



2022 Annual Report
Air Toxics “Hot Spots” Act – AB 2588

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PREFACE – PURPOSE OF THIS REPORT:

The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) is a State of California public right-to-know law requiring local air quality management and air pollution control districts to collect information about the location, type, and quantity of toxic compounds emitted into the air from specified local business and industry. The AB 2588 Program Annual Report is published to provide the public with information regarding the AB 2588 Program of the Shasta County Air Quality Management District (District). The enabling statutes in the *California Health and Safety Code* (CH&SC) § 44300-44394 require the California Air Resources Board (CARB) and local air districts to implement AB 2588. This report describes the current reporting and evaluation status for facilities being tracked under this program. This annual report is required by CH&SC § 44363 and must include the following information:

1. Describe the priorities and categories designated per CH&SC § 44360;
2. Summarize the results and progress of the HRA program;
3. Rank and identify facilities according to degree of cancer risk;
4. Identify facilities which expose individuals or populations to any noncancer health risks;
5. Describe the status of development of control measures to reduce emissions of toxic air contaminants, if any.

INTRODUCTION:

The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) was adopted in response to public concern regarding emissions of toxic air contaminants and their potential adverse health effects. AB 2588 is a public right-to-know law which established a program for developing a statewide inventory of more than 700 toxic substances released at stationary sources and assessing the risk associated with those releases. The goals of the AB 2588 Program are the following:

1. to collect emission data on listed toxic substances in order to better understand what toxics are routinely emitted into the atmosphere by facilities and in what quantities;
2. to use this toxics emissions inventory to evaluate the level of risk individual facilities’ emissions may pose to the surrounding public, and;
3. to notify the public in cases where significant risks are likely posed by nearby facilities and require facilities to develop strategies to mitigate those risks to below significant levels.

In order to achieve these goals, the program requires local air districts to collect from facilities, Emission Inventory Plans and Emission Inventory Reports on toxic emissions which include information about the location, type, and quantity of listed toxic compounds emitted into the air. The Air District is then to use this inventory to analyze these site-specific emissions to assess the risk to public health from exposure. The AB 2588 Program requires

notification to the public of any associated significant health risks. To inform the public more generally, CH&SC § 44363 requires that each air district shall prepare and publish an annual report describing the air district's implementation of the Act.

AIR TOXICS “HOT SPOTS” PROGRAM – IMPLEMENTATION & PRIORITIZATION:

Based on qualifiers including quantity of criteria pollutants emitted, industry type, and existing status in the AB 2588 Program, facilities are contacted by the District in order to evaluate and report the toxics emitted by the routine processes at their facility. Initial reporters are required to submit an Emission Inventory Plan (EI Plan) while those facilities subject to update reporting may only need to report using an Update Summary Form if no changes which may affect the facility's emissions have occurred since the last EI Plan. The EI Plan provides a comprehensive description of the methods that will be used to quantify emissions of listed toxic substances from all points of release at the facility. Upon District approval of the EI Plan, the facility must then implement the EI Plan to quantify all listed toxic substances released during routine operation at the facility. These emissions shall be presented in the Emission Inventory Report (EI Report) which includes, among other requirements, results of all source testing performed pursuant to the Act, engineering calculations to estimate emissions and completed core reporting forms which include facility information, stack information, device information, process information, and toxic substance emission type and rate of emission for each device and process.

District staff then reviews the EI Report for completeness and accuracy before transmitting it to CARB. Upon approval, the District staff inventory the facility's toxic substance emissions based on the EI Report and then estimate the impact of these emissions on surrounding receptors, both commercial and residential. These impacts are quantified as a Prioritization Score, which is generated for both cancer and non-cancer health impacts; the Shasta County Air Quality Management District currently uses the Emissions and Potency Procedure outlined in CAPCOA Air Toxics “Hot Spots” Program Facility Prioritization Guidelines updated August 2016 and prepared by the California Air Pollution Control Officers Association (CAPCOA). These guidelines also include a Dispersion Adjustment Procedure which takes the release height of emissions into account. For one facility, the District also reviewed the Prioritization scores generated with this method at the facility's request to verify the Emissions and Potency Procedure did not substantially overestimate the facility's potential risk to the point of elevating the facility into a higher-than-necessary prioritization category. This was the only facility for which this was done for the 2021 Reporting Year and both Prioritizations are presented so facilities' possible cancer impacts can still be compared on the same terms. The prioritization score procedure is the first step in a conservative health risk representation for a facility. The Emissions and Potency Procedure analyzes both the cancer and non-cancer health risks based on three parameters: toxic emission rates; potency or toxicity of the emissions; and proximity to potential receptors. The Shasta County Air Quality Management District categorizes facilities for the AB 2588 Program according to Prioritization Score as shown in **Table 1** below.

Table 1: Prioritization based on Prioritization Score		
Prioritization Score	Prioritization Category	Reporting Requirements
PS ≤ 1	Low	Exempt from further reporting for AB 2588 due to low risk; may be reprioritized later due to changes in emissions or conditions which require facility reanalysis to occur.
1 < PS ≤ 10	Intermediate	Subject to quadrennial update reporting; may be reclassified as Low or High at District discretion based on other factors such as proximity to schools or hospitals.
PS > 10	High	Requires an HRA (unless already done recently) be submitted; further reporting requirements dependent on HRA results.

Compared with the prioritization score procedure, the health risk assessment (HRA) is a more comprehensive and accurate analysis of toxic substance emission dispersion, potential for human exposure, and the quantitative assessment of both individual and population-wide health risks due to that exposure. The health risk assessment produces results in terms of maximum cancer risk in cases per million theoretical population and as a non-cancer hazard index based on chronic and acute toxicity impacts. After a facility submits an HRA which was required per the AB 2588 Program, the District reviews the HRA and then submits it to the Office of Environmental Health Hazard Assessment (OEHHA) for further review. When both agencies have approved the HRA, the results will determine that facility’s categorization for the AB 2588 Program and continuing reporting requirements as shown in **Table 2** below.

Should a health risk assessment indicate a significant risk to surrounding receptors (see **Table 2** for the “Notification Threshold”), the facility is required to notify the exposed population of the HRA results. In addition, Shasta County Air Quality Management District has set the Notification Threshold to equal the threshold for requiring an Airborne Toxics Risk Reduction Audit (RRA) and subsequent Airborne Toxic Risk Reduction Plan (RR Plan).

Table 2: Prioritization Following Health Risk Assessment			
HRA Cancer Risk*	HRA Hazard Index	Prioritization Category	Reporting Requirements
Risk < 1	Index < 0.1	Low	Exempt from further reporting; may be reprioritized later upon conditions requiring facility reanalysis.
$1 \leq \text{Risk} < 10$	$0.1 \leq \text{Index} \leq 1$	Intermediate	Continue quadrennial update reporting.
Risk ≥ 10	Index > 1.0	High	Notification Threshold: notify exposed public of significant risk; RRA Threshold: prepare an Airborne Toxics Risk Reduction Audit (RRA) and Plan to reduce risk; continue reporting per RR Plan; resume quadrennial reporting after RR Plan is concluded.
*Measured in risk per million theoretical population.			

The District has not yet needed to require a facility to conduct an Airborne Toxic Risk Reduction Audit for compliance with AB 2588. Further information is provided in the section on Development of Control Measures at the end of this report. A list of current facilities listed by Cancer Prioritizations Score or Cancer Risk (if categorized based on an HRA) can be found in **Attachment A**.

HISTORY OF UPDATES TO PROGRAM IMPLEMENTATION:

The Shasta County Air Quality Management District (District) implementation of AB 2588 began in August 1988. At that time, the District notified prospective businesses in Shasta County in order to ascertain site-specific emission points of airborne toxic substances. Those businesses with operations found to emit toxic substances were then required to submit an Emission Inventory Plan and Emission Inventory Report to the District. The continued implementation of the program is a dynamic process. Facilities currently in the program change ownerships, change production rates, and sometimes cease operating. All the facilities subject to the program must submit update reports or surveys every four years. These updates identify production changes that may or may not influence the facility’s toxic emissions.

As a streamlining effort in the implementation of the Air Toxics “Hot Spots” Act, AB 564 (Canella Bill) was enacted in 1996, adding several amendments to the original AB 2588 regulations. The amendments included allowances for particular stationary sources to not submit EI Plans and EI Reports to the District. These particular

stationary sources were identified as “industrywide” facilities, which included auto body shops, gasoline service stations, dry cleaners, and print shops. For these industrywide facilities, CAPCOA and the South Coast Air Quality Management District, in consultation with CARB, OEHHA and other air districts, developed toxic emission surveys with review guidelines in lieu of requiring the facilities complete individual EI Plans and EI Reports. The facility surveys are reviewed by District staff who use the industrywide facility guidelines to estimate facilities’ toxic substance emissions and estimate their impact.

The Canella Bill amendments also included “de minimis thresholds” which were throughput/use thresholds below which facilities are assumed to have insignificant toxic impacts to surrounding receptors. An example of these de minimis thresholds approved in the Canella Bill includes the exemption of wastewater treatment plants which process less than ten million gallons per day.

In 2015 and 2016 substantial updates were made to the Program’s prioritization and HRA methodologies. The passage of the Children’s Health Protection Act of 1999 (SB 25, Stat. 1999) required OEHHA to re-evaluate risk assessment methodologies to ensure infants and children are explicitly addressed in assessing risk. In the last decade, advances in science have shown that early-life exposures to air toxics contribute to an increased lifetime risk of developing cancer, or other adverse health effects, compared to exposures that occur in adulthood. On March 6th, 2015 OEHHA adopted revised guidelines to address this greater sensitivity and incorporate the most recent data on childhood and adult exposure to air toxics. In August 2016, CAPCOA released updated prioritization guidelines based on OEHHA’s updates. Although emissions levels and actual exposure have not changed, the new methodology calculations will show an increase by a factor of 1.5 to 3 in inhalation health risk due to the new awareness of increased sensitivity in infants and children. The District is currently updating the AB 2588 Program to implement these changes to make sure facilities are being evaluated using the most up-to-date methodologies and information on risk from toxic emissions.

Additional updates were also recently made to the AB 2588 Program to phase in the addition of around 900 new substances to the list for quantification over the next 6 years and update facility reporting requirements to be consistent with the Criteria and Toxics Reporting Regulation (CTR) and its amendments. The final version of these amendments to the Program went into effect March 21st, 2022. The new amendments also update the industry applicability criteria and de minimis thresholds based on new understanding of the risks of toxics which have been part of AB 2588 reporting for decades.

The District has been working on implementing the 2016 updates starting with the 2020 Reporting Year and focusing on facilities currently subject to the AB 2588 Program. However, the District will soon be developing a plan to implement the 2022 updates which will include re-evaluating many facilities in the District which were previously exempted from the program and which may no longer qualify for exemption.

PROGRESS OF THE HEALTH RISK ASSESSMENT PROGRAM:

From 1988 through 2021, the District has evaluated approximately 530 facilities for emissions of toxic air contaminants through New Source Review and the AB 2588 Program. Currently, there are fourteen (14) facilities (see **Attachment A**) subject to quadrennial toxic emissions reporting to the District. All other evaluated facilities have been exempted from the AB 2588 program due to being categorized as “Low Priority”, operating under “de minimis” thresholds or because the facility has gone out of business.

Since implementation of the 2016 updates began, of the fourteen (14) remaining facilities, one (1) submitted an EI Plan and EI Report due to changes at the facility, and six (6) (including the updated facility) were recategorized from “Intermediate” to “High” Priority and were required to prepare a health risk assessment. Only the recategorized facility which reported in 2020 has had time to submit the HRA, which is still undergoing review by OEHHA and has therefore not yet received final approval. As such, the evaluations of the new and remaining

facilities, as of April 2022, have not found a facility producing a health risk requiring public notification. However, all these facilities will continue to be tracked based on the requirements of the AB 2588 Program with periodic reporting as specified.

DEVELOPMENT OF CONTROL MEASURES:

The District has recognized a steady decline in annual toxic pollutant emissions produced by many of the subject stationary source facilities in recent years. Some of this decline has been linked to lower production levels in times where the economy had slowed. Even as production levels began increasing again, however, regulations for the purpose of toxics control have still helped to reduce toxic emissions. The District routinely enforces other regulations which also control or reduce the emissions of toxic substances, including CARB's Airborne Toxic Control Measures (ATCM), EPA's National Emission Standards for Hazardous Air Pollutants (NESHAP), Best Available Control Technologies (BACT), or Best Available Retrofit Control Technologies (BARCT) requirements and New Source Review. Coupled with facility operators independently choosing to make equipment or process changes (such as selecting environmentally safe alternatives to replace toxic compounds), the District has not yet needed to require a facility to conduct an Airborne Toxic Risk Reduction Audit for compliance with AB 2588.