have already been achieved across the Valley, there remain many Valley communities that are disproportionately burdened by the cumulative effects of various environmental and socioeconomic factors. AB 617 requires the expedited implementation of advanced control technologies for existing stationary source facilities; development and implementation of community-specific air quality monitoring networks; development and implementation of community emission reduction programs; enhanced reporting of facility emissions inventory data, and the creation of publically accessible online clearinghouses of emission control technology determinations. Resources available through this legislation have allowed the District and Community Steering Committees, through a comprehensive public outreach and community engagement process, to develop programs for community protection and develop a robust plan for reducing local exposure to fine particulate matter and toxic air contaminants in Valley communities.

Criteria Air Pollutant and Toxics Air Contaminants Reporting (CTR) Regulation

AB 617 requires CARB to develop a uniform statewide system of annual reporting of emissions of criteria air pollutants and toxic air contaminants for certain categories of stationary sources. The bill requires stationary sources to report their annual emissions of

criteria air pollutants and toxic air contaminants. In order to implement these reporting requirements, CARB developed the ["Regulation for the Reporting of Criteria Air Pollutants and Toxic Air Contaminants" \(CTR\)](#) to implement statewide annual reporting of criteria air pollutant and toxic air contaminant emissions data from facilities, and was adopted in support of mandates under AB 617, AB 197, and AB 2588. For Valley permitted facilities, the District will implement this regulation on behalf of the state through the District's existing annual emission inventory and air toxics processes. Emissions inventory data is critical to understanding the sources of emissions that may contribute to adverse health risks or other impacts at the local, regional, and statewide level.

Summary of California's Air Toxics "Hot Spots" Information and Assessment Act

Implementation

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in September 1987. Under this act, stationary sources are required to report the types and quantities of certain toxic substances their facilities routinely release into the air. The goals of the Air Toxics "Hot Spots" Act are:

- to identify Valley facilities that release toxic air contaminants as a result of their day to day operations,
- to collect and quantify emission data,
- to identify facilities causing localized impacts,
- to determine facility-wide health risks,
- to notify nearby residents and businesses of significant risk facilities in their vicinity, and
- to require that significant-risk facilities reduce their risks below the level of significance in accordance with the provisions of the "Emissions Inventory Criteria and Guidelines Report" adopted by the Air Resources Board.

A flowchart summarizing the AB 2588 Toxic "Hot Spots" implementation process is provided in Appendix C.

The District's implementation of the Air Toxics Hot Spots requirements has resulted in significant reductions in the public's exposure to toxic air contaminants. Under this right-to-know law, the District has worked with Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report emissions and any significant risks through written public reports and neighborhood public meetings, and to take steps to reduce such risks. Implementation of this regulation was a significant driver for hundreds of facilities throughout the Valley to switch from burning fuel oil to natural gas in combustion equipment, add air pollution control equipment, and reduce the use of toxic compounds. As a result of these efforts under the Hot Spots program and original OEHHA risk calculation methodology, there were no Valley facilities under the California Air Toxics "Hot Spots" program that were identified as posing a significant risk to any Valley resident

since 2007. Using OEHHA's updated risk calculation methodologies, there have been no Valley facilities identified as a significant risk to date. The District is continuing to reassess remaining Valley facilities under Hot Spots, and utilizing the updated risk calculation methodologies as appropriate.

Assessing the Risk to the Public

The State Air Toxics "Hot Spots" Act requires the District to compile an inventory of toxic emissions from Valley facilities, prioritize facilities for health risk assessment, evaluate public health risks for facilities ranked as high priority, and notify individuals who may be impacted by any significant health risks. Although the Hot Spots program is primarily a public notification program, the public awareness achieved through the Hot Spots program has led many Valley businesses to voluntarily reduce their toxic emissions to ease community concerns.

Prioritizing Facility Health Risk

AB 2588 requires air districts to "prioritize" facilities to determine which facilities must perform a health risk assessment. In establishing priorities, the air districts are to consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to potential receptors, and any other factors that the district determines may indicate that the facility may pose a significant health risk.

After the approval of the updated facility's Toxic Emission Inventory Plan (TEIP) & Toxic Emissions Inventory Report (TEIR), which is required if there has been a significant increase in emissions since the facility's previous report submittal, the new data from the reports are entered into the California Emission Inventory Data and Reporting System (CEIDARS). The District then prioritizes these facilities using complex computerized database and modeling programs. As part of this process, very conservative assumptions are utilized, with many safety factors built in to determine the worst-case health risk to possible receptors. The purpose of those safety factors is to ensure that the most sensitive receptors (children, elderly, pregnant women and people with weakened immune systems) are protected. The District prioritizes and ranks the health risk posed by the facility as "low", "intermediate", or "high" priority.

Health Risk Assessments

When a facility's prioritization score exceeds 10, the facility is classified as "High Priority" and a Health Risk Assessment (HRA) is required for the facility. The District and State Office of Environmental Health Hazard Assessment (OEHHA) are required by the Air Toxics "Hot Spots" Act to review each Health Risk Assessment (HRA). Based on the results of the HRA, facilities may be determined to pose a significant risk. Risk calculation involves uncertainties arising from lack of data in many areas necessitating the use of assumptions. As part of this process, very conservative assumptions are utilized, with many safety factors built in to determine the worst-case risk to possible receptors. The purpose of those safety factors is to ensure that the most sensitive receptors (children, elderly, pregnant women and people with weakened immune systems) are protected. The

assumptions used are designed to error on the side of health protection in order to avoid underestimating the risk to the public. Therefore, while the actual risk may be much less than the calculated risk, it is very unlikely to be higher than calculated.

Update Summary Facilities

Intermediate Priority and Intermediate Risk facilities are subject to the regulation's Update Summary reporting process. Every four years these facilities must complete an Update Summary Form and submit it to the District for review. The Update Summary submittal is necessary in order to provide the District with information regarding any operational changes at the facility, such as process rates, that may result in a change in air toxics emissions that would require further evaluation. However, it is important to note that changes that require modifications to the facility, equipment, or related District-issued permits, must be approved prior by the District prior to being implemented, and will therefore be known to the District in advance of the submittal of Update Summary reports. As noted elsewhere in this report, the District will not approved such changes if the changes would pose a significant risk to the surrounding population.

Risk Reduction Audits and Plans

Facilities that pose health risks above District action levels are required to submit plans to reduce their risk. Action levels for risk were established in the District's Board-Approved Risk Reduction policy. The Risk Reduction Audit Plan (RRAP) action level for cancer risk is 100 cases per million exposed persons, based on the maximum exposure beyond facility boundaries at a residence or business. The action level for non-cancer risk is a hazard index of five at any point beyond the facility boundary where a person could reasonably experience exposure to such a risk. There are currently no Valley facilities that have been determined to pose risks in excess of these action levels.

The District's review of completeness of the facility's RRAP includes a substantive analysis of the emission reduction measures included in the plan, and the ability of those measures to achieve emission reduction goals as quickly as feasible. If the District determines that the RRAP does not meet those requirements, the District shall remand the audit and plan to the facility to remedy the deficiencies identified by the District.

Industry-wide Surveys

For common types of smaller commercial facilities that may emit toxic air contaminants, the District uses industry-wide surveys, which provide a more streamlined and cost-effective method of preparing toxics inventories. Valley gasoline dispensing facilities, dry cleaning operations, printing operations, and automotive painting facilities have been categorized as industry-wide survey facilities. With the added streamlining effort of combining the point source emissions inventory with the toxics inventory, these industry-wide facilities are surveyed on a periodic basis, allowing for expeditious screening risk assessments and improved quality of the state's inventory.

District AB 2588 Air Toxics Hot Spots Reassessments

Background

The District's implementation of AB 2588, California's *Air Toxics "Hot Spots" Information and Assessment Act*, has resulted in major reductions in emissions of air toxics from existing sources in the San Joaquin Valley. Under this right-to-know law, the District has worked with Valley facilities to quantify emissions of air toxics, determine the health risk caused by those emissions, report emissions and any significant risks through written public reports and neighborhood public meetings, and to take steps to reduce such risks. As a result of this effort, and the resulting emissions reductions, no Valley facility currently poses a significant risk under this program.

In 2015, the District began implementing the state Office of Environmental Health Hazard Assessment's (OEHHA's) revised Guidance on Preparation of Health Risk Assessments that was adopted by OEHHA in early March 2015 (see Appendix A). The District's health risk assessment processes and policies were updated accordingly and implemented July 1, 2015. This revised guidance was designed to implement the Governing Board's guidance to incorporate all of OEHHA's revisions to provide enhanced protection of children and the public overall, while also protecting the public's right-to-know and preventing unreasonable restrictions on permitting actions.

Since the calculated health risk under the new OEHHA methodologies is higher than previous estimates, the health risks associated with air toxics facilities subject to the AB 2588 Air Toxics "Hot Spots" program are being reassessed. As described above, under this health risk reassessment process, facilities are required to prepare a Toxic Emission Inventory Plan (TEIP) and a Toxic Emission Inventory Report (TEIR) in order to provide site-specific inventories of air emissions of toxic substances.

Implementation Plan

In 2016, the District began the outreach and reassessment of facilities by following the phased processing schedule outlined in AB 2588, which was originally implemented in the late 80's and early 90's. AB 2588 subjected three major categories (or phases) of facilities to the regulation based upon their level of annual emissions. The AB 2588 regulation also allows for "Industry-wide" toxics emissions inventory, which consist of facilities that are small businesses where emissions can be generally characterized such as Gasoline Dispensing, Auto Body Coating, etc. These industry-wide facilities are being addressed under a fourth assessment phase. The following summary outlines each phase within the District's implementation plan:

First phase:	Phase I Facilities (≥ 25 tons emissions per year)
Second phase:	Phase II Facilities ($10 \leq$ tons emissions per year < 25)
Third phase:	Phase III Facilities (< 10 tons emissions per year)
Fourth phase:	Phase IV Facilities (Industry-wide, DICE only, Ag facilities)

As required by the State Air Toxics "Hot Spots" Information and Assessment act, the District already collects and compiles toxic emissions data for industrial and commercial facilities through the aforementioned Toxic Emission's Inventory Plans (TEIP's) & Toxic Emissions Inventory Reports (TEIR's). Although this process was finalized for low risk Valley facilities during the early years of the Air Toxics Hot Spots program (1989-1991), approximately 160 of the highest emitting operations are required to provide updates to their emissions reports every four years. To simplify and streamline the assessment process, facilities that are currently evaluated on a quadrennial update summary schedule under the District Hot Spot program will be maintained on their current assessment schedule.

The District's assessment procedure is summarized as follows:

Toxics Emission Inventory Plan (TEIP)

- District sends outreach informational letter to facility
- District sends TEIP notification letter, includes TEIP due date
- District develops facility-specific TEIP template, is made available to facilities
- Facilities submit their TEIP for District approval; District will send TEIP incompleteness letter requesting deficiencies be addressed, if any
- District Approves Facility TEIP and sends TEIP approval letter, which includes notification that a Toxic Emission Inventory Report (TEIR) is due

Toxics Emission Inventory Report (TEIR) / Prioritization

- District develops facility-specific TEIR template, is made available to facilities
- Facilities submit their TEIR for District Approval; District will send TEIR incompleteness letter requesting deficiencies be addressed, if any
- District approves facility TEIR and sends approval letter to facility
- District staff will run prioritization based on approved TEIR
- Prioritization:
 - Low Priority: Prioritization ≤ 1
Facility Exempt from further AB 2588 requirements
 - Intermediate Priority: 1 < Prioritization ≤ 10
Facility required to provide Update Summary on a quadrennial basis
 - High Priority: Prioritization > 10
Facility required to perform a Health Risk Assessment
- District sends letter summarizing the status, and notifies facility if an HRA is required

Health Risk Analysis (HRA) - If Necessary

- Facilities submit their HRA for District Approval; District will send HRA incompleteness letter requesting deficiencies be addressed, if any.
- Using OEHHA's protocol, the District reviews HRA and determine the facility's health risk status using the thresholds identified below:
 - Low Risk: HRA cancer risk < 1 in a million, and HRA total hazard index of < 0.1
(Facility Exempt from further AB 2588 requirements)
 - Intermediate Risk: $1 \leq$ HRA cancer risk < 10 in a million, or $0.1 \leq$ HRA total hazard index < 1.0
(Facility required to provide update summary on a quadrennial basis)
 - High Risk: HRA cancer risk \geq 10 in a million, or HRA total hazard index of \geq 1.0
(Public Notice)
 - Risk Reduction: HRA cancer risk \geq 100 in a million cancer, or HRA total hazard index of \geq 5.0
(Public Notice and Risk Reduction Audit Plan)

Air Toxics Hot Spot Reassessment Status Update

Under the aforementioned District Air Toxics Hot Spot reassessment effort, the District has finalized 5,313 facility reassessments from 2016 - 2021. Tables 2 and 3 below summarize the District's reassessment efforts.

Table 2 below identifies the number of facility reassessments finalized through a prioritization analysis or an applicability exemption determination. The "Low/Exempt" category includes the number of facilities with a low prioritization score or surveyed and determined to be exempt from AB 2588 Hot Spots requirements. "Intermediate" priority facilities are subject to the regulation's Update Summary reporting process every four years.

Table 2: Summary of Facility Prioritizations

Prioritization Category	Number of Facilities
Low/Exempt	4,466
Intermediate	762
Total	5,228

Any facilities categorized as a high priority are then assessed with an HRA. Table 3 below identifies the number of facility reassessments finalized through an HRA process. The “Low/Exempt” category includes the number of facilities prioritized as low risk and are exempt from further AB 2588 “Hot Spots” requirements. “Intermediate” risk facilities are subject the regulation’s Update Summary reporting process every four years. To date, there are no facilities determined to be a high risk.

Table 3: Summary of Facility Health Risk Assessments

Risk Category	Number of Facilities
Low/Exempt	19
Intermediate	66
High	0
Total	85

Facilities Reassessed in 2021

In 2021, the District finalized 289 facility reassessments utilizing conservative prioritization methods or by requiring the facility to submit a comprehensive Health Risk Assessment (HRA).

The District prioritized 138 emergency diesel internal combustion engine (DICE)-only facilities and 132 other types of facilities, for a total of 270 facilities, representing various source categories under the Air Toxic Hot Spots program in 2021. Tables 4 and 5 below identify the facilities that were prioritized in 2021.

Table 4: Emergency DICE-Only Facilities Prioritized in 2021

Region	Facility ID	Facility Name	City	Prioritization Score	Prioritization Category
N	2401	Lodi Toyota Lodi Scion	Lodi	0.00	Low/Exempt
C	4040	Fresno Unified School District	Fresno	0.00	Low/Exempt
S	6736	City Of Woodlake	Woodlake	0.00	Low/Exempt
S	4641	West Coast Broadcasting	Visalia	0.00	Low/Exempt
S	8255	Sturgeon Services International	McKittrick	0.00	Low/Exempt
S	7996	Burton School District	Porterville	0.00	Low/Exempt
S	7357	County Of Tulare	Strathmore	0.00	Low/Exempt
N	8682	Devil Mountain Growers	Clements	0.00	Low/Exempt
N	4340	City Of Modesto	Modesto	0.00	Low/Exempt
N	7597	Citadel Broadcasting Company	Tracy	0.0003	Low/Exempt
C	8210	City Of Orange Cove	Orange Cove	0.001	Low/Exempt

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S	7397	Cutler-Orosi Joint Powers Wastewater	Cutler	0.002	Low/Exempt
N	7470	Western Hills Water District	Patterson	0.01	Low/Exempt
N	7469	Western Hills Water District	Patterson	0.01	Low/Exempt
N	7472	Western Hills Water District	Patterson	0.01	Low/Exempt
S	3483	Dinuba City	Dinuba	0.01	Low/Exempt
S	4015	County Of Kern General Services	Bakersfield	0.01	Low/Exempt
S	7060	City Of Exeter	Exeter	0.01	Low/Exempt
N	7471	Western Hills Water District	Patterson	0.01	Low/Exempt
N	4783	Murphy Parkway Owner, Lp C/O Overton Moo	Lathrop	0.01	Low/Exempt
S	8639	Rio Bravo Medical Campus LLC.	Bakersfield	0.02	Low/Exempt
N	7939	Modesto City Schools	Modesto	0.02	Low/Exempt
N	4264	Spm Housing Associates	Tracy	0.02	Low/Exempt
N	8067	B R Funsten & Co	Manteca	0.02	Low/Exempt
N	7473	Western Hills Water District	Patterson	0.02	Low/Exempt
S	3809	City Of Lindsay	Lindsay	0.03	Low/Exempt
S	8126	Dg Strategic Vii LLC.	Lebec	0.03	Low/Exempt
S	7450	City Of Dinuba	Dinuba	0.03	Low/Exempt
S	4132	Sunview Vineyards Of Ca Inc.	Mcfarland	0.03	Low/Exempt
C	3999	Federal Aviation Administration	Fresno	0.04	Low/Exempt
S	4251	Oak Valley Union Elem S D	Tulare	0.04	Low/Exempt
S	3837	City Of Exeter	Exeter	0.04	Low/Exempt
N	8859	Merced Community College District	Los Banos	0.05	Low/Exempt
C	7580	Fresno County	Squaw Vallley	0.05	Low/Exempt
C	8229	David Mcdonald	Prather	0.07	Low/Exempt
S	7865	Federal Aviation Administration	Bakersfield	0.07	Low/Exempt
S	5729	Booth Ranches LLC.	Orange Cove	0.08	Low/Exempt
C	7480	Sun-Maid Growers Of California	Kingsburg	0.09	Low/Exempt
S	3920	Ivanhoe Public Utility District	Ivanhoe	0.09	Low/Exempt
N	8611	Beverly Health Care Center	Stockton	0.09	Low/Exempt
C	5972	Biola Community Services Dist	Biola	0.10	Low/Exempt
S	3953	City Of Dinuba	Dinuba	0.10	Low/Exempt
C	7226	Broder Bros Co	Fresno	0.12	Low/Exempt
C	8538	City Of Orange Cove	Orange Cove	0.12	Low/Exempt
N	7778	The Commons At Union Ranch	Manteca	0.13	Low/Exempt
S	8556	Frontier California Inc.	Lost Hills	0.14	Low/Exempt

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S	7524	Porterville College	Porterville	0.23	Low/Exempt
S	981	Dinuba City Wastewater Plant	Dinuba	0.24	Low/Exempt
S	7123	Nandakumar Ravi Md & Rajeev Manu Md	Bakersfield	0.25	Low/Exempt
N	7504	Patelco Credit Union	Merced	0.26	Low/Exempt
S	7176	Conduent	Bakersfield	0.27	Low/Exempt
S	8565	County Of Kern	Bakersfield	0.31	Low/Exempt
N	7599	City Of Hughson	Hughson	0.36	Low/Exempt
C	7221	Edwards Fresno 21 & Imax Theatres	Fresno	0.37	Low/Exempt
S	3966	3701 Sillect Investors Group	Bakersfield	0.39	Low/Exempt
S	7016	City Of Dinuba	Dinuba	0.44	Low/Exempt
N	7655	City Of Manteca	Manteca	0.45	Low/Exempt
S	7256	Southwest Family Dentistry	Bakersfield	0.45	Low/Exempt
N	7449	City Of Hughson	Hughson	0.47	Low/Exempt
C	7539	County Of Fresno	Fresno County	0.54	Low/Exempt
C	3947	City Of Kerman	Kerman	0.57	Low/Exempt
N	8617	Citadel Broadcasting	Stockton	0.59	Low/Exempt
S	7613	Arrc Technology	Bakersfield	0.59	Low/Exempt
C	3067	Laton Community Services District	Laton	0.70	Low/Exempt
C	7528	City Of Kerman	Kerman	0.70	Low/Exempt
C	6994	City Of Kerman	Kerman	0.70	Low/Exempt
N	819	LMG Stockton, Inc. Dba The Record	Stockton	0.73	Low/Exempt
S	3514	Goshen Community Services Dist.	Goshen	0.73	Low/Exempt
S	7224	Robin Martella	Bakersfield	0.77	Low/Exempt
C	8160	City Of Orange Cove	Orange Cove	0.81	Low/Exempt
N	4873	Atlantic Aviation	Stockton	0.89	Low/Exempt
N	7954	Lodi Regional Health Systems Inc.	Stockton	0.94	Low/Exempt
C	4369	City Of Kerman	Kerman	0.97	Low/Exempt
S	8399	Coffee Surgery Center LLC.	Bakersfield	1.00	Low/Exempt
N	9806	Plymouth Place	Stockton	1.06	Intermediate
N	9510	California Water Service Company	Stockton	1.13	Intermediate
C	7798	Westlake Hardware, Inc.	Fresno	1.14	Intermediate
S	6898	Parkview Julian Convalescent Hospital	Bakersfield	1.16	Intermediate
C	3797	Community Subacute & Transitional Center	Fresno	1.17	Intermediate
N	6637	City Of Modesto Fire Department	Modesto	1.18	Intermediate

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C	7410	Fresno Unified School District	Fresno	1.27	Intermediate
S	8457	Stockdale Annex Mutual Water Co	Bakersfield	1.27	Intermediate
N	4710	Keyes Community Services District	Keyes	1.29	Intermediate
N	8881	Amazon.Com Services, LCC - Oak4	Tracy	1.31	Intermediate
N	7487	City Of Modesto Fire Department	Modesto	1.39	Intermediate
C	7118	Spine And Pain Treatment Of Santa Barbar	Madera	1.41	Intermediate
C	7969	Sanger Unified School District	Sanger	1.45	Intermediate
S	4169	City Of Arvin	Arvin	1.46	Intermediate
C	3909	Saladino's	Fresno	1.50	Intermediate
N	7377	Tara Park Waste Water (City Of Manteca)	Manteca	1.67	Intermediate
S	6735	City Of Woodlake	Woodlake	1.81	Intermediate
C	8705	Ireit Fresno El Paseo, LLC.	Fresno	1.86	Intermediate
N	9041	Owens & Minor	Tracy	1.86	Intermediate
N	4871	City Of Oakdale	Oakdale	1.96	Intermediate
N	9009	Zayo Group	Modesto	2.00	Intermediate
C	6824	Winterfell Yosemite Gardens (Ca) Owner,	Clovis	2.08	Intermediate
N	7463	River Surgical Center	Modesto	2.23	Intermediate
N	9212	San Joaquin County	Stockton	2.27	Intermediate
N	4716	San Luis Water District	Santa Nella	2.34	Intermediate
N	5034	Delhi County Water District	Delhi	2.35	Intermediate
C	3004	Ash Tree Dialysis	Fresno	2.48	Intermediate
S	8191	City Of McFarland	McFarland	2.48	Intermediate
S	3839	Kern County Public Health Dept.	Bakersfield	2.50	Intermediate
N	4219	City-County Capitol Improvement	Modesto	2.68	Intermediate
S	3235	McFarland Mutual Water Co	McFarland	2.69	Intermediate
N	9017	Omnicare Pharmacy	Lodi	2.69	Intermediate
C	5883	City Of Fresno	Fresno	2.70	Intermediate
N	7185	South San Joaquin Irrigation District	Lathrop	2.77	Intermediate
N	8650	Americold	Modesto	2.89	Intermediate
N	3583	City Tower Group LLC.	Modesto	2.94	Intermediate
C	3904	Brooks Automation, Inc.	Fresno	3.05	Intermediate
N	7266	Health & Wellness Surgery Center LP	Turlock	3.71	Intermediate
S	6629	Spanish Radio Group	Bakersfield	4.09	Intermediate
C	8761	Noble Credit Union	Fresno	4.14	Intermediate

N	4437	City Of Riverbank	Riverbank	4.43	Intermediate
N	9280	Brandel Manor	Turlock	5.07	Intermediate
S	7545	City Of Exeter	Exeter	5.18	Intermediate
N	8911	YRC Freight Inc.	Tracy	5.40	Intermediate
S	4135	Carquest Auto Parts	Bakersfield	6.00	Intermediate
C	3284	Brickyard Business Park Assoc. Inc.	Madera	6.85	Intermediate
N	7901	Blue Shield Of California	Lodi	7.75	Intermediate
N	7443	Ethan Conrad Properties, LLC.	Los Banos	7.78	Intermediate
C	3289	Gap, Inc.	Fresno	7.83	Intermediate
S	7235	Gogo LLC.	Arvin	8.24	Intermediate
S	6621	CBCC Pain Medicine And Surgery Center	Bakersfield	8.42	Intermediate
S	3852	TRC-MRC 2, LLC. C/O Majestic Management	Lebec	8.52	Intermediate
S	3971	Centennial Center	Bakersfield	8.78	Intermediate
C	2897	Willow Creek Healthcare Center	Clovis	9.26	Intermediate
S	7549	Pan American Bank	Porterville	9.31	Intermediate
C	7519	City Of Clovis, Ca	Clovis	9.34	Intermediate
N	4715	San Luis Water District	Santa Nella	10.40	High
N	7432	Covenant Village Of Turlock	Turlock	11.40	High
S	4000	Majestic Management Co. Agent - Trc-Mrc2	Lebec	12.60	High
N	9532	San Joaquin Regional Transit District	Stockton	13.48	High
N	4996	Sutter Valley Hospitals	Tracy	14.90	High
S	3767	BLC Glenwood Garden SNF-LH LLC.	Bakersfield	16.60	High
C	3663	Oremor Of Fresno, LLC.	Fresno	61.31	High
S	1380	Encompass Health Rehabilitation Hospital	Bakersfield	61.90	High

Table 5: Other Facilities Prioritized in 2021

Region	Facility ID	Facility Name	City	Prioritization Score	Prioritization Category
C	2643	Howard Auto Body	Fresno	0.00	Low/Exempt
C	4038	Mobile Mini LLC	Fresno	0.00	Low/Exempt
N	6059	Holt Of California	Stockton	0.00	Low/Exempt
C	780	California Organic Fertilizers Inc.	Hanford	0.00	Low/Exempt
S	1233	Taft Production Co	Taft	0.00	Low/Exempt
N	3980	Colorcoat Powder Coating	Modesto	0.00	Low/Exempt
C	2015	Actagro, LLC.	Biola	0.01	Low/Exempt

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Region	Facility ID	Facility Name	City	Prioritization Score	Prioritization Category
S	215	Pacific Almond Co	Lost Hills	0.01	Low/Exempt
N	4751	Hilltop Ranch	Ballico	0.02	Low/Exempt
C	3273	Evolution Autobody Repair #2	Fresno	0.02	Low/Exempt
N	2107	Darling Ingredients Inc.	Crows Landing	0.03	Low/Exempt
S	1641	Sentinel Peak Resources Ca LLC	Western Kern Co	0.03	Low/Exempt
C	7830	Gill Ranch Storage, LLC	Madera	0.04	Low/Exempt
N	137	Nustar Terminals Ops Partnership LP	Stockton	0.05	Low/Exempt
N	183	Cargill, Incorporated	Stockton	0.05	Low/Exempt
S	882	Golden State Vintners/Franzia-McFarland	McFarland	0.05	Low/Exempt
S	711	Delano Growers Grape Products	Delano	0.06	Low/Exempt
S	8199	Hydrite Chemical Co	Visalia	0.06	Low/Exempt
S	2635	Caballero Operations LLC.	Bakersfield	0.06	Low/Exempt
S	858	Asphalt Coatings Engineering	Wasco	0.10	Low/Exempt
S	2796	General Production Oil	Kern County	0.10	Low/Exempt
C	8744	Custom Ag Formulators, Inc.	Fresno	0.12	Low/Exempt
C	1301	Phillips 66 Pipeline LLC	Coalinga	0.13	Low/Exempt
C	551	Renew Auto Body & Paint	Fresno	0.13	Low/Exempt
C	2980	RNA Corp A Division Of Wilbur-Ellis Co	San Joaquin	0.14	Low/Exempt
C	3812	Golden Work Finish	Fresno	0.17	Low/Exempt
S	236	Key Energy Services	Bakersfield	0.18	Low/Exempt
C	4371	Peacock Auto Body	Fresno	0.18	Low/Exempt
N	9063	Lopez Custom Composite	Stockton	0.22	Low/Exempt
C	1568	United Auto Body	Fresno	0.22	Low/Exempt
S	7048	ASV Wines Inc.	McFarland	0.22	Low/Exempt
N	3152	M B Sports	Atwater	0.23	Low/Exempt
S	200	Lost Hills Mining LLC	Lost Hills	0.23	Low/Exempt
S	160	J D Heiskell & Co LLC	Pixley	0.24	Low/Exempt
S	1603	Sergio's Auto Body & Paint	Arvin	0.26	Low/Exempt
S	862	A C Plating	Bakersfield	0.28	Low/Exempt
S	3431	Shafter-Wasco Landfill	Shafter	0.29	Low/Exempt
S	38	Kern Oil & Refining Co	Bakersfield	0.33	Low/Exempt
N	594	Pacific Coast Producers	Lodi	0.34	Low/Exempt
N	1119	North County Sanitary Landfill	Lodi	0.34	Low/Exempt
C	14	Fresno Cogeneration Partners	San Joaquin	0.35	Low/Exempt

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Region	Facility ID	Facility Name	City	Prioritization Score	Prioritization Category
N	3650	Plug It Products Corp.	Lodi	0.36	Low/Exempt
C	3798	Papich Const Co, Inc. Db Sierra Pacific	Coalinga	0.37	Low/Exempt
S	1525	Phillips 66 Pipeline LLC	Taft	0.37	Low/Exempt
S	1612	Granite Construction Co	Bakersfield	0.40	Low/Exempt
S	415	Golden Empire Transit District	Bakersfield	0.41	Low/Exempt
C	4356	R & R Customs	Fresno	0.41	Low/Exempt
S	2584	Sequoia Exploration	Bakersfield	0.44	Low/Exempt
S	2918	Crimson Resource Management	Kern County	0.44	Low/Exempt
S	1257	Certis USA LLC	Wasco	0.47	Low/Exempt
C	705	J R Simplot Company	Helm	0.47	Low/Exempt
N	1719	Silgan Containers Mfr. Corp.	Modesto	0.48	Low/Exempt
S	2590	California Powder Coating	Visalia	0.50	Low/Exempt
S	1336	Pacific Pipeline System LLC	Lebec	0.51	Low/Exempt
S	1521	Phillips 66 Pipeline LLC	McKittrick	0.53	Low/Exempt
N	1665	Bronco Wine Company	Ceres	0.56	Low/Exempt
S	2716	Jody Fresh Cooling Co	Dinuba	0.66	Low/Exempt
S	4291	Express Collision Center	Wasco	0.71	Low/Exempt
N	8521	Alpine Pacific Nut Company Inc.	Hughson	0.72	Low/Exempt
S	3720	China Grade Sanitary Landfill	Bakersfield	0.74	Low/Exempt
S	1518	Phillips 66 Pipeline LLC	Lost Hills	0.85	Low/Exempt
N	3250	Pioneer Americas LLC/Olin Chlor Alkali	Tracy	0.88	Low/Exempt
S	3746	Sunrise Power Co	Fellows	0.88	Low/Exempt
S	1330	Berry Petroleum Company LLC	McKittrick	0.92	Low/Exempt
N	2074	OHE Sand & Gravel	Oakdale	0.95	Low/Exempt
S	40	California Resources Production Corp	Tupman	0.96	Low/Exempt
N	9633	Diamond Auto Body & Services Inc.	Stockton	0.98	Low/Exempt
N	8057	Dollar Tree Distribution, Inc.	Stockton	1.09	Intermediate
N	3032	John B. Sanfilippo & Son, Inc.	Gustine	1.10	Intermediate
S	892	Pactiv LLC	Bakersfield	1.12	Intermediate
N	4597	MRP San Joaquin Energy, LLC	Tracy	1.24	Intermediate
N	2282	Hunt & Sons Inc.	Ceres	1.25	Intermediate
S	4212	South Kern Industrial Center LLC	Taft	1.47	Intermediate
S	3636	Pastoria Energy Facility LLC	Lebec	1.51	Intermediate

Region	Facility ID	Facility Name	City	Prioritization Score	Prioritization Category
N	4070	Foothill Sanitary Landfill	Linden	1.58	Intermediate
S	83	Pacific Pipeline System, LLC	Mettler	1.71	Intermediate
N	1679	Santa Fe Aggregates, Inc.	Waterford	1.77	Intermediate
S	1333	Berry Petroleum Company, LLC	Bakersfield	1.95	Intermediate
S	2286	US Oil & Gas	Bakersfield	2.17	Intermediate
S	2585	Sequoia Exploration	Bakersfield	2.17	Intermediate
N	1246	Fineline Industries, LLC	Merced	2.35	Intermediate
N	956	The Wine Group, Inc.	Ripon	2.42	Intermediate
N	5055	University Of California Merced	Merced	2.48	Intermediate
N	1237	E & J Gallo Winery	Livingston	2.54	Intermediate
N	1626	Del Monte Foods Modesto Plant 1	Modesto	2.76	Intermediate
S	39	Midstream Energy Partners (USA) LLC	Tupman	2.81	Intermediate
N	3299	Turlock Irrigation District	Modesto	2.82	Intermediate
N	2395	Delta Packing Co Of Lodi, Inc.	Lodi	2.98	Intermediate
C	954	Prison Industry Authority - Avenal	Avenal	3.06	Intermediate
C	195	Calif. State Prison - Avenal	Avenal	3.06	Intermediate
S	1326	California Resources Production Corp	Kern County	3.35	Intermediate
S	8452	California Resources Production Corp	Bakersfield	3.35	Intermediate
S	3232	Bakersfield Metropolitan Landfill BENA	Edison	3.78	Intermediate
N	964	George Reed Inc.	Clements	3.79	Intermediate
N	8534	Forward, Inc. Composting Facility	Manteca	4.03	Intermediate
C	4352	CSATF/CA Substance Abuse Treatment Facility	Corcoran	4.27	Intermediate
C	214	Calif State Prison - Corcoran	Corcoran	4.27	Intermediate
S	8885	Uc Davis Animal Health & Food Safety Lab	Tulare	4.56	Intermediate
S	363	Vulcan Materials Co, Western Div.	Bakersfield	4.93	Intermediate
S	3726	Global Elastomeric Products Inc.	Bakersfield	5.14	Intermediate
N	4064	H.J. Baker & Bro. LLC	Stockton	5.23	Intermediate
N	1904	Foam Fabricators, Inc.	Modesto	5.23	Intermediate
S	4170	Page Industrial Services Inc.	Bakersfield	5.31	Intermediate
S	44	Tricor Refining LLC	Bakersfield	5.65	Intermediate
C	8523	Patrick W Geiger	Fresno	5.78	Intermediate

Region	Facility ID	Facility Name	City	Prioritization Score	Prioritization Category
S	1792	Southern Calif. Gas Co	Bakersfield	5.96	Intermediate
N	6830	Fineline Industries, LLC	Merced	6.15	Intermediate
N	8114	Valley Custom Powder Coating	Lathrop	6.96	Intermediate
S	3991	Foster Farms - Traver Feedmill	Traver	7.26	Intermediate
C	252	Central Cal Women's Facility	Chowchilla	7.43	Intermediate
C	628	Cbus Ops DbA Mission Bell Winery	Madera	7.47	Intermediate
N	7757	Salas Brothers Funeral Chapel Inc.	Modesto	7.64	Intermediate
S	2843	Bakersfield City Wood Site	Bakersfield	8.48	Intermediate
S	36	San Joaquin Refining Co	Bakersfield	8.54	Intermediate
N	758	Equilon Enterprises LLC	Stockton	8.58	Intermediate
N	2253	Ball Metalpack (Oakdale), LLC	Oakdale	8.66	Intermediate
N	4912	Recology Blossom Valley Organics	Vernalis	8.72	Intermediate
N	845	Tesoro Logistics Operations LLC	Stockton	8.91	Intermediate
S	525	Land O' Lakes Inc.	Tulare	9.21	Intermediate
C	2341	NAS Lemoore	Lemoore	9.35	Intermediate
S	3594	USA Waste Of California, Inc.	Tulare	9.54	Intermediate
C	3839	Avenal Regional Landfill	Avenal	9.69	Intermediate
C	4051	Coalinga State Hospital	Coalinga	12.30	High
C	265	Chapel Of The Light	Fresno	25.70	High
S	37	Kern Oil & Refining Co.	Bakersfield	30.10	High
C	7405	Triangle Rock Products, LLC	Madera	31.60	High
S	3729	Visalia Landfill	Visalia	38.70	High
C	1406	Foster Farms, Belgravia Plant	Fresno	47.70	High
C	948	Vitro Flat Glass LLC	Fresno	58.60	High
N	7494	A Bay Area Crematory Inc.	Stockton	80.80	High
N	3696	Highway 59 Landfill Site	Merced	123.00	High
C	1820	Rio Bravo Fresno	Fresno	123.00	High

Table 6: Summary of Prioritizations Performed in 2021

Prioritization Category	DICE-Only Facilities	Other Facilities	Total
Low/Exempt	74	67	141
Intermediate	56	55	111
High	8	10	18
Total	138	132	270

As shown in Table 6 above, in 2021, a total of 18 facilities were determined to be “High Priority” under the State of California’s Air Toxics Hot Spots program and require a Health Risk Assessment.

Table 7: Summary of Health Risk Assessments Performed in 2021

Risk Category	DICE-Only Facilities	Other Facilities	Total
Low/Exempt Risk	2	3	5
Intermediate Risk	6	16	22
High	0	0	0
Total	8	19	27

In 2021, HRAs for 27 facilities that were previously categorized as high priority were completed. The HRAs determined the facilities were either low or intermediate risk as summarized in Table 7 above. Table 8 below contains a detailed list of the facilities and their risk category.

Table 8: List of Facilities with Health Risk Assessments Performed in 2021

Region	Facility ID	Facility Name	City	Cancer Risk	Acute Hazard Index	Chronic Hazard Index	Risk Category
C	2696	Calaveras Materials Inc	Fresno	0.76	0.06	0.00	Exempt Low Risk
N	8569	Ameresco Forward Llc	Manteca	0.84	0.05	0.06	Exempt Low Risk
C	3537	Fresno Pet Cemetery	Fresno	0.99	0.05	0.04	Exempt Low Risk
S	4000	Majestic Managment Co. Agent - Trc-Mrc2	Lebec	0.96	0.000	0.00	Exempt Low Risk

Region	Facility ID	Facility Name	City	Cancer Risk	Acute Hazard Index	Chronic Hazard Index	Risk Category
N	9532	San Joaquin Regional Transit District	Stockton	0.55	0.000	0.00	Exempt Low Risk
N	1103	M & R Company	Lodi	0.00	0.00	0.97	Intermediate Risk
C	898	Pacific Bell Telephone Co	Fresno	0.70	0.23	0.00	Intermediate Risk
C	4051	Coalinga State Hospital	Coalinga	1.19	0.00	0.00	Intermediate Risk
C	261	Certainreed Llc	Chowchilla	1.20	0.01	0.05	Intermediate Risk
N	913	Stockton Metropolitan Airport	Stockton	1.48	0.93	0.00	Intermediate Risk
N	4408	Aero Turbine Inc	Stockton	1.54	0.40	0.01	Intermediate Risk
C	1080	Scelzi Enterprises Inc	Fresno	2.82	0.16	0.15	Intermediate Risk
C	3733	Evergreen Cremation Service Of California	Fresno	4.65	0.30	0.28	Intermediate Risk
N	1976	Conagra Foods	Oakdale	5.10	0.05	0.00	Intermediate Risk
C	817	MB Technology	Fresno	5.56	0.12	0.03	Intermediate Risk
S	1548	Aera Energy LLC	Coalinga	5.60	0.21	0.02	Intermediate Risk
C	2902	Childrens Hospital Of Central California	Madera	5.65	0.01	0.00	Intermediate Risk
N	2333	Doctors Medical Center	Modesto	6.19	0.00	0.01	Intermediate Risk
N	7856	Family Pet Mortuary	Turlock	7.44	0.58	0.46	Intermediate Risk

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Region	Facility ID	Facility Name	City	Cancer Risk	Acute Hazard Index	Chronic Hazard Index	Risk Category
N	1088	Valley Crematory	Tracy	8.78	0.06	0.31	Intermediate Risk
N	825	Stockton Wood Shavings Company	French Camp	8.96	0.35	0.00	Intermediate Risk
S	1380	Encompass Health Rehabilitation Hospital	Bakersfield	1.16	0.001	0.00	Intermediate Risk
C	3663	Oremor Of Fresno, Llc	Fresno	1.21	0.001	0.00	Intermediate Risk
S	3767	B/c Glenwood Garden Snf-Lh Llc	Bakersfield	3.10	0.000	0.00	Intermediate Risk
N	4715	San Luis Water District	Santa Nella	1.75	0.003	0.00	Intermediate Risk
N	4996	Sutter Valley Hospitals	Tracy	1.69	0.001	0.00	Intermediate Risk
N	7432	Covenant Village Of Turlock	Turlock	9.44	0.001	0.00	Intermediate Risk

Providing Outstanding Customer Service

The District remains in close contact with facilities tracked through the Toxics Hot Spots Program to assist them in meeting ongoing toxics requirements. To further minimize the economic impact on these facilities, the District has integrated the Air Toxics and Emissions Inventory programs, an enhancement that eliminates the need for duplicate reporting efforts by the facilities and allows for quick and accurate processing of update TEIR reports or health risk assessments with the most current facility information. This, in turn, expedites the determination for potential further reporting by the sources. The District made other significant efforts to provide facilities with assistance, such as developing air dispersion modeling guidelines and being the first district in California to implement the use of the "AERMOD" modeling program (see Air Dispersion Modeling section below) along with the continuing training of District staff in the District's "San Joaquin Valley HARP" (SHARP) program, an internally developed improvement of the Air Resources Board's Hotspots Analysis Reporting Program (HARP). These efforts also improve the quality of service offered to affected facilities and the public.

Preventing Creation of Significant Health Risk

The District's integrated approach to reducing air toxics emissions in the San Joaquin Valley assists in preventing health risks through a variety of means:

Preventing the Creation of Significant Risk from New or Modified Sources - One goal of District risk management efforts is to ensure that new and modified sources of air pollution do not introduce new and unacceptable health risks at nearby residences and businesses. In order to achieve this goal, the District reviews the risk associated with each proposed permitting action where there is an increase in emissions of hazardous air pollutants or change in operations. This risk management review is performed by expert District staff as part of the engineering evaluation for these projects. Since risk management reviews are performed concurrently with other project review functions using streamlined procedures including improved modeling tools developed by District staff, use of appropriate designated modeling programs, and utilizing the most current and applicable meteorological data processed by District staff, the process does not extend the length of time necessary to process applications.

Under the District's risk management policy, Toxic Best Available Control Technology must be applied to all units that may pose greater than de minimis levels of risk (i.e., a cancer risk greater than one in one million). Projects that would pose significant impacts to nearby residences or businesses (i.e., by causing an increased cumulative facility cancer risk of 20-in-a-million or greater) are not approvable. When a project is determined not to be approvable as proposed, District staff will work with the applicant to find approvable low-risk alternatives, such as installing air toxic emissions control devices or limiting the operation of the proposed equipment. Under this program, the District has performed approximately 15,000 Risk Management Reviews for facilities throughout the valley. As a consequence, no permit for a new or modified operation has been approved since the program was initiated in 1995 that would have created a significant health impact through increases in air toxic emissions.

In addition, since July 2015, over 4,800 projects have been analyzed and approved under the revised District RMR methodologies that incorporate the revised OEHHA risk assessment methodologies (see Appendix A). These revised procedures have resulted in no permitting project denials and have not changed expected permit processing time or the associated application processing fees compared to the prior methodology.

Air Toxics “Hot Spots” Information and Assessment Act - As noted earlier in this report, this law is designed to provide information on the extent of emissions from existing stationary sources and the potential public health impacts of those emissions. Facilities are required to calculate and report to the District their actual emissions of air toxic emissions. “Significant Risk” facilities must disclose their impacts to the nearby residents that may be impacted. Facilities that exceed a higher risk reduction action threshold must go even further and reduce emissions of air toxics. No Valley facility currently poses a significant risk under the “Hot Spots” program, while at the beginning of the implementation of the program, in 1989, 16 facilities were classified “Significant Risk Facilities.” As discussed above, the District has begun a significant risk reassessment process that incorporates the revised OEHHA guidance.

Incentive-Based Programs - The District has experienced tremendous success in replacing and retrofitting large numbers of polluting equipment in the San Joaquin Valley, through our emissions reduction incentive grant programs. As identified above, a significant portion of the air toxics emissions reductions achieved have been from the replacement or electrification of over 29,100 diesel fired internal combustion engines. In addition, they have directly reduced more than 6,000 tons per year of diesel particulate emissions, one of the most potent and common carcinogens in the ambient air.

Air Toxics Regulations - In addition, the District implements a variety of state, federal, and District rules reducing and regulating the emissions of toxic air pollutants. Such regulations have generated significant reductions in air toxics from a wide variety of sources, from requiring the gradual phase-out of perchloroethylene used at drycleaners and mandating emissions controls at chrome platers, to a large number of rules aimed at reducing particulate emissions from diesel internal combustion engines.

Due to this diverse set of risk reduction efforts, approximately 14% of all air toxics in the San Joaquin Valley are now emitted from stationary sources of pollution under the direct control and regulation of the District, while 52% comes from mobile sources such as cars and trucks, and the remaining 34% is emitted from area-wide sources like road dust, paints, solvents, and other consumer products (per CTI). Mobile and area-wide sources of emissions are generally under the regulatory authority of the State of California and the federal government.

Reducing Regional Health Risks

Reducing Health Risk through State Airborne Toxic Control Measures

Diesel Exhaust Risk Reduction

The California Air Resources Board (CARB) identified particulate matter emissions from diesel-fueled engines as a toxic air contaminant with the potential to pose a significant cancer risk to the public. In the analysis prepared for this determination, CARB estimated the cancer risk from the exhaust of diesel internal combustion engines to be over 500 cancer cases per million, which is far higher than the estimated cancer risk from all other sources of air pollution combined. Because of the extremely high level of risk associated with diesel exhaust, and because of the prevalence of the engines, the State chose not to address diesel exhaust using the existing risk management guidance. Instead, the State decided to establish an advisory committee of interested parties, and developed a comprehensive risk management plan that would result in significant reductions in emissions of diesel particulate matter. CARB adopted the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles. The Plan's goals were a 75 percent reduction in diesel PM by 2010 and an 85 percent reduction by 2020 from the 2000 baseline.

Several of the following Air Toxic Control Measures (ATCMs) were developed as a part of ARB's diesel exhaust risk reduction efforts, which continue to be developed. Related information is available on [ARB's ATCM website](#).

ATCM for Portable Diesel-Fueled Engines

The purpose of the CARB adopted Portable Diesel ATCM is to protect public health by controlling particulate matter (PM) emissions from diesel fueled portable engines rated at 50 horsepower and greater operating in California. All existing portable diesel engines were required to be certified by January 1, 2010, and all new portable engines were required to meet the latest certification standards. In addition, the ATCM contains stringent diesel PM fleet standards that apply after 2010.

The latest version of the ATCM became effective on November 30, 2018 and contains stringent emissions standards and operational requirements that impact new and existing portable diesel engines. The District has been implementing the requirements of the Portable ATCM in the review of applications for District Portable Registrations and permits for portable diesel engines. This ATCM is expected to continue to result in a substantial reduction in Valley diesel PM emissions over the next several years.

ATCM for Stationary Diesel-Fueled Engines

The purpose of the CARB adopted Stationary Diesel ATCM is to protect public health by controlling particulate matter (PM) and criteria pollutant emissions from stationary diesel fueled portable engines rated at 50 horsepower and greater operating in California.

This ATCM is satisfied via Rule 4702 (Internal Combustion Engines) in combination with the District's permitting or Permit-Exempt Equipment Registration (PEER) program. These District programs have collectively been found by the CARB to be equivalent to the Stationary ATCM for stationary agricultural engines. This ATCM and District Rule 4702 are expected to continue to result in a substantial reduction in Valley diesel PM emissions over the next several years.

State Control Measure for In Use Off-road Diesel Vehicle Rule

The purpose of the CARB adopted a off-road diesel vehicle rule is to reduce diesel PM and oxides of nitrogen (NO_x) emissions from in-use (existing) off-road heavy-duty diesel vehicles. The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, and airport ground support equipment. Vehicles with engines less than 25 horsepower are exempt. The regulation is expected to reduce diesel exhaust emissions by over 1,600 tons per year statewide between 2010 and 2030.

Diesel Particulate Matter Control Measure for On-road Heavy-duty Diesel-fueled Vehicles Owned or Operated by Public Agencies and Utilities

The purpose of the CARB adopted control measure will reduce emissions from on-road heavy duty vehicles over several deadlines, with the first groups of vehicles required to be in compliance by December 31, 2007. This control measure is particularly effective because it reduces diesel PM emissions in the heart of residential communities where municipal and utility vehicles frequently conduct business, and where the public is significantly impacted by diesel PM emissions.

ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling

CARB initially adopted an ATCM to reduce emissions of toxics and criteria pollutants by limiting idling of new and in-use sleeper berth-equipped diesel trucks. The emission performance requirements require technologies used as alternatives to idling the truck's main engine. The new engine requirements required 2008 and newer model year heavy-duty diesel engines to be equipped with non-programmable engine shutdown systems that automatically shut down the engine after five minutes of idling or, alternatively, meet a more stringent NO_x idling emission standard. Beginning January 1, 2008, in-use truck requirements require operators of both in-state and out-of-state registered sleeper berth equipped trucks to manually shut down their engine when idling more than five minutes at any location within California. Each year heavy-duty diesel truck idling contributes to hundreds of pounds of PM as well as other pollutants to the Valley. The District Incentive Program has subsidized truck stop support equipment to reduce diesel truck idling along the main goods movement corridors. Tests conducted by the District and ARB have

determined that an idling truck can consume up to a gallon of diesel fuel an hour. The idling of heavy-duty trucks, at the time of delivery, represents a high percentage of emissions around developed areas in the Valley.

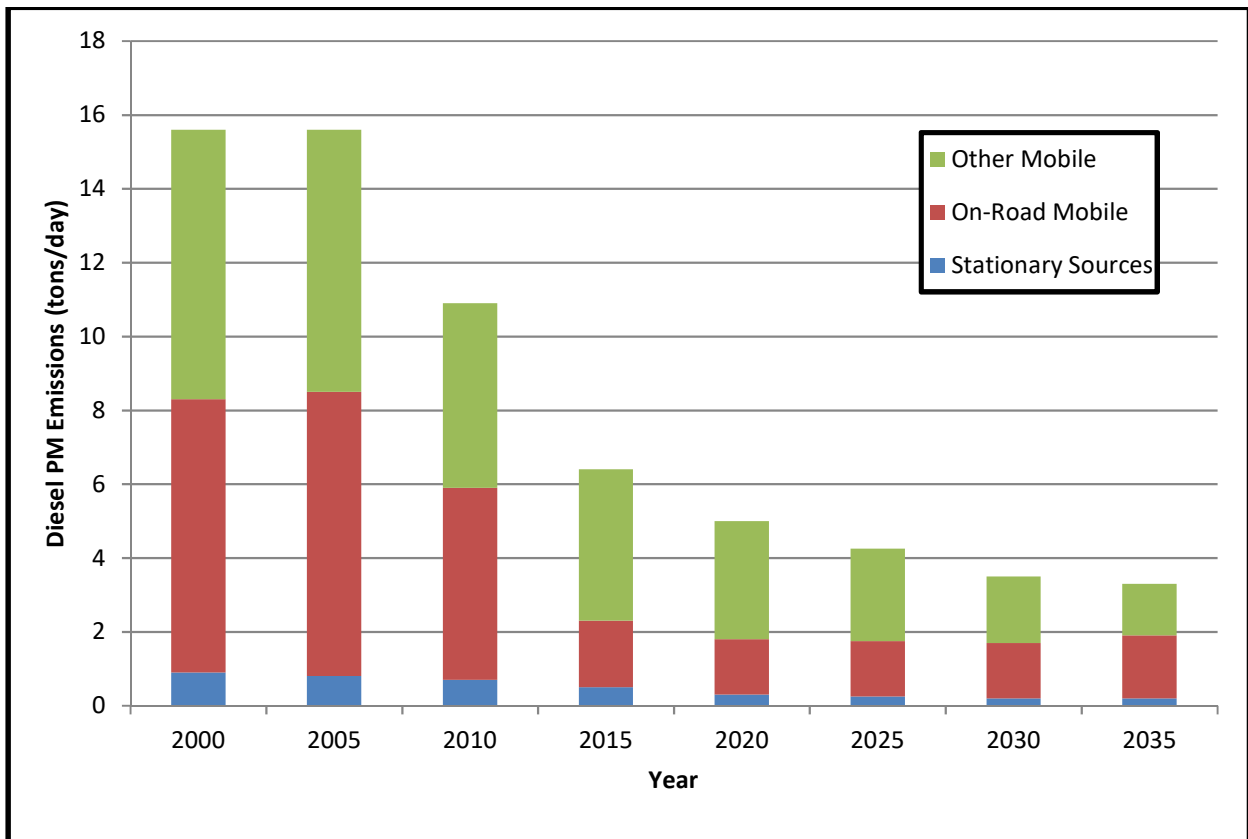
ATCM for Transport Refrigeration Units

The purpose of the CARB adopted ATCM is to reduce emissions of diesel PM from Transport Refrigeration Units (TRUs). TRUs are refrigeration systems powered by diesel internal combustion engines designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars. Although TRU engines are relatively small, ranging from 9 to 36 horsepower, significant numbers of these engines congregate at distribution centers, truck stops, and other facilities, resulting in the potential for health risks to those that live and work nearby. CARB estimated that diesel PM emissions from TRUs will be reduced by 83% by 2040.

CARB has recently developed amendments to this ATCM. Related information is available on their [TRU ATCM website](#).

Figure 2 below shows the forecast of diesel PM emissions in the San Joaquin Valley through the year 2035.

Figure 2: Diesel PM Emissions Trend, San Joaquin Valley (The California Almanac of Emissions and Air Quality, CARB, 2013)



ATCM for Hexavalent Chromium for Decorative and Hard Chrome Plating and Chromic Acid Anodizing Facilities

The purpose of the CARB adopted ATCM is to established new, more stringent emission limitations that depend upon size and nearness to sensitive receptors, limited the use of chemical fume suppressants, and adopted new housekeeping, education, monitoring, recordkeeping, and reporting requirements. The District chose to implement this ATCM by revising Rule 7011 to incorporate the revised ATCM by reference. The District also required submission of a compliance plan and applications for Authorities to Construct (ATCs). A compliance workshop was held on November 17, 2007 to assist facility owners and operators in complying with the ATCM. The District's Governing Board adopted the rule on January 17, 2008. In January 2022, CARB held a workshop to revise the ATCM to establish enhanced best management practices (e.g. building enclosures, limits, source testing, etc.) for all facilities using hexavalent chrome.

ATCM for Perchloroethylene Emissions from Dry Cleaning Operations

The purpose of the CARB adopted ATCM is to phase out the use of perc dry cleaning machines and related equipment by January 1, 2023. In addition, the amendments will put in place revisions to the Curriculum for the Environmental Training Program for Perc Dry Cleaning Operations (Training Curriculum). There were changes to the operational requirements for dry cleaners as well. For example, the revised ATCM requires that owners/operators maintain a spare set of gaskets on-site. Also, the trained operator must now be on-site whenever the machine is operated. These amendments became effective upon final approval by the Office of Administrative Law on December 27, 2007. The District adopted the revised ATCM in 2008 by reference.

ATCM for Composite Wood Products

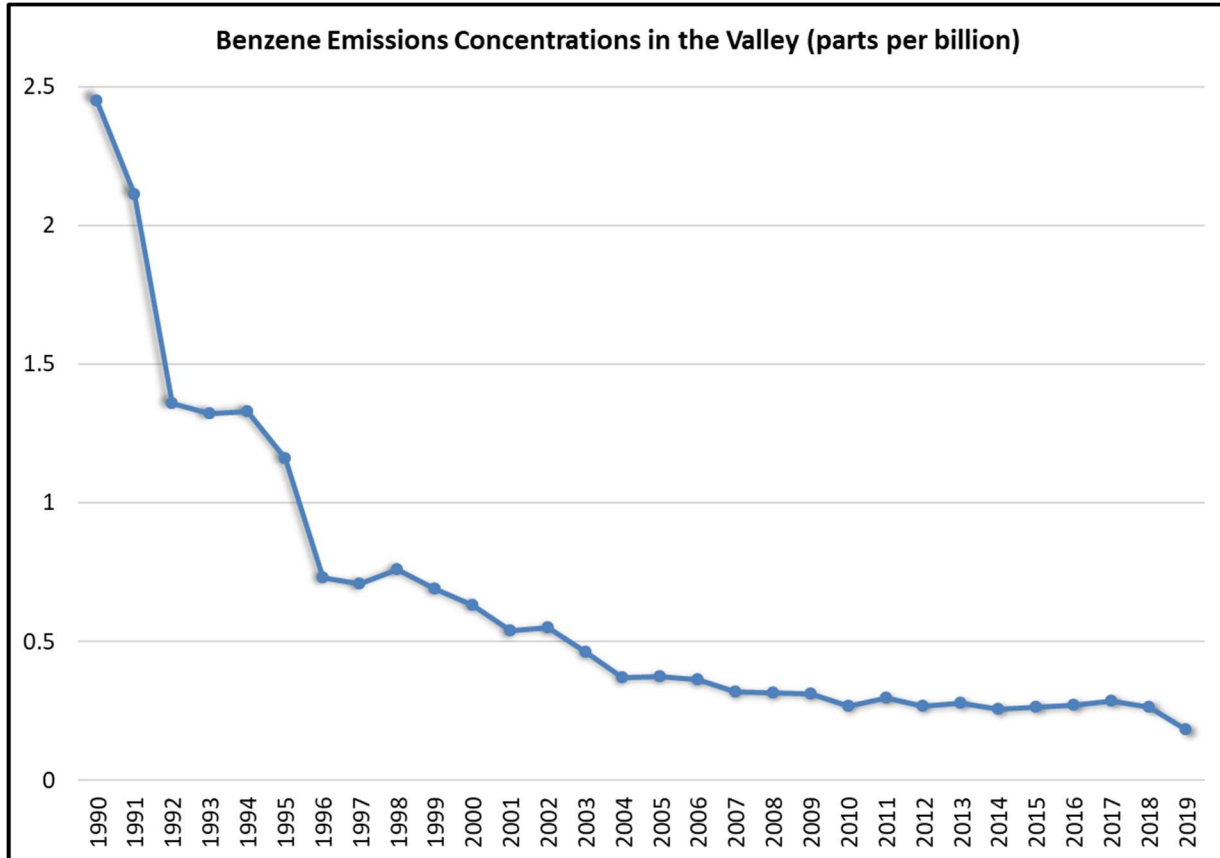
The purpose of the CARB approved ATCM is to reduce formaldehyde emissions from composite wood products including hardwood plywood, particleboard, medium density fiberboard, thin medium density fiberboard, and also furniture and other finished products made with composite wood products. Formaldehyde is produced on a large scale worldwide. One major use includes the production of wood binding adhesives and resins. CARB developed a modified version of the Composite Wood Product ATCM that was released for a 15-day public comment period on January 31, 2008, and was approved April 18, 2008, by the Office of Administrative Law. Further amendments to this ATCM were approved in May of 2012.

ATCM for Benzene from Retail Service Stations

CARB adopted the Airborne Toxic Control Measure (ATCM) for Emissions of Benzene from Retail Service Stations. The ATCM reflects the use of best available control technology which requires the installation of CARB-certified Phase I and II vapor recovery control equipment at all retail service stations. The ATCM is designed to reduce benzene and total hydrocarbon emissions from uncontrolled stations by 95 percent.

Figure 3 below shows the trend of benzene emissions in the Valley.

Figure 3: Benzene Emissions Trend, San Joaquin Valley (CARB Annual Toxics Monitoring Data)



ATCMs Adopted by the District as Regulations:

- Chromium Plating And Chromic Acid Anodizing Facilities
- Hexavalent Chromium - Cooling Towers
- Ethylene Oxide - Sterilizers and Aerators
- Dioxin - Medical Waste Incinerators
- Fluorides - Phosphoric Acid Plants
- Asbestos - Containing Material for Surfacing Applications
- Toxic Metals from Non-Ferrous Metal Melting
- Perchloroethylene from Dry Cleaning Operations

Other ATCMs are implemented primarily through the permitting process. These include the ATCM for Stationary Compression Ignition Engines and the ATCM for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater.

Reducing Health Risk through Enforcement Delegation

On July 1, 2008, the District began enforcing California Air Resources Board's ATCM to Limit School Bus Idling and Idling at Schools and ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling, during timeframes in which state funding is available to support these efforts. The purpose of these ATCMs is to reduce toxic and criteria air pollutants by limiting idling time. By enforcing these requirements in the Valley, the District is able to directly reduce public exposure from toxic emissions, especially in sensitive areas.

The District was delegated the responsibility of enforcing the U.S. EPA's NESHAP for asbestos, a known carcinogen, and as a result performs hundreds of inspections of construction projects that have the possibility of disturbing asbestos containing materials. By ensuring that these materials are removed and handled correctly, the probability of harmful releases of asbestos is significantly reduced.

Implementation of Federal Air Toxics Mandates

The Federal Environmental Protection Agency (EPA) has issued NESHAPs through Part 61 and Part 63 of Title 40 of the Code of Federal Regulations (CFR). The Part 61 NESHAPs were issued prior to the adoption of the Federal Clean Air Act Amendments of 1990. Those NESHAPs are specific to a particular hazardous air pollutant (HAP). Due to little activity in adopting NESHAPs, the 1990 amendments to the Federal Clean Air Act established a new procedure for developing NESHAPs. A list of 189 HAPs was established. EPA identified industries that emitted those HAPs and established a prioritized list of over 70 source categories for which Maximum Achievable Control Technology (MACT) standards would be promulgated. These MACT standards apply to major sources of HAPs, defined as sources with emissions greater than 10 tons per year of a single HAP, or 25 tons per year of combined HAPs. Many of these source categories are already subject to state and local regulation, which have traditionally been more stringent than the federal regulations. EPA has already adopted MACT standards to address the majority of the source categories identified.

In addition to the MACT standards for major sources, EPA is also required to adopt NESHAPs standards to reduce the health risk associated with area (non-major) sources of HAPs. As the result of a lawsuit, EPA was under court order to promulgate area source NESHAPs for 4 categories of sources by December 15, 2006; for 6 categories by June 15, 2007; and for 10 categories each 6 months thereafter until June 15, 2009. Similar to the MACT standards for major sources, many of the area sources subject to these standards are already subject to state and local regulation. Area source NESHAPs have already been promulgated for Oil and Natural Gas Production Facilities; Polyvinyl Chloride and Copolymers Production, Primary Copper Smelting, Secondary Copper Smelting, and Primary Nonferrous Metals - Zinc, Cadmium, and Beryllium; Acrylic and Modacrylic Fibers Production, Carbon Black Production, Chemical Manufacturing: Chromium Compounds, Flexible Polyurethane Foam Production and Fabrication, Lead Acid Battery Manufacturing, and Wood Preserving; Clay Ceramics Manufacturing, Glass Manufacturing, and Secondary Nonferrous Metals Processing; Electric Arc Furnace

Steelmaking Facilities; and Hospital Ethylene Oxide Sterilizers. See Appendix E for the current status of the District's implementation of NESHAPs.

An amendment to 40 CFR part 63, subpart ZZZZ (control of HAPs from reciprocating internal combustion engines) was proposed on June 6, 2012, and was finalized by EPA on January 14, 2013. This regulation requires reductions in hazardous air pollutants from stationary internal combustion engines over the next several years, and requires significant recordkeeping and monitoring of the engines affected. The District is currently developing processes and policies to assist those facilities affected to comply with the new requirements.

Many other amendments to existing NESHAPs were finalized in 2012: Chemical Manufacturing, Hard & Decorative Chrome electroplating and HCL supplements, Polyvinyl Chloride, Nitric Acid Plants, Petroleum Refineries process heaters and flares, etc. While these NESHAPs have lesser applicability in California and the San Joaquin Valley than the engine NESHAP discussed above, the District will identify, notify, and assist those facilities affected.

The District currently is delegated authority by EPA to implement and enforce NESHAPs through two mechanisms. First, all major sources of HAPs are required to obtain Title V operating permits. The NESHAP requirements for these major sources are included in the Title V permits for which the District is delegated authority by EPA. Second, the District is delegated authority to implement and enforce all area source NESHAPs that are included in District Rule 4002, most recently amended on May 20, 2004. Under the District's Air Toxics Program and federal regulations, there are several options for implementing new NESHAP requirements. These options are discussed in more detail below. The District will choose the most appropriate option for implementing each Federal standard, and will hold public workshops to obtain public input on the implementation of these additional standards.

- **Straight Delegation:** Accepting delegation of the federal standard as written by amending Rule 4002 or by agreeing to automatic delegation with an option of opting-out for specific NESHAPs using an approach developed by the California Air Pollution Control Officers Association (CAPCOA);
- **Rule Adjustment:** Proposing minor changes to the federal MACT rule that make the adjusted rule no less stringent than the federal standard;
- **Rule Substitution:** Substituting one or more existing, new, or amended District rules for the federal standard (It should be noted that California Districts have been delegated authority for the chrome plating and dry cleaning NESHAPs because EPA has agreed that the ATCMs for those source categories are equivalent to the NESHAPs.);
- **Streamlining Multiple Applicable Requirements:** Minimizing duplicative requirements by placing the more stringent emission limit or workplace practice standard on the permit along with the corresponding monitoring, recordkeeping, and reporting requirements;
- **Program Substitution:** Using existing programs to assure compliance with the requirements of federal standards;

- **No Delegation:** Using existing programs to reduce the emissions of hazardous air pollutants without delegation of federal standards.

The NESHAPs for which the District has received delegation through Rule 4002 are listed in Table E1 in Appendix E. All current NESHAPs for which the District has not received delegation through Rule 4002 are listed in Table E2 in Appendix E.

Regardless of the status and type of delegation, the District believes strongly in working with the affected sources to make them aware of the requirements in a timely manner, and then help them understand and comply with these public health protective regulations.

California Environmental Quality Act and Health Risk Reduction

The California Environmental Quality Act (CEQA) requires public agencies to evaluate project environmental impacts and all feasible alternatives or mitigation measures that can substantially reduce or avoid those impacts. Generally, the main responsibility for satisfying CEQA requirements, or “lead agency” role, falls under the responsibility of city or county planning agencies.

From a health risk perspective, land use decisions are critical to improving and preventing degradation of air quality within the San Joaquin Valley Air Basin because land use patterns greatly influence potential exposure of sensitive receptors to sources of air pollution. Under CEQA, land use agencies must evaluate the potential significance of health risks associated with the projects they approve. However, most land use agencies lack the necessary technical expertise to assess health risk impacts associated with exposure to toxic air contaminants. To address this issue, the District is providing support to land use agencies to assist them with health risk assessment from exposure to toxic air contaminants into their land use decisions.

Public Assistance

With concerns about health risk impacts from CEQA projects and the need to streamline the CEQA HRA review process; the District has dedicated a significant amount of effort into providing assistance to proponents and their consultants in preparing CEQA HRAs. This effort includes providing extensive assistance to consultants regarding health risk modelling. In addition to providing direct assistance, the District carefully reviews the HRAs included in CEQA documents circulated by public agencies for review, and provides further feedback and guidance.

Air Dispersion Modeling

Air quality models use mathematical techniques to simulate the physical and chemical processes that affect air pollutants as they disperse and react in the atmosphere. These models form the backbone of the air toxics management process, as they are used to assess the potential exposure of the public to various toxic emissions. Using inputs of meteorological data and source parameter information such as emission rates and stack height, models predict ambient concentrations of primary pollutants that are emitted. Models are also important to the air quality management process because they determine compliance with National/State Ambient Air Quality Standards (NAAQS/SAQS), and other regulatory requirements such as New Source Review (NSR).

EPA Regulatory Model (AERMOD)

The American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) was formed to introduce state-of-the-art modeling concepts into the EPA's air quality models. Through AERMIC, a modeling system, AERMOD, was developed to incorporate air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.

With the promulgation of AERMOD as the preferred air dispersion model in EPA's *Guideline on Air Quality Models* (signed by the EPA Administrator on October 21, 2005 and published November 9, 2005 in the *Federal Register*), AERMOD is used for appropriate application as a replacement for ISCST3 since November 9, 2006.

Meteorological Data

The District makes available meteorological data from both the National Climatological Data Center (NCDC) and the Fifth-Generation Penn State/National Center for Atmospheric Research Mesoscale Model (MM5). The NCDC data were collected at major airports in the San Joaquin Valley. The MM5 data were derived from a numerical model for locations in the valley where there are no airports. These locations are primarily in the western part of the Valley. All processed data is freely available for download on the District's web page at:

http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

Modeling Support to Public Agencies

The District is one of the leading air dispersion modeling experts in the State of California by ensuring that the newest models and techniques are implemented and providing modeling guidance to support internal and external users. Additionally, District staff has been called by local government agencies, other Districts, consultants working on projects outside the Valley, and ARB to provide modeling assistance.

District continues its leadership role in dispersion modeling science at the state and federal levels. The District assists the California Air Resources Board (CARB) with the development of modeling training for other air districts, the public, and consultants throughout California. The District presented modeling topics at several conferences and meetings such as the EPA's Regional, State, and Local Modelers Conference and the CAPCOA Engineering training classes. In addition, the District produced material used by EPA Region IX during modeling training for federal New Source Review.

To ensure that stakeholders, consultants and the public are kept up-to-date on modeling issues, the District maintains a modeler list serve, the members of which receive regular updates on District modeling techniques. Subscribers to the District's modeler list serve range from local, state, national, and worldwide subscribers that look to the District for cutting edge techniques and guidance to address regulatory issues.

The District's Health-Risk Reduction Strategy

In September 2010, the District Governing Board adopted the Health-Risk Reduction Strategy to maximize public health improvements within the District's various strategies and programs. In line with the District's Air Toxic Program, the overall goal of the Health-Risk Reduction Strategy is to minimize the Valley population's exposure to air pollution and corresponding health risk. This risk reduction goal is being pursued through the integration of emerging scientific knowledge into the District's control strategies, incentive programs, public communication, and other strategies to prioritize those efforts that provide the biggest public health benefits.

The District's Health-Risk Reduction Strategy has been implemented through a variety of programs:

- **Attainment Plans and Control Strategies.** Within the District's *2018 PM_{2.5} Plan*, the District prioritized strategies achieving the greatest public health benefits while satisfying applicable attainment planning requirements. The District also analyzed the health benefits that would result from implementation of the plan. Several examples of prioritized control strategies included in the *2018 PM_{2.5} Plan* include new measures to further reduce emissions from commercial cooking (Rule 4692) and residential wood burning (Rule 4901). These measures will reduce some of the most harmful types of particulate matter when and where those reductions are most needed in urban, highly populated areas. The District has prioritized commitments to strengthen these programs due to the significant and well-researched public health benefits.

- **Research.** The District actively tracks, sponsors, and coordinates research projects related to public health and air quality. For example, the District sponsored a first-of-its-kind epidemiological investigation of health effects of air pollution in Modesto, Fresno, and Bakersfield. The study found that high particulate matter and ozone concentrations clearly correlate to increased hospital and ER admission rates, especially for those 19 and younger. The District also sponsored a pilot study of ultra-fine particulates in Fresno, partnering with UCSF-Fresno, to investigate the quantity and spatial distribution of ultra-fine plumes from motor vehicles, lawn care equipment, wood burning, and restaurants, which found that ultra-fine particulate exposure in Fresno County is comparable to larger urban centers including Sacramento, San Francisco, Santa Clara, Los Angeles, Orange, and Riverside counties.
- **District Incentive Programs.** The District has implemented a number of incentive programs that prioritize public health benefits, including programs that target heavy duty diesel equipment, old school buses, light-duty vehicles, residential wood burning devices, and more. A significant portion of this funding provides direct benefits to environmental justice and disadvantaged communities throughout the Valley. Two recent examples of the District's commitment to reducing emissions in environmental justice areas and disadvantaged communities through voluntary incentive programs include the Tune-In & Tune-Up program and the Burn Cleaner Program. The Tune-In & Tune-Up program provides incentives for primarily low-income Valley residents to perform much-needed smog related repairs to their personal vehicles. In some cases, the District is even able to offer greater incentives for residents to replace their old, high polluting vehicle with a much cleaner and much newer vehicle. Through the Burn Cleaner Incentive Program, the District is able to provide funding for Valley residents to replace, older, high polluting residential wood burning devices with new, clean burning devices or natural gas inserts. Through this program, the District offers a higher incentive for the Valley's low-income population.

To assist in addressing toxic emissions, the District's incentive programs have invested over \$4.2 billion in public and private funding for clean air projects reducing more than 212,000 tons of emissions, helping truckers, farmers, and Valley residents reduce emissions from mobile and off-road sources of emissions. For example, Valley residents have benefitted from the fact that over 29,100 internal combustion engines have been replaced, achieving annual emission reductions of more than 6,000 tons of diesel particulate matter (one of the most potent carcinogens).

- **The District's information and educational programs, including the Real-Time Air Quality Advisory Network (RAAN), Web-based Archived Air Quality (WAAQ) System, and Healthy Air Living Schools.** RAAN uses real-time data from air monitoring stations throughout the Valley to provide hour-by-hour air quality updates to schools and other subscribers. WAAQS was implemented in 2015 and takes RAAN a step further by providing neighborhood-by-neighborhood historical air quality data for any address in the Valley air basin. Valley residents can use this information to make informed decisions and plan outdoor activities for times with the best air quality, reducing potential air quality health risks. As a high priority area of focus, the District has continued working to expand the Healthy Air Living Schools initiative to deliver an extensive set of tools and information, including the recent launch of school-based

Real-Time Electronic Air-quality Displays (READ), to enable Valley schools to understand and respond to air quality conditions and protect the health of students.

Appendices

- Appendix A: Implementing OEHHA's Revised Guidance for HRAs
- Appendix B: Toxic Emissions Summary
- Appendix C: AB 2588 District Implementation Flow Chart
- Appendix D: Current Status of NESHAP Delegation

Appendix A - Implementing OEHHA's Revised Guidance for HRAs

Background

In 1990, the state legislated new law, "The Children's Environmental Health Protection Act" (SB 25, Escutia, 1999, Health and Safety Code Section 39606), which requires explicit consideration of infants and children in assessing risks from air toxics, necessitated revisions of the methods for both non-cancer and cancer risk assessment, and of the exposure variates.

Changes to OEHHA Guidance

On June 20, 2014, the state Office of Environmental Health Hazard Assessment (OEHHA) proposed changes to *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* (Risk Assessment Guidelines). These revisions were mainly designed to provide enhanced protection of children, as required by "The Children's Environmental Health Protection Act", and were adopted in March 2015.

OEHHA'S Key Risk Calculation Changes

The key changes to the proposed Risk Assessment Guidelines affecting the calculation of cancer risk are summarized as follows:

- Residential exposure duration changed from 70 years to 30 years
(reduces calculated risk)
- Worker exposure duration changed from 40 years to 25 years
(reduces calculated risk)
- Cancer risk calculated by age groups rather than single group
(increases calculated risk)
- Age-based sensitivity factors used to calculate cancer risk
(increases calculated risk)
- Age-based breathing rates used in conjunction with a 95th percentile breathing rate for children
(increases calculated risk)
- Breathing rate for adults from 95th percentile to 80th
(reduces calculated risk)
- Allow spatial averaging of impacts (rather than receptor or point-specific impacts)
(reduces calculated risk)

As noted, some of the changes reduced the calculated risk for a given source of emissions, while others increased the calculated risk. Overall, the calculated cancer risk increased about 2.4 times for most situations.

The District's Revised Health Risk Methodology

The District Governing Board directed staff to implement OEHHA's changes to risk assessment procedures for the protection of children, without creating scenarios in which a permitting action would result in a higher risk than prior District methodologies, but to do so in a way that will not impose unreasonable permitting or CEQA restrictions in the San Joaquin Valley.

The revised policies continue to adhere to the long-standing objectives of the District's risk management philosophy:

- Minimize health risk from new and modified sources of air pollution,
- Do not allow significant health risk impacts from new and modified sources,
- Avoid unreasonable restrictions on permitting,
- Maintain public right-to-know about air toxics risk in their neighborhoods,
- Require reductions in risk from high risk facilities.

To ensure the greatest health protection and to prevent relaxations from the District's prior methodology, the District's incorporated all of OEHHA's suggested revisions that increased calculated risk, but did not incorporate those changes that decreased calculated risk. The District's revised risk management policies incorporated the following:

- More health protective 95th percentile breathing rate for both children AND adults, instead of OEHHA's proposed 95th percentile for children only and 80th percentile for adults,
- More health protective 70-year residential exposure instead of OEHHA's proposed 30-year, unless the expected project life is shorter,
- More health protective 40-year worker exposure instead of OEHHA's proposed 25-year, unless the expected project life is shorter,
- More health protective receptor (point-specific) impacts instead of OEHHA's spatial averaging method,
- All of the OEHHA changes that increase calculated risk for children.

Using these conservative and health protective modeling methodologies resulted in a higher calculated risk, about 2.4 times higher compared to the risk calculated for the same emissions using prior District methodologies.

The District will continue to require Toxic Best Available Control Technology (T-BACT) for any emissions unit with a cancer risk of greater than one-in-a-million. The District will deny permits for any project with a cumulative cancer risk of 20-in-a-million or greater.

Although the new methodology results in higher calculated risk, Valley residents' exposure to hazardous air pollution has been significantly reduced. The District's comprehensive regulatory and incentive-based programs discussed below, combined with state and federal air toxic control regulations, have significantly reduced the public's exposure to air toxics over the past two decades.

Revised District Risk Management Policies for Permitting

The District updated its risk management policy in May of 2015 to incorporate the changes discussed above. Under this policy, Toxic Best Available Control Technology must be applied to all units that may pose greater than de minimis levels of risk (i.e., a cancer risk greater than one in one million). Projects that would pose significant impacts to nearby residences or businesses (i.e., by causing a cumulative facility cancer risk of 20-in-a-million or greater) are not approvable.

In order to streamline the implementation of these changes, the District also developed a new modeling tool (SHARP database) based on a tiered approach to performing health risk assessments (District Policy, APR-1906):

- TIER 1 is used when specific information about a project and its location relative to actual or foreseen receptors are not known.
- TIER 2 is used when specific modeling input information about the project is known. This includes AERMOD model inputs (e.g. UTMs or Lat/Long coordinates of the emission source(s) and receptor(s) under evaluation) that would refine accuracy of the modeled concentration. Other refined AERMOD options in the model that are non-standard (e.g. low wind speed) are also employed.
- TIER 3 is used when specific exposure parameters information about the project and effected receptors are known. This includes information about limits to the life of a project, receptor time away from home, or other project specific receptor exposure parameters.

Each higher tier incorporates increased complexity and a more refined analysis, but takes longer to complete. The lower tiers result in higher calculated risk because of the nature of the more conservative and less precise information used, and therefore are adequate to analyze risk as a first cut. If a project passes the health risk analysis under the first tier, no further analysis is necessary, resulting in increased efficiency of District processes without sacrificing health protections. The higher tiers are generally only implemented if more refined and precise risk analysis is necessary.

With the implementation of these tools the District is the first and only district to fully adopt its revised Risk Assessment Guidelines and became the first air district in California to fully implement the changes recommended by OEHHA to provide additional health protections for children.

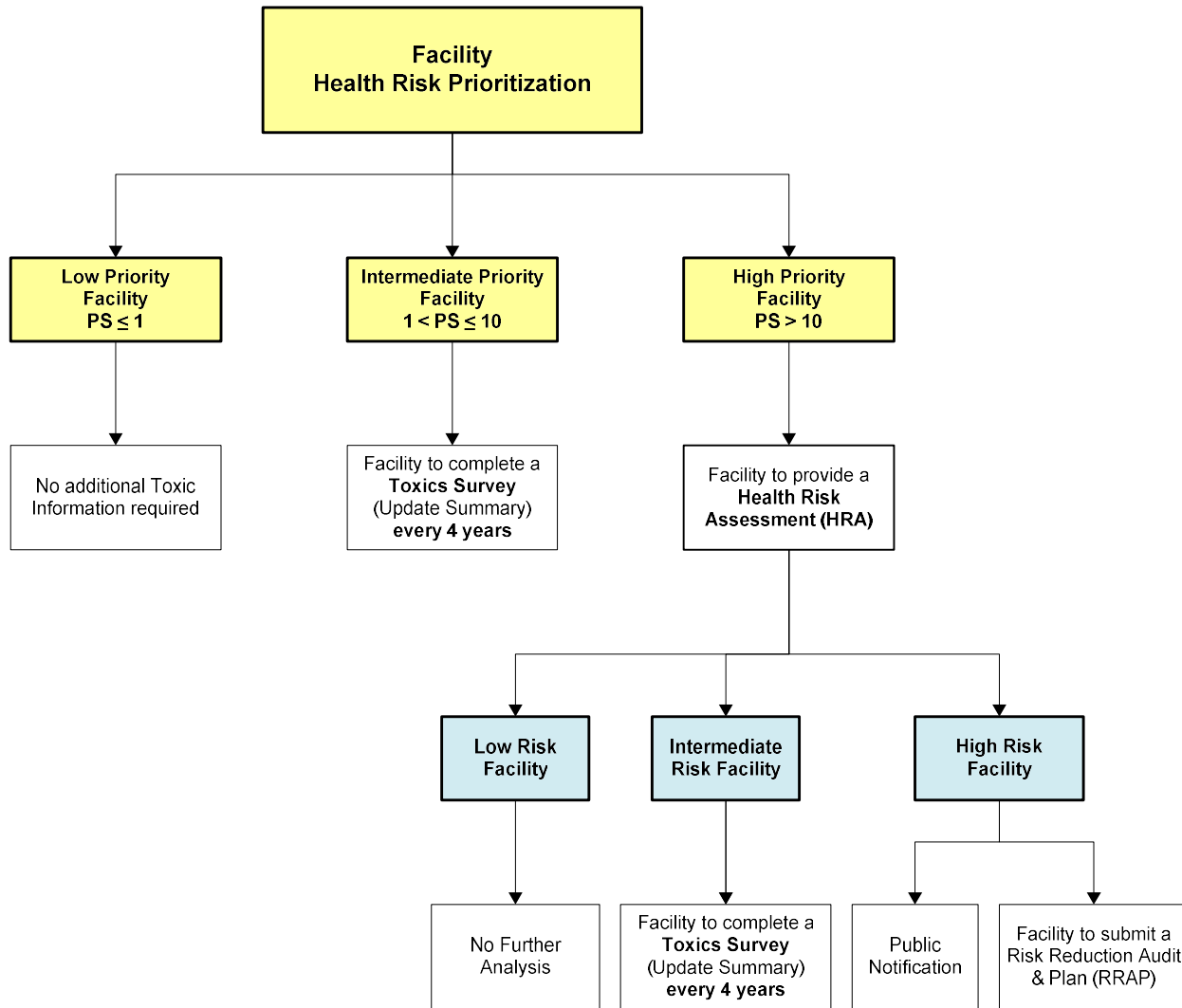
Appendix B - Toxics Emissions Summary

Emissions for eight counties of San Joaquin Valley from the latest California Air Resources Board CTI. Data for the CTI was obtained from a variety of District and State sources.

Table B1: Toxic Emissions Summary

Pollutant	CTI (tons/yr)
Acetaldehyde	3,512
Diesel Particulate Matter	2,520
Formaldehyde	2,318
Benzene	1,020
Perchloroethylene	448
1,3-Butadiene	269
Methylene Chloride	247
PAHs	238
Manganese	217
Acrolein	153
p-Dichlorobenzene	130
Styrene	96
Trichloroethylene	46
Chromium	34
Lead	28
Nickel	18
Acrylonitrile	7
Vinyl Chloride	7
Arsenic	5
Cadmium	3
Mercury	2
Chloroform	2
Ethylene Oxide	0
Ethylene Dichloride	0
Beryllium	0
Carbon Tetrachloride	0
Dioxins/Benzofurans	0
Chromium, Hexavalent	0

Appendix C - AB 2588 District Implementation Flow Chart



Appendix D - Current Status of NESHAP Delegation

NESHAPs Delegated

NESHAPs for Which Authority Has Been Delegated to the District Because They Are Included in Rule 4002

Table E1: 40 CFR 63

<i>Subpart</i>	<i>Title</i>
A	General Provisions
F-I	National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry
J	National Emission Standards for Hazardous Air Pollutants from Polyvinyl Chloride and Copolymers Production
L	National Emission Standards for Coke Oven Batteries
R	National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)
S	National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry
T	National Emission Standards for Halogenated Solvent Cleaning (except §63.462 - Batch cold cleaning machine standards)
U	National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins
W	National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production
X	National Emission Standards for Hazardous Air Pollutants From Secondary Lead Smelting
Y	National Emission Standards for Marine Tank Vessel Loading Operations
AA	National Emission Standards for Hazardous Air Pollutants From Phosphoric Acid Manufacturing Plants
BB	National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants
CC	National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries
DD	National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations
EE	National Emission Standards for Magnetic Tape Manufacturing Operations
GG	National Emission Standards for Aerospace Manufacturing and Rework Facilities
HH	National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities
II	National Emission Standards for Shipbuilding and Ship Repair (Surface

Subpart	Title
	Coating)
JJ	National Emission Standards for Wood Furniture Manufacturing Operations
KK	National Emission Standards for the Printing and Publishing Industry
LL	National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants
MM	National Emission Standards for Hazardous Air Pollutants from Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills
YY	National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology (Generic MACT)
CCC	National Emission Standards for Hazardous Air Pollutants for Steel Pickling--HCl Process Facilities and Hydrochloric Acid Regeneration Plants
DDD	National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production
GGG	National Emission Standards for Hazardous Air Pollutants From Pharmaceutical Production
HHH	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities
III	National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production
JJJ	National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins
LLL	National Emission Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry
MMM	National Emission Standards for Hazardous Air Pollutants: Pesticide Active Ingredient Production
NNN	National Emission Standards for Hazardous Air Pollutants for Source Categories; Wool Fiberglass Manufacturing
OOO	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins
PPP	National Emission Standards for Hazardous Air Pollutants for Polyether Polyols Production
QQQ	National Emission Standards for Hazardous Air Pollutants from Primary Copper Smelting
RRR	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production
TTT	National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting
UUU	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units
VVV	National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works
XXX	National Emission Standards for Hazardous Air Pollutants for Ferroalloys Production: Ferromanganese and Silicomanganese
AAAA	National Emission Standards for Hazardous Air Pollutants from Municipal

Subpart	Title
	Solid Waste Landfills
CCCC	National Emission Standards for Hazardous Air Pollutants from Manufacturing of Nutritional Yeast
EEEE	National Emission Standards for Hazardous Air Pollutants from Organic Liquids Distribution (Non-Gasoline)
FFFF	National Emission Standards for Hazardous Air Pollutants from Miscellaneous Organic Chemical Manufacturing
GGGG	National Emission Standards for Hazardous Air Pollutants from Solvent Extraction for Vegetable Oil Production
HHHH	National Emission Standards for Hazardous Air Pollutants from Wet-Formed Fiberglass Mat Production
JJJJ	National Emission Standards for Hazardous Air Pollutants from Paper and Other Web Coating
KKKK	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Metal Cans
MMMM	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Miscellaneous Metal Parts and Products
NNNN	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Large Appliances
OOOO	National Emission Standards for Hazardous Air Pollutants from Printing, Coating, and Dyeing of Fabrics and Other Textiles
PPPP	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Plastic Parts and Products
QQQQ	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Wood Building Products
RRRR	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Metal Furniture
SSSS	National Emission Standards for Hazardous Air Pollutants from Surface Coating of Metal Coil
TTTT	National Emission Standards for Hazardous Air Pollutants from Leather Finishing Operations
UUUU	National Emission Standards for Hazardous Air Pollutants from Cellulose Products Manufacturing
VVVV	National Emission Standards for Hazardous Air Pollutants from Boat Manufacturing
WWWW	National Emission Standards for Hazardous Air Pollutants from Reinforced Plastic Composites Production
XXXX	National Emission Standards for Hazardous Air Pollutants from Rubber Tire Manufacturing
YYYY	National Emission Standards for Hazardous Air Pollutants from Stationary Combustion Turbines
AAAAA	National Emission Standards for Hazardous Air Pollutants from Lime Manufacturing Plants
BBBBB	National Emission Standards for Hazardous Air Pollutants from Semiconductor Manufacturing
CCCCC	National Emission Standards for Hazardous Air Pollutants from Coke Ovens: Pushing, Quenching, and Battery Stacks

<i>Subpart</i>	<i>Title</i>
EEEEE	National Emission Standards for Hazardous Air Pollutants from Iron and Steel Foundries
FFFFF	National Emission Standards for Hazardous Air Pollutants from Integrated Iron and Steel Manufacturing
GGGGG	National Emission Standards for Hazardous Air Pollutants from Site Remediation
HHHHH	National Emission Standards for Hazardous Air Pollutants from Miscellaneous Coating Manufacturing
IIIII	National Emission Standards for Hazardous Air Pollutants from Mercury Emissions From Mercury Cell Chlor-Alkali Plants
JJJJJ	National Emission Standards for Hazardous Air Pollutants from Brick and Structural Clay Products Manufacturing
KKKKK	National Emission Standards for Hazardous Air Pollutants from Clay Ceramics Manufacturing
LLLLL	National Emission Standards for Hazardous Air Pollutants from Asphalt Processing and Asphalt Roofing Manufacturing
MMMMM	National Emission Standards for Hazardous Air Pollutants from Flexible Polyurethane Foam Fabrication Operations
PPPPP	National Emission Standards for Hazardous Air Pollutants from Engine Test Cells/Standards
QQQQQ	National Emission Standards for Hazardous Air Pollutants from Friction Materials Manufacturing Facilities
RRRRR	National Emission Standards for Hazardous Air Pollutants from Taconite Iron Ore Processing
SSSSS	National Emission Standards for Hazardous Air Pollutants from Refractory Products Manufacturing
TTTTT	National Emission Standards for Hazardous Air Pollutants from Primary Magnesium Refining

NESHAPs Not Delegated

NESHAPs for Which Authority Has Not Been Delegated to the District

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<i>Subpart</i>	<i>Title</i>
L	National Emission Standards For Coke Oven Batteries
M	National Perchloroethylene Air Emission Standards For Dry Cleaning Facilities – California Not Delegated Authority To Enforce 17 CCR 93109 Instead Of Subpart M For Major Sources.
N	National Emission Standards For Chromium Emissions From Hard And Decorative Chromium Electroplating And Chromium Anodizing Tanks – California Delegated Authority To Enforce 17 CCR 93102 Instead Of Subpart N. Applies To Old ATCM.
O	Ethylene Oxide Emissions Standards For Sterilization Facilities
Q	National Emission Standards For Hazardous Air Pollutants For Industrial Process Cooling Towers
OO	NATIONAL Emission Standards For Tanks - Level 1
PP	National Emission Standards For Containers
QQ	National Emission Standards For Surface Impoundments
RR	National Emission Standards For Individual Drain Systems
SS	National Emission Standards For Closed Vent Systems, Control Devices, Recovery Devices And Routing To A Fuel Gas System Or A Process
TT	National Emission Standards For Equipment Leaks - Control Level 1
UU	National Emission Standards For Equipment Leaks - Control Level 2 Standards
VV	National Emission Standards For Oil-Water Separators And Organic-Water Separators
WW	National Emission Standards For Storage Vessels (Tanks) - Control Level 2
XX	National Emission Standards For Ethylene Manufacturing Process Units: Heat Exchange Systems And Waste Operations
EEE	National Emission Standards For Hazardous Air Pollutants From Hazardous Waste Combustors
DDDD	National Emission Standards For Hazardous Air Pollutants: Plywood And Composite Wood Products
IIII	National Emission Standards For Hazardous Air Pollutants: Surface Coating Of Automobiles And Light-Duty Trucks
ZZZZ	National Emissions Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines
DDDDD	National Emission Standards For Hazardous Air Pollutants For Industrial, Commercial, And Institutional Boilers And Process Heaters
NNNNN	National Emission Standards For Hazardous Air Pollutants: Hydrochloric Acid Production
WWWWW	National Emission Standards For Hospital Ethylene Oxide Sterilizers
YYYYY	National Emission Standards For Hazardous Air Pollutants For Area Sources: Electric Arc Furnace Steelmaking Facilities
ZZZZZ	National Emission Standards For Hazardous Air Pollutants For Iron And

Subpart	Title
	Steel Foundries Area Sources
BBBBBB	National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, And Pipeline Facilities
CCCCCC	National Emission Standards For Hazardous Air Pollutants For Source Category: Gasoline Dispensing Facilities
DDDDDD	National Emission Standards For Hazardous Air Pollutants For Polyvinyl Chloride And Copolymers Production Area Sources
EEEEEE	National Emission Standards For Hazardous Air Pollutants For Primary Copper Smelting Area Sources
FFFFFF	National Emission Standards For Hazardous Air Pollutants For Secondary Copper Smelting Area Sources
GGGGGG	National Emission Standards For Hazardous Air Pollutants For Primary Nonferrous Metals Area Sources - Zinc, Cadmium, And Beryllium
HHHHHH	National Emission Standards For Hazardous Air Pollutants: Paint Stripping And Miscellaneous Surface Coating Operations At Area Sources
LLLLLL	National Emission Standards For Hazardous Air Pollutants For Acrylic And Modacrylic Fibers Production Area Sources
MMMMMM	National Emission Standards For Hazardous Air Pollutants For Carbon Black Production Area Sources
NNNNNN	National Emission Standards For Hazardous Air Pollutants For Chemical Manufacturing Area Sources: Chromium Compounds
OOOOOO	National Emission Standards For Hazardous Air Pollutants For Flexible Polyurethane Foam Production And Fabrication Area Sources
PPPPPP	National Emission Standards For Hazardous Air Pollutants For Lead Acid Battery Manufacturing Area Sources
QQQQQQ	National Emission Standards For Hazardous Air Pollutants For Wood Preserving Area Sources
RRRRRR	National Emission Standards For Hazardous Air Pollutants For Clay Ceramics Manufacturing Area Sources
SSSSSS	National Emission Standards For Hazardous Air Pollutants For Glass Manufacturing Area Sources
TTTTTT	National Emission Standards For Hazardous Air Pollutants For Secondary Nonferrous Metals Processing Area Sources