Partial Recirculated Draft Environmental Impact Report
Cumulative Toxic Air Contaminant Impact Analysis Only
Visalia Walmart Expansion Project

State Clearinghouse No. 2008121133

City of Visalia • September 18, 2012

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City of Visalia, Tulare County, California
Cumulative Toxic Air Contaminant Impact Analysis Only

State Clearinghouse No. 2008121133

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September 18, 2012

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SECTION 1: OVERVIEW

1.1 - Introduction

This document is a partial Recirculation of the Draft Environmental Impact Report (Partial Recirculated Draft EIR) prepared in 2010 for the Visalia Walmart Expansion Project (project). The City of Visalia released a Draft Environmental Impact Report (Draft EIR) for the Visalia Walmart Expansion Project (State Clearinghouse No. 2008121133) on October 13, 2010. The Draft EIR circulated for public review between October 13, 2010 and November 29, 2010. After closure of the public review period, the City prepared responses to comments received on the Draft EIR. The responses were provided in the Final EIR, which was released on April 15, 2011.

The Visalia City Council certified the Final EIR and approved the project entitlements on June 20, 2011.[1] Following the City Council action, The Visalia Smart Growth Coalition filed a lawsuit under the California Environmental Quality Act (CEQA) challenging the EIR's adequacy in Tulare County Superior Court. The Court upheld the adequacy of the 2011 EIR in all but one discrete area related to cumulative toxic air contaminant impacts, which is the subject of this Partial Recirculated Draft EIR.

1.2 - Project Description

The project description remains unchanged from the description contained in the June 2011 EIR.[2] In brief, the proposed project involves the expansion and remodeling of the existing Walmart store and site located at 1819 East Noble Avenue between Ben Maddox Way and Pinkham Street in east-central Visalia, California. The project would increase the existing store by 54,076 square feet, for a total floor area of 187,282 square feet. The existing 14.55-acre Walmart site would increase to include 3.8 acres of adjacent land for a total site area of 18.35 acres.

The project would remodel the existing store and site and add a grocery component to the existing store. The expanded store's operating hours would be 24 hours per day, 7 days per week, except for the Tire & Lube Express, which will continue to operate daily between 6:00 a.m. and 10:00 p.m. The project includes an expanded loading dock area that adds four new loading bays to the existing two truck docks, with the loading dock area flanked on the north and south by 10-foot-high masonry walls. In the 2011 EIR, project truck deliveries were conservatively estimated to include an additional three semi-trailer deliveries per day, of which two were assumed to be by refrigerated truck, and up to four smaller vendor truck deliveries per day. The June 2011 project approvals

[1] The 2010 Draft EIR will be referred to herein as the 2010 DEIR. It should be noted that references to the 2011 EIR include the 2010 DEIR and the Final EIR volume, which includes the written responses to public comments on the 2010 DEIR. Together, they constitute the EIR prepared for the project and certified by the City on June 20, 2011.

[2] The 2011 EIR may be referenced for additional information regarding the project and its environmental impacts by viewing the document at the City of Visalia offices or online at www.ci.visalia.ca.us.

include limitations on loading dock area activities and truck deliveries between the hours of 6 a.m. and 10 p.m. daily.[3]

1.3 - Summary of the Tulare Superior Court Lawsuit and Ruling

The lawsuit filed in the Tulare County Superior Court by the Visalia Smart Growth Coalition in Tulare County Superior Court claimed that the 2011 EIR was legally inadequate under CEQA and could not therefore support the City's June 20, 2011 project approvals. The lawsuit alleged that the EIR (1) inadequately evaluated the topics of cumulative toxic air contaminants (TAC) and project noise; (2) inadequately responded to public comments; and (3) that "new information" contained in a rebuttal memo prepared in response to the petitioner's late technical comments required recirculation of the entire 2011 EIR for further public review.

The Court issued its ruling on April 12, 2012, which is included as Appendix K. The Court found that the EIR's Cumulative TAC analysis violated CEQA, but rejected all other challenges to the adequacy of the 2011 EIR. The Court determined that the cumulative TAC impact discussion contained in the 2011 EIR failed to abide by CEQA's requirements because the EIR had not determined the level of TAC emissions from existing emission sources surrounding the project site. In a cumulative impact analysis, the existing emissions are to be combined with the emissions from planned and probable future emissions sources and the project, to determine whether a significant cumulative TAC impact would exist. If a significant cumulative impact is found to exist, the significance of the project's contribution to the risk is evaluated to determine if it is what CEQA refers to as "cumulatively considerable," and thus significant under CEQA.[4] The Court ordered the City to set aside its certification of the 2011 EIR and the project approvals and remanded the EIR to the City of Visalia for reconsideration of the sole issue of the cumulative significance of TAC emissions. The ruling required the preparation of a cumulative TAC analysis meeting the criteria described in the ruling and CEQA.

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[3] Condition No. 8 states " . . . [t]hat the hours of operation for all loading dock and independent deliveries, along with bailing [sic] and pallet operations, at grade delivery door usage, and the proposed c-trains, is prohibited during the hours of 10 pm to 6 am. The parking of delivery vehicles at or around the dock area or rear of the building which idle for longer than permitted by State law (5 minutes) or would need to operate Trailer Refrigeration Units (TRUs) is also prohibited during these hours." Under this condition, non-TRU semi-trailer trucks could arrive onsite after 10 p.m. and before 6 a.m., but would be required to park onsite and would not unload until 6 a.m. The modeling conducted for the Partial Recirculated DEIR to determine the TAC emissions from the existing Walmart store and the project conservatively assumed that no truck deliveries could occur after 10 p.m. or before 6 a.m.

[4] A cumulative impact analysis requires a cumulative threshold that was not available to the EIR consultant as the SJVAPCD has not established one, and was not independently established for use in for use in the 2011 EIR. This PRDEIR utilizes 100 in a million as the cumulative threshold, as discussed in Appendix A, Cumulative Toxic Air Contaminant Threshold Document of Appendix J, Cumulative Health Risk Assessment.

1.4 - CEQA Standards for Recirculation

1.4.1 - Overview

CEQA Guidelines Section 15088.5 establishes that a lead agency is required to recirculate an EIR when significant new information is added to the EIR after it is released for public review. Significant new information is defined as "changes in the project or environmental setting as well as additional data or other information" that results in the disclosure of:

- A new significant environmental impact;
- A substantial increase in the severity of an environmental impact; or
- A feasible project alternative or mitigation measure considerably different from others previously analyzed [that] would clearly lessen the environmental impacts of the project.

CEQA Guidelines Section 15088.5 also establishes that recirculation may be triggered by the Draft EIR being so fundamentally and basically inadequate and conclusionary in nature that meaningful public review and comment were precluded. In this case, the Court found that the 2011 EIR's analysis of impacts related to cumulative toxic air contaminant emissions was fundamentally inadequate.

Standards for Partial Recirculation

CEQA Guidelines Section 15088.5(c) establishes that if revisions to the Draft EIR are limited to only a few chapters of the document, the lead agency need only recirculate the portions that have been modified. This is known as partial recirculation. The City of Visalia is partially recirculating the Visalia Walmart Expansion Project Draft EIR for public and agency review pursuant to the Court's April 12, 2012 ruling in the matter of *Visalia Smart Growth Coalition v. the City of Visalia*.

1.4.2 - Basis for Partial Recirculation of the Visalia Walmart Expansion Project Draft EIR

The Court ruling stated that the EIR is remanded to the City for reconsideration of the sole issue of the cumulative significance of TAC emissions. A partial recirculation of the EIR most effectively complies with the Court ruling and CEQA Guidelines Section 15088.5, which sets forth the criteria and process for undertaking a partial recirculation. The information presented in this Partial Recirculated DEIR is limited to the discussion of the significance of cumulative TAC emissions. The remainder of the Draft EIR was affirmed by the Court, has not been revised, and is therefore not being recirculated. The changes made to the 2011 EIR by this partial recirculation are described in detail in Section 1.5, Summary of Changes.

1.5 - Summary of Changes

CEQA Guidelines Section 15088.5(g) requires that Partial Recirculated Draft EIRs provide a summary of the revisions made to the Draft EIR. The revisions are limited to portions of one section

of the Draft EIR: The cumulative TAC analysis that was included in Section II. Environmental Setting, Impacts and Mitigation, I. Air Quality. The discussion of toxic air contaminants in this section has been replaced with the Partial Recirculated Draft EIR's new project-level and cumulative toxic air contaminant assessment. In addition, one new technical appendix (Appendix J) that includes the Cumulative Health Risk Assessment and Cumulative Toxic Air Contaminant Threshold Document has been prepared by MBA and is provided to support the Partial Recirculated Draft EIR. This document replaces the HRA prepared for the 2011 EIR.

No changes are proposed to impact conclusions and no new mitigation measures are proposed. Therefore, no changes to the Executive Summary, Project Alternatives, and Other CEQA Considerations were required.

1.5.1 - Section II. Environmental Setting, Impacts, and Mitigation, I. Air Quality

The discussion of environmental setting and impacts for cumulative toxic air contaminants included in the 2010 Draft EIR's Air Quality section has been replaced with a new section limited only to toxic air contaminants. This information is provided as a stand-alone EIR section to comply with the Court ruling, which identified the cumulative toxic analysis as the only deficiency that required the City's reconsideration... The section replaces the Draft EIR's toxic air contaminant impact analysis in its entirety.

The 2011 EIR's responses to comments E-17, E-19, and E-20, set forth below, pertain to the EIR's cumulative toxic air contaminant analysis. Response No. E-18, as noted below, remains valid. The factual information that remains valid is included in Appendix J: Cumulative Health Risk Assessment. Overall, the responses seek to justify an analysis that did not quantify emissions from actual existing sources contributing cumulative impacts and was ruled legally deficient. As such, the responses present arguments that do not apply, as explained below and the Partial Recirculated Draft EIR's (PRDEIR's) new cumulative TAC impact analysis supersedes the approach and analysis used in the 2010 DEIR and in Responses E-17, E-19 and E-20 set forth below. In the interest of further enlightening the public and decision-makers regarding the reasons why the 2011 EIR approach to cumulative TAC impacts was ruled deficient and how the PRDEIR rectifies its inadequacies, the following explanatory information is provided; it is intended solely for informational purposes.

Response E-17 describes the ARB risk maps referred to in the DEIR. It accurately portrays the information that was in the maps. The general statements about the range of risk displayed for different areas are similar to the discussion in Appendix J's Appendix A: Cumulative Toxic Air Contaminant Threshold Document. The statement that the risk associated with the project and other TAC sources within 0.5 mile is small compared with the ambient cancer risk to the Maximally Exposed Individual (MEI) explains the 2011 EIR's approach.

The ARB maps showed the risk at less than 100 in a million in the grid cell that includes the project. The project's contribution of 3.4 in a million is small compared with the ambient risk. The issue with

this statement is that the risk amount in the grid cell is a range (50–100), and does not account for distance from actual emission sources such as State Route 198 and the other roads. As discussed in the Cumulative TAC Threshold Document, the ARB maps are out of date according to ARB staff, do not accurately portray the impact on the MEI, and have been removed from the agency's website. If an EIR does not use the ARB maps to determine as the existing conditions, it needs to analyze the actual sources as was done in Appendix J, prepared by Michael Brandman Associates (MBA).

Response E-18 supports the SJVAPCD's project level threshold of 10 in a million and remains accurate.

Response E-19 explains the EIR's determination that the scope of a cumulative TAC analysis includes only planned/probable projects and not existing sources. Under this approach, the risk from existing sources is covered by the ARB mapping described in E-17, so no estimate of actual existing sources within the 0.5-mile geographic scope is required. The problem is that the ARB mapping only provides an average for the entire grid cell and is out of date. The MBA replacement approach provides risk estimates for the actual existing and planned probable sources and justifies the use of a 1,000-foot geographic scope for the cumulative analysis. The new cumulative TAC impact analysis supersedes the approach/analysis used in the 2010 DEIR.

The second paragraph answers the question of why the 2010 DEIR's toxic air contaminant evaluation did not need to account for increases in traffic that would occur in future years. The reason is that emissions are declining faster than growth in travel, and the analysis did not reflect the decline in emissions (in accordance with SJVAPCD guidance). Therefore, the use of current travel results in a worst-case risk assessment. This is consistent with the PRDEIR's analysis and statements in the Health Risk Assessment (HRA).

The third paragraph addresses transportation construction emissions. The 2011 EIR determined that very little construction activity was expected in the area, and the construction activity that would occur is temporary and far from the MEI. The additional risk from construction emissions was considered negligible. This is consistent with the MBA's viewpoint. Emissions related to construction activities are not included in the new HRA.

The concluding paragraph reiterates that the 10-in-a-million threshold is for project-level significant determinations, not for use in determining the significance of the risk resulting from cumulative projects. Response E-17 involved the EIR's conclusion that the ambient risk from TAC emissions was between 50 and 100, so the 10 in a million threshold was the incremental contribution to an existing cumulative impact. This is consistent with the SJVAPCD's draft 2012 GAMAQI and the concept that the existing conditions are already significant. This is inconsistent with the new cumulative TAC impact assessment approach and, for this reason, is superseded by the analysis in the PRDEIR.

By using the 100–in-a-million threshold and the risk from actual existing TAC emissions, the PRDEIR's approach provides a more accurate cumulative assessment. The approach used in the DEIR was deemed invalid; therefore, the response in this case is not valid and has been replaced by the one used in the new HRA and reflected in this PRDEIR.

Response E-20, Scope of Cumulative TAC Impact Analysis, explains the EIR's rationale for concluding that counting TAC emissions from existing sources would be "double counting" and thus inappropriate. The EIR's assumption was that the existing TAC sources were included in the baseline conditions, which the EIR assumed to be approximately 100 in million, as identified on the ARB map risk level. The EIR correctly stated that Visalia is not subject to high TAC levels compared with other areas of the State.

The PRDEIR does not use the approach defended here. The DEIR approach was predicated on accepting that the existing conditions are part of the baseline, and, consequently, it was not necessary to estimate contributions of individual cumulative emission sources. The PRDEIR's approach quantifies the existing emissions and provides a cumulative threshold to evaluate significance. The response to E-20 does not support the new HRA approach and is replaced by the analysis and substantial evidence supporting the PRDEIR.

1.5.2 - Technical Appendices

Two technical documents have been prepared in the process of conducting the project's Cumulative Toxic Air Contaminant analysis, and are provided to support the analysis contained in the Partial Recirculated Draft EIR Both documents are included in one new technical appendix: Appendix J: *Cumulative Health Risk Assessment.* There are two items to note with respect to Appendix J:

- The Cumulative Toxic Air Contaminant Threshold Document is attached to the Cumulative Health Risk Assessment as Appendix A.
- Appendix J replaces the prior Health Risk Assessment included in the 2011 EIR that was included as Appendix I.

1.6 - Public Review of the Partial Recirculated Draft EIR

The City of Visalia is circulating the Visalia Walmart Expansion Project Partial Recirculated Draft EIR for the statutory 45-day review period. Public review extends from September 18, 2012 through November 1, 2012. Notice of Availability of the PRDEIR for public review was published in the Visalia Times-Delta newspaper on September 18, 2012.

The City of Visalia has filed a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, this Partial Recirculated Draft EIR has been distributed to responsible and trustee agencies,

other affected agencies, surrounding cities, and interested parties, as well as all parties requesting a copy of the Partial Recirculated Draft EIR in accordance with Public Resources Code 21092(b)(3).

During the public review period, the Partial Recirculated Draft EIR, including the technical appendices, is available for review at the City of Visalia offices as well as on the City's website, www.ci.visalia.ca.us, and at the Tulare County Library, Visalia Main Branch. The address for each location is provided below.

City of Visalia
Community Development Department
315 Acequia Avenue
Visalia, CA 93291
Hours:
Monday–Friday: 8 a.m. to 5 p.m.

Tulare County Library, Visalia Main Branch
200 West Oak Avenue
Visalia, CA 93291
Hours:
Tuesday–Thursday: 9 a.m. to 8 p.m.
Friday: 12 p.m. to 6 p.m.
Saturday: 9 a.m. to 5 p.m.

Pursuant to Section 15088.5, the City is recirculating and will respond to written public comments on the PRDEIR. The remainder of the 2011 EIR has not been altered and the Tulare Superior Court rejected all other prior challenges to its legal adequacy. Accordingly, and consistent with CEQA Guidelines section 15088.5, the City will provide a written response to comments received during the public review period on the PRDEIR. Comments regarding the adequacy of the 2011 EIR will not receive a written response. The City will prepare a Final EIR following the closure of the 45-day public comment period that will include written responses to public comments received on the PRDEIR during the 45-day public review period.

Written comments on the PRDEIR should be submitted before close of the public comment period to the City of Visalia at the following address:

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SECTION 2: TOXIC AIR CONTAMINANTS

2.1 - Introduction

The discussion in this section replaces the analysis of toxic air contaminant (TAC) emissions in the 2010 Draft EIR Section II. Environmental Setting, Impacts, and Mitigation, I. Air Quality. Other air quality impact discussions in the Draft EIR section have not been revised. In addition, Michael Brandman Associates (MBA) prepared a technical appendix (Appendix J: Cumulative Health Risk Assessment) providing the detailed analysis and modeling results that replaces the toxic air contaminant emissions analysis prepared for the 2010 Draft EIR by the firm Illingworth & Rodkin in its entirety. Appendix A to the HRA consists of the Cumulative Toxic Air Contaminant Threshold Document, which establishes the cumulative TAC thresholds that are used in the project's cumulative toxic air contaminant analysis below. The content and in-depth analysis found in Appendix J (including Appendix A) is not repeated in this document but is incorporated by reference as though fully set forth herein.

This section describes the existing air quality setting and potential health risk effects from project implementation on the site and its surrounding area. The analysis is limited to the cumulative effects of toxic emissions generated by the project.

2.2 - Environmental Setting

The project is located in the City of Visalia, which is located in the San Joaquin Valley Air Basin (Air Basin). Regional and local air quality is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The project is in an urban setting with a combination of commercial, retail, industrial, public, and residential land uses that provide a complex mix of sources of toxic air contaminants and land uses considered sensitive to these pollutants. There is an existing commercial retail shopping center adjacent to the west, beyond which is a series of automobile dealerships along Ben Maddox Way to the southwest. There is a new Social Security Administration office building on property adjacent to and northeast of the project site along Noble Avenue. The land uses along the south side of Noble Avenue east to Pinkham Street consist of commercial service, church, and office uses. The lands to the east and south of the project site are largely in residential use, with the exception of one vacant 2.0-acre parcel, adjacent to the southeast portion of the project site, which fronts onto Pinkham Street to the east. The State Route 198 (SR-198) freeway corridor runs in an east-west direction just north of Noble Avenue, and beyond the freeway, there are various commercial and light industrial uses along Mineral King Avenue. Exhibit 2-1 provides an aerial view of the local vicinity.

2.2.1 - Regional Air Quality

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features. Atmospheric conditions such as wind speed,

wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal and, consequently, their effect on air quality. On occasion, the combination of topography and inversion layers can prevent the dispersion of air pollutants in the Air Basin.

Topography

The Air Basin is generally shaped like a bowl. It is open in the north and is surrounded by mountain ranges on all other sides. The Sierra Nevada mountains are along the eastern boundary (8,000 to 14,000 feet in elevation), the Coast Ranges are along the western boundary (3,000 feet in elevation), and the Tehachapi Mountains are along the southern boundary (6,000 to 8,000 feet in elevation). The mountains surrounding the Air Basin form natural horizontal barriers to the dispersion of air contaminants.

Climate and Meteorology

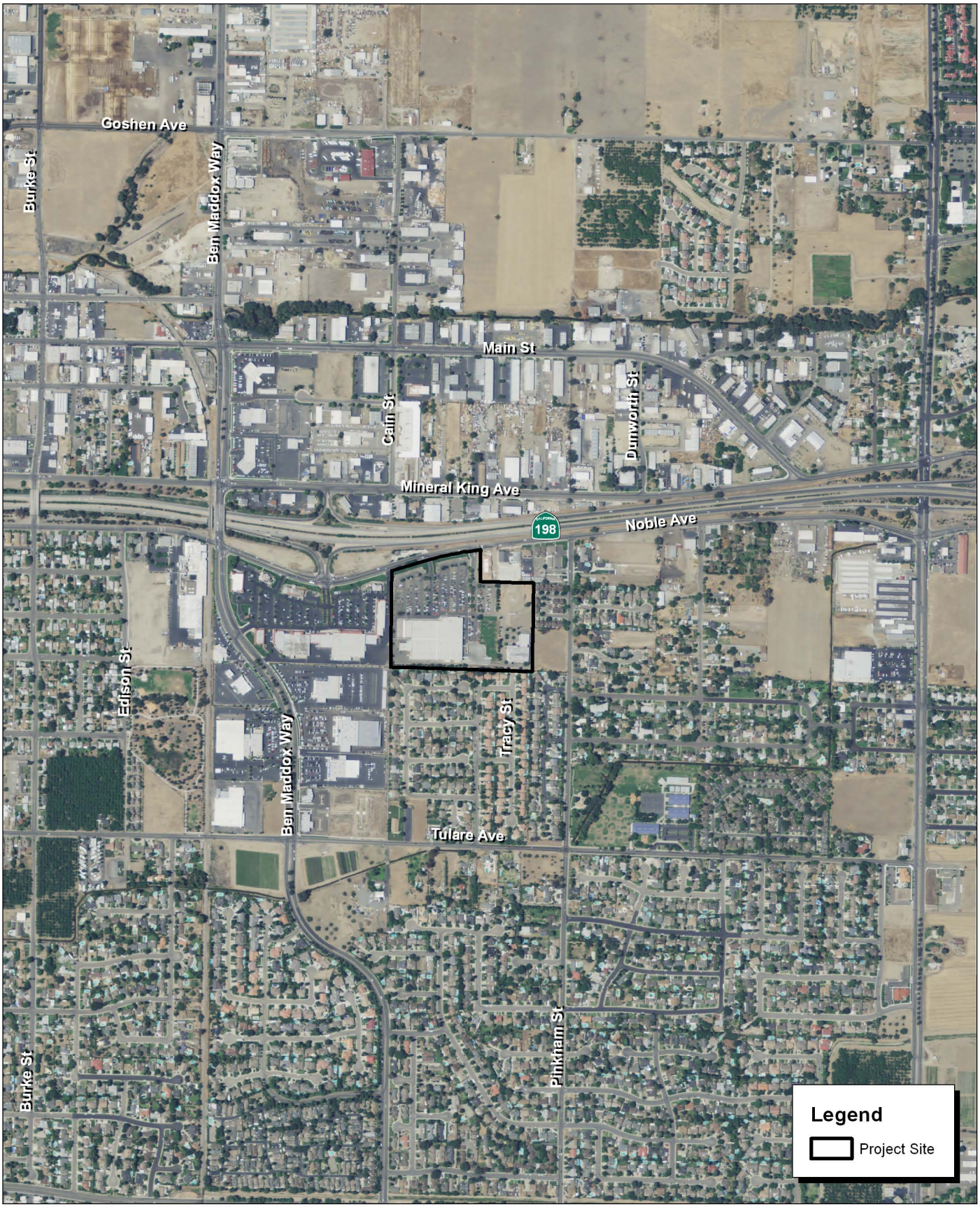
The Air Basin has an "inland Mediterranean" climate and is characterized by long, hot, dry summers and short, foggy winters. Sunlight is a catalyst in the formation of some air pollutants (such as ozone), and the Air Basin averages more than 260 sunny days per year. Temperatures in the Visalia area range from an average high of 98.3 degrees Fahrenheit (°F) in July to an average low of 37.2°F in December. The average annual rainfall is 10.83 inches.

Dominant Airflow

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. Marine air moves into the Air Basin from the San Joaquin River Delta. The wind generally flows south-southeast through the valley, through the Tehachapi Pass and into the Mojave Desert Air Basin portion of Kern County. As the wind moves through the Air Basin, it mixes with the air pollution generated locally, generally transporting air pollutants from the north to the south in the summer and in a reverse flow in the winter.

Inversions

Inversions are also an important component of regional air quality. In general, air temperature decreases with distance from the earth's surface, creating a gradient from warmer air near the ground to cooler air at elevation. Under normal circumstances, the air close to the earth warms as it absorbs surface heat and begins to rise. Winds occur when cooler air rushes in to take the place of the rising warm air. The wind and upward movement of air causes "mixing" in the atmosphere and can carry away or dilute pollution. Inversions occur when a layer of warm air sits over cooler air, trapping the cooler air beneath. These inversions trap pollutants from dispersing vertically and the mountains surrounding the Air Basin trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the Air Basin in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,000 feet during the winter. The result is a relatively high concentration of air pollution in the valley during inversion episodes.



Source: Tulare County NAIP, 2009. County of Tulare.

Michael Brandman Associates

NORTH

1,000 500 0 1,000

Feet

Exhibit 2-1
Local Vicinity Map
Aerial Base

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These inversions cause haziness, which, in addition to moisture, may include suspended dust, a variety of emissions from vehicles, particulates from wood stoves, and other pollutants.

2.2.2 - Toxic Air Contaminants

A toxic air contaminant is defined as an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. Toxic air contaminants are usually present in minute quantities in the ambient air. However, their high toxicity or health risk may pose a threat to public health even at very low concentrations.

In general, for those toxic air contaminants that may cause cancer, there is no concentration that does not present some risk. In other words, there is no threshold level below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

Diesel Particulate Matter

Air Resources Board (ARB) identified the PM emissions from diesel-fueled engines as a toxic air contaminant in August 1998 under California's toxic air contaminant program. In California, diesel engine exhaust has been identified as a carcinogen. Most researchers believe that diesel exhaust particles contribute the majority of the risk.

DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40 percent of the statewide total, with an additional 57 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3 percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report diesel PM emissions also include heavy construction (except highway) manufacturers of asphalt, paving materials and blocks, and electrical generation.

DPM is a subset of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. In a document published in 2002, the United States Environmental Protection Agency (EPA) noted that in 1998, diesel PM made up about 6 percent of the total $PM_{2.5}$ inventory nationwide. The complex particles and gases that make up diesel exhaust have the physical properties of organic compounds that account for 80 percent of the total particulate matter mass consisting of hydrocarbons and their derivatives and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust. The chemical composition and particle sizes of DPM vary among different engine types (heavy-duty, light-duty), engine operating conditions (idling, accelerating, decelerating), expected load, engine emission controls, fuel formulations (high/low sulfur fuel), and engine year.

Some short-term (acute) health effects of diesel exhaust exposure include eye, nose, throat, and lung irritation, and exposure can cause coughs, headaches, light-headedness, and nausea. Diesel exhaust is a major source of ambient PM pollution in urban environments. In a 2002 report from the Office of Environmental Health Hazard Assessment (OEHHA) titled "Health Effects of Diesel Exhaust Report," it was noted that numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems (OEHHA 2002). The National Toxicology Program asserted that more serious, long-term health effects of diesel exhaust have demonstrated an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure in its 2005 Report on Carcinogens, Eleventh Edition (EPA 2005).

Other Toxic Air Contaminants

In addition to exposures to DPM, other toxic emissions are also present in urban atmospheres most notably due to various stationary sources such as industrial process facilities and gasoline service stations and mobile sources such as emissions from gasoline-fueled vehicles. Such emissions include benzene, 1,3-butadiene, formaldehyde, naphthalene, and acetaldehyde, among others.

There is a dearth of information on establishing ambient levels of toxic air contaminants in the San Joaquin Valley, particularly in the project region. The ARB has published information on TAC measurements taken at various times and locations in the San Joaquin Valley. This information is published in the ARB Almanac, of which the latest publication is from 2009 (ARB 2009). However, the data contained in the Almanac are inconsistent in that the Almanac interspaces information for different time periods. For instance, the Almanac presents information on several important TACs including diesel particulate matter. Using this information, the Almanac develops estimates of average cancer risk for the entire San Joaquin Valley Air Basin based on the relevant measurements of several TACs. While measurements of several TACs in the Almanac used to estimate cancer risk have a relatively recent data record (2007 and 2008), the information on diesel particulate matter has not been updated since 2000. What is relevant is that diesel particulate matter emissions have declined significantly since 2000, due to the implementation of emission control measures adopted by both the federal EPA and the ARB. Using the information contained in the Almanac and other estimates of diesel particulate matter, a reasonable estimate of the average cancer risk in the San Joaquin Valley for the year 2010 is between 350 and 400 in a million. However, the cancer risk at any specific location within the San Joaquin Valley Air Basin will vary, depending on the proximity of the location relative to nearby sources of the TACs.

Sensitive Receptors

Certain populations, such as children, the elderly, and persons with pre-existing respiratory or cardiovascular illness, are particularly sensitive to the health impacts of air pollution. For purposes of CEQA, the SJVAPCD considers a sensitive receptor to be a location that houses or attracts children,

the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools.

The closest sensitive receptors to the project are a number of residences located to the south along East College Court to the south along the project's southern property line. Additional residences are located to the east along Pinkham Street. The closest school to the project is the Pinkham Elementary School, located 0.27 mile southeast of the project. The location of sensitive receptors is shown in Exhibit 2-2.

Air pollutants are regulated at the national, state, and air basin level; each agency has a different degree of control. The EPA regulates at the national level. The ARB regulates at the state level and SJVAPCD regulates at the air basin level.

National and State Regulatory Agencies

The EPA handles global, international, national, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, also known as federal standards. There are national standards for six common "criteria" air pollutants including ozone, nitrogen dioxide, carbon monoxide, particulate matter (PM_{10} and $PM_{2.5}$), lead, and sulfur dioxide, which were identified from provisions of the Clean Air Act of 1970.

Besides the criteria air pollutants, there is another group of substances found in ambient air referred to as Hazardous Air Pollutants (HAPs) under the Federal Clean Air Act and Toxic Air Contaminants (TACs) under the California Clean Air Act. These contaminants tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods. They are regulated at the local, state, and federal level. HAPs are the air contaminants identified by the EPA as known or suspected to cancer, serious illness, birth defects, or death. Many of these contaminants originate from human activities, such as fuel combustion and solvent use.

Mobile Source Air Toxics (MSATs) are a subset of the 188 HAPs. Of the 21 HAPs identified by the EPA as MSATs, a priority list of six priority HAPs were identified that include diesel exhaust, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. While vehicle miles traveled in the United States is expected to increase by 64 percent over the period 2000 to 2020, emissions of MSATs are anticipated to decrease substantially as a result of efforts to control mobile source emissions (by 57 percent to 67 percent depending on the contaminant).

The ARB Statewide comprehensive air toxics program was established in the early 1980s. The TAC Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics.

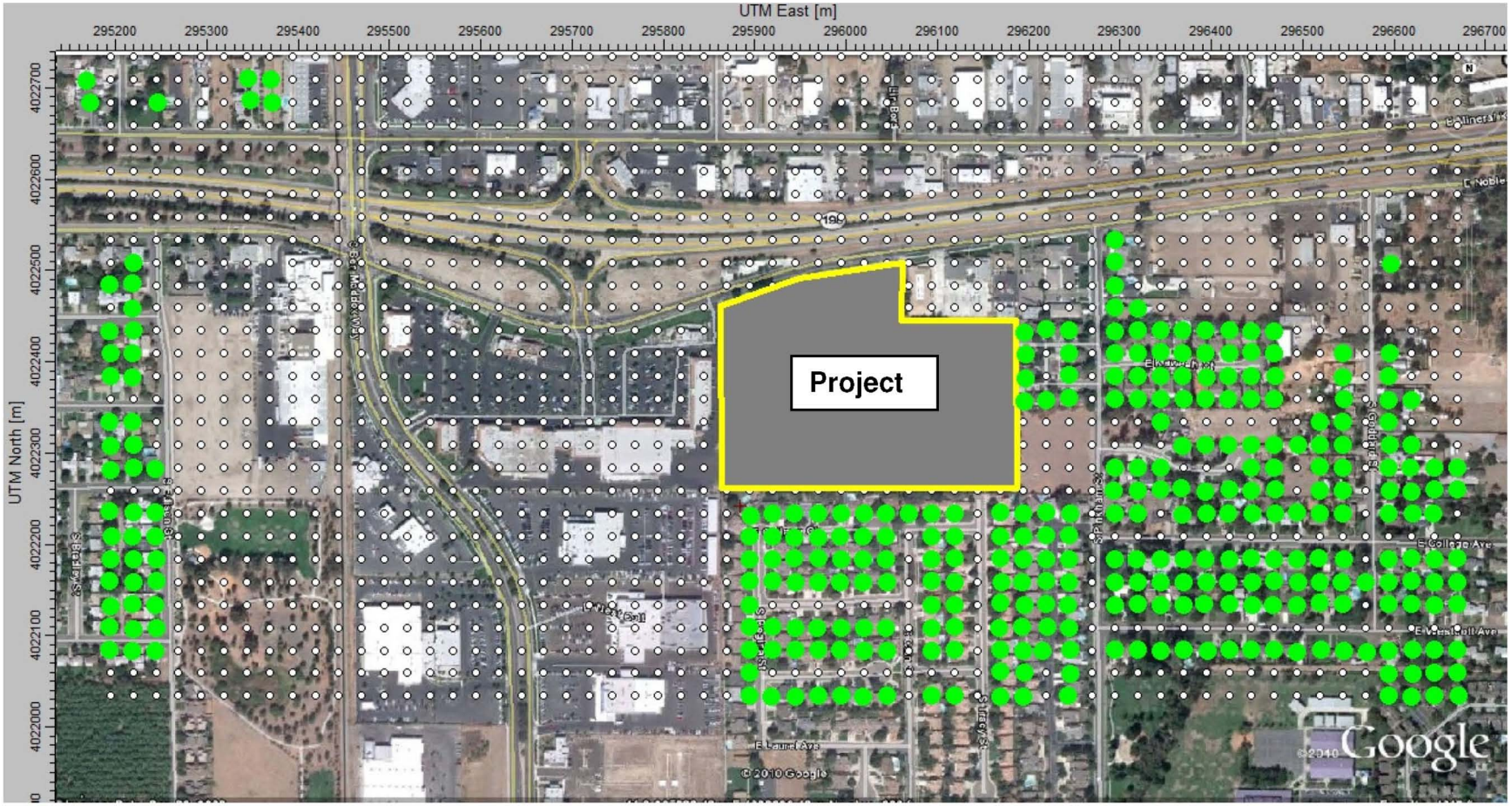
The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk from stationary TAC sources, and facility plans to reduce these risks.

Under AB 1807, the ARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, the ARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires the ARB to use available information gathered from the ARB 2588 program to include in the prioritization of compounds. In September 1992, the Hot Spots Act was amended by Senate Bill 1731, which required facilities that pose a significant health risk to reduce their risk through a risk management plan.

In September 2000, the ARB approved a comprehensive Diesel Risk Reduction Plan (Plan) to reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. The goal of the Plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and 85 percent by 2020. The Plan is a roadmap that identifies the steps ARB will be taking to develop specific regulations to reduce diesel PM emissions. Exhibit 2-3 provides a graph that displays emission reductions attributable to the Plan. The Plan identifies 14 measures applicable to the largest sources of diesel PM, most of which have been implemented. The primary provisions of the measures accomplished the following:

- Establish more stringent emission standards for new diesel-fueled engines and vehicles;
- Establish particulate trap retrofit requirements for existing engines and vehicles where traps are determined to be technically feasible and cost-effective;
- Require the sulfur content of diesel fuel to be reduced to enable the use of advanced diesel PM emission controls; and
- Evaluate alternatives for diesel-fueled engines and vehicles.

As a result of controls on motor vehicles, fuels, stationary sources, and consumer products, the public's exposure to air toxics has decreased dramatically. Between the early 1990s and today, the decrease in statewide average health risk ranged from approximately 20 percent for formaldehyde to approximately 90 percent for perchloroethylene. Air toxics associated with motor vehicles and their fuels such as 1,3-butadiene and benzene have also seen significant decreases of 80 to 85 percent as a result of ARB's mobile source control program. In aggregate, the estimated cancer risk from air toxics has been reduced by approximately 60 percent since the early 1990s. Exhibit 2-3 illustrates the percent reduction in cancer risk and emission reductions in diesel PM between the year 2000 and 2020. The graphs show a decrease of over 80 percent in cancer risk by 2020 with the implementation of ARB's Diesel Risk Reduction Plan achieves (ARB 2000).



Michael Brandman Associates

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Exhibit 2-2
Locations of Sensitive Receptors

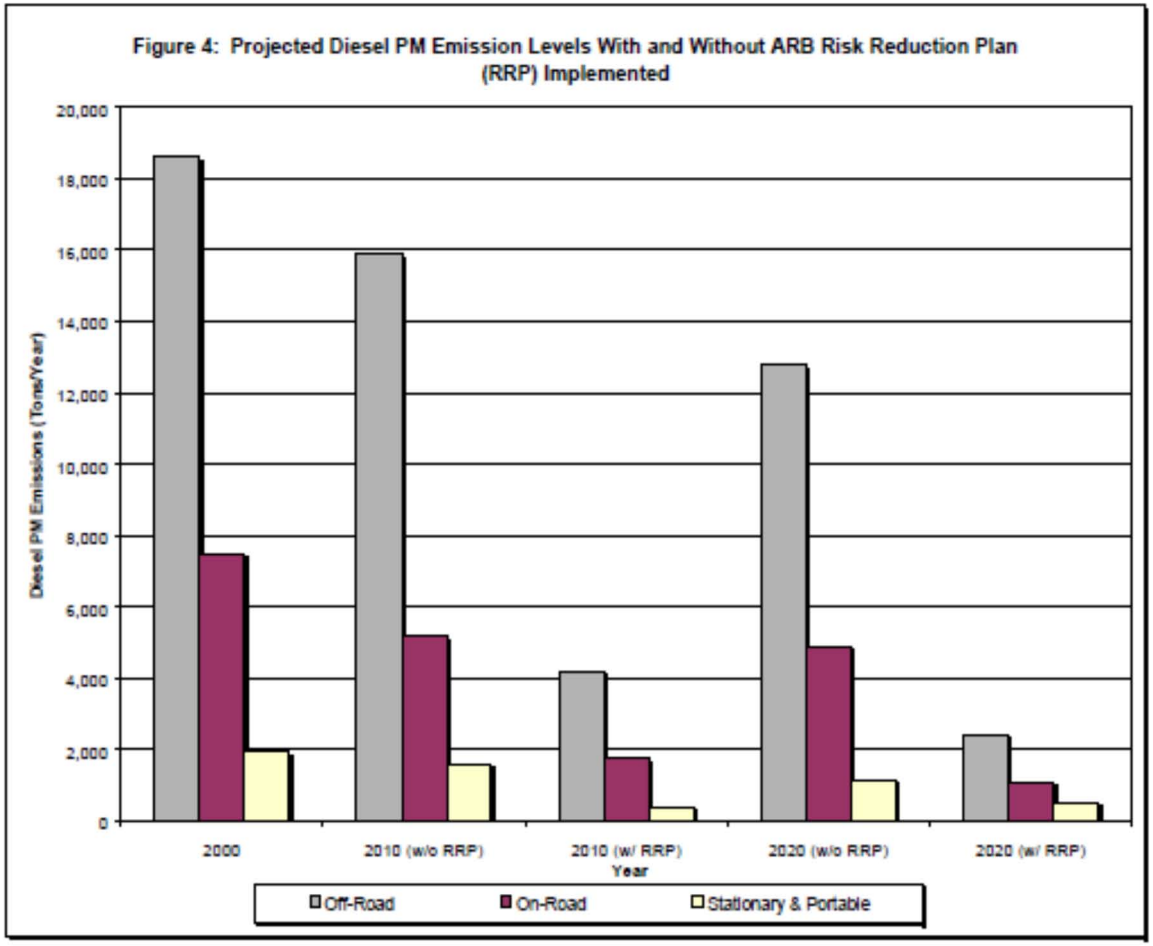

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Exhibit 2-3
Diesel Risk Reduction Plan Diesel PM Emission Reductions

- **Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater.** Effective February 19, 2011, each fleet shall comply with weighted reduced particulate matter emission fleet averages by compliance dates listed in the regulation.

- **ARB Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling** adopts new section 2485 within Chapter 10, Article 1, Division 3, title 13 in the California Code of Regulations. The measure limits the idling of diesel vehicles to reduce emissions of toxics and criteria pollutants. The driver of any vehicle subject to this section: (1) shall not idle the vehicle's primary diesel engine for greater than five minutes at any location; and (2) shall not idle a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

- **ARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks**, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged. If the parking brake is not engaged, then the engine shutdown system shall shut down the engine after 900 seconds of continuous idling operation once the vehicle is stopped and the transmission is set to "neutral" or "park." Any project trucks manufactured after 2008 would be consistent with this rule, which would ultimately reduce air emissions.

- **ARB Regulation for In-Use Off-Road Diesel Vehicles.** On July 26, 2007, the ARB adopted a regulation to reduce diesel particulate matter and NO_x emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

- **Statewide Truck and Bus Rule.** On December 12, 2008, the ARB approved this regulation to reduce emissions from existing on-road diesel trucks and buses operating in California. This regulation applies to all on-road heavy-duty diesel-fueled vehicles with a gross vehicle weight rating greater than 14,000 pounds, agricultural yard trucks with off-road certified engines, and certain diesel-fueled shuttle vehicles of any gross vehicle weight rating. Out-of-state trucks

and buses that operate in California are also subject. Under the regulation, older, heavier trucks, i.e. those with pre-2000 year engines and a gross vehicle weight rating greater than 26,000 pounds, are required to have installed a particulate matter filter and must be replaced with a 2010 engine between 2015 and 2020, depending on the model year. By 2015, all heavier pre-1994 trucks must be upgraded to 2010 engines and newer trucks are thereafter required to be replaced over the next 8 years. Older, more polluting trucks are required to be replaced first, while trucks that already have relatively clean 2007-2009 engines are not required to be replaced until 2023. Lighter trucks (14,001-26,000 pounds) must adhere to a similar schedule, and will all be replaced by 2020. Furthermore, nearly all trucks that are not required under the Truck and Bus Regulation to be replaced by 2015 are required to be upgraded with a particulate matter filter by that date.

- **ARB Airborne Toxic Control Measure.** In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

San Joaquin Valley Air Pollution Control District

The air pollution control agency for the Air Basin is the SJVAPCD. The SJVAPCD is responsible for regulating emissions primarily from stationary sources, certain areawide sources, and indirect sources, but has no authority over motor vehicle emissions and other non-stationary sources of TAC emissions. The SJVAPCD maintains air quality monitoring stations throughout the Air Basin; however, the ARB also maintains monitoring stations in the Air Basin and operates the sites that monitor for TAC emissions. The SJVAPCD, in coordination with the eight countywide transportation agencies, is also responsible for developing, updating, and implementing the Air Quality Plans (AQPs) for the Air Basin. In addition, the SJVAPCD has prepared the Guide for Assessing and Mitigating Air Quality Impacts, which sets forth recommended thresholds of significance, analysis methodologies, and provides guidance on mitigating significant impacts (SJVAPCD 2002).

Air quality plans for toxic air contaminants are not required; however, plans required for ozone and particulate matter provide reductions for pollutants that are also toxic. For example, some toxics compounds are a subset of reactive organic gases (ROG) controlled as ozone precursor emissions. Diesel particulate matter DPM is a subset of both PM_{10} and $PM_{2.5}$ emissions. Therefore, some control

measures adopted to achieve NAAQS and CAAQS for ozone precursors and PM will also provide reductions in toxic emissions. For example, motor vehicle emission controls to reduce unburned hydrocarbons and fuel evaporation have greatly reduced toxic benzene emissions along with other reactive organic gases responsible for ozone formation.

Local Regulatory Authority

The City of Visalia has no regulatory authority over TAC emissions, but does have authority under CEQA to require projects to disclose potential TAC impacts associated with projects and to require mitigation to reduce significant impacts from TAC emissions. The City can also disapprove projects that have significant impacts that cannot be reduced or mitigated to less than significant levels.

2.3 - Methodology

A health risk assessment is a guide that helps to determine if current or future exposures to a chemical or substance could affect the health of a population. The State of California Office of Environmental Health Hazard Assessment (OEHHA) develops methods for conducting health risk assessments. As defined under the Air Toxics "Hotspots" Information and Assessment Act of 1987 ["AB 2588" (Chapter 1252, Statutes of 1987), California Health and Safety Code Section 44306], "A health risk assessment means a detailed comprehensive analysis prepared pursuant to Section 44361 to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure" (OEHHA 1987).

The analysis of the potential cumulative health risk impacts resulting from the project was prepared using a variety of data sources and air quality models. The basic methodology followed the two-step procedure described by the Tulare County Superior Court ruling in the case of *Visalia Smart Growth Coalition vs. City of Visalia* (April 12, 2012) in preparing the cumulative assessment. This two-step procedure was described as follows:

> Step one is to identify and quantify all existing impacts; then to add the project's new impacts, then to add the impacts of any other potential (probable) projects. The next action in step one is to establish and justify a threshold of significance for the total of all such impacts. If the cumulative total impacts are below this threshold, a finding of non-significance can be made. If the total impacts exceed the threshold, then they are cumulatively significant and step two comes into play.

If the existing conditions without the project are already significant, then a second step is required to determine of the project's contribution is cumulatively considerable.

> Step two is to determine whether the contributions of the project are cumulatively considerable.

The methodology recommended by the SJVAPCD in its current version of the Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI 2002) does not provide a threshold to determine if existing sources plus the project and reasonably foreseeable sources would result in a significant cumulative impact. The SJVAPCD's 2012 Draft GAMAQI proposes a cumulative contribution threshold of 10 in a million, but still does not define what would constitute an existing cumulative impact. This situation required the identification of a new cumulative threshold and cumulative contribution threshold supported by analysis and substantial evidence. The Cumulative Toxic Threshold Document provided as "Appendix A" to Appendix J Cumulative Health Risk Assessment report was prepared to provide a threshold and analysis approach that meets these requirements.

The methodology applied in this report to address this two-step process is based on a combined approach using the cumulative threshold adopted by the Bay Area Air Quality Management District (BAAQMD) in its CEQA Air Quality Guidelines (BAAQMD 2011a) and the cumulative contribution threshold proposed in the SJVAPCD 2012 Draft GAMAQI (SJVAPCD 2012). The TAC analysis and modeling conducted for the project follows the Guidance for Air Dispersion Modeling (SJVAPCD 2010) prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD) for quantification of emissions and evaluation of potential impacts to air resources. The BAAQMD CEQA Air Quality Guidelines was also used in defining the geographical extent of existing sources of emissions to analyze in the cumulative assessment. A detailed discussion supporting the establishment of the cumulative significance threshold used for this project is contained in Appendix A to Appendix J of this report.

2.4 - Thresholds of Significance

This analysis relies on the SJVAPCD project level threshold for toxic emissions. The City of Visalia has identified a cumulative toxics threshold for this project through independent analysis of information regarding the impacts of these pollutants. Appendix A to the MBA Cumulative Health Risk Assessment (Appendix J of this report), describes cumulative analysis approaches used by the SJVAPCD, the San Luis Obispo Air Pollution Control District (SLOAPCD), and BAAQMD and provides supporting documentation for the selected cumulative TAC thresholds and the geographic scope of the analysis.

Application of the cumulative TAC threshold used in this analysis considers the combined emissions of existing sources, planned sources, and probable future sources of TAC emissions to establish a baseline to which the project's emissions are added to determine whether a significant cumulative impact will exist. Under CEQA, a project's contribution to a significant cumulative impact is significant if it is found to be "cumulatively considerable" (CEQA Guidelines, Sections 15064(h) and 15130). Appendix A—the Cumulative Toxic Air Contaminant Threshold Document—therefore also considers what would constitute a cumulatively considerable contribution to toxic impacts for projects proposed in areas where the emissions from other cumulative sources are close to exceeding

or already exceed the cumulative threshold without the project. These thresholds are consistent with CEQA requirements and supported by substantial evidence.

2.4.1 - Project-Level Health Risk Significance Thresholds

In accordance with the thresholds contained within the SJVAPCD GAMAQI, the following project-level significance health risk thresholds were applied:

- A cancer risk level of 10 in one million
- A non-cancer hazard index of 1.0

A project that contributes a cancer risk in excess of 10 in a million or a non-cancer hazard index of greater than 1.0 would be considered to have a significant project-level impact.

2.4.2 - Cumulative Health Risk Significance Thresholds

The following thresholds were identified for the analysis of cumulative toxic air emissions for the project:

- **Non-Cancer Risk to Maximally Exposed Individual.** Cumulative sources of risks or hazards (including the proposed project and existing, planned, and probable future sources located within a 1,000-foot radius) would be subject to a significance threshold of a chronic or acute Hazard Index of greater than 10.0.
- **Cancer Risk to Maximally Exposed Individual (MEI).** Cumulative sources—which include the proposed project and existing, planned, and probable future TAC sources located within an approximately 1,000-foot radius[1]—are subject to a significance threshold of 100 in one million.
- **Cancer Risk to MEI in Areas with Cumulative Sources over 90 in Million Without the Project.** When existing, planned, and probable future TAC sources located within a 1,000-foot radius of the from the location of the new source being evaluated exceed a cancer risk of 90 in one million, a project contribution of 10 in one million or more will be considered a cumulatively considerable contribution to the significant cumulative impact.
- When existing sources and reasonably foreseeable sources within 1,000 feet from the location of the new source being evaluated exceed a cancer risk of 90 in one million, a project-level contribution of 10 in one million or more would be considered a significant cumulative contribution.

[1] The 1,000-foot analysis radius is an approximate measurement, and this is implicit in all references to this measurement, regardless of whether or not the term "approximate" appears in each one. Generally, at 1,000 feet the TAC emissions sources anticipated to combine with the project's own TAC emissions will be captured. However, significant TAC emission sources such as major roadways, freeways, railyards, and large stationary sources located just beyond the 1,000-foot radius should not be excluded from an emissions inventory due to their location just outside the 1,000-foot radius. These TAC sources should be included provide a conservative analysis of the project study area's cumulative emissions. See section 3.3.5 for further discussion of this issue.

- **Non-Cancer Risk to MEI.** Cumulative sources of risks or hazards (including the proposed project, existing sources, planned, and probable future sources located within the approximate 1,000-foot analysis radius) would be subject to a significance threshold of a chronic or acute Hazard Index of greater than 10.0.

2.5 - Impact Analysis

This section assesses first the incremental health risk impacts of the project's own toxic air contaminant (TAC) emissions. Next, the cumulative impacts of the project in relation to health risk impacts contributed by existing, planned, and probable future sources of TAC emissions within a 1,000-foot radius of the project are calculated. The incremental and cumulative impacts are then compared with the significance thresholds adopted for this assessment. Impact 1 replaces Impact 5 in the Draft EIR air quality impact discussion. Impact 2 replaces the un-numbered impact discussion for cumulative toxic impacts in the Draft EIR air quality section.

Project Toxic Air Contaminants

Impact 1: **The project may expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

The estimation of health risk impacts requires the completion of four basic steps:

1. Estimation of the (TAC) emissions from the project and from existing and reasonably foreseeable emission sources within the 1000-foot zone of influence that could impact public health based on the baseline year of 2010 as the time period of the project's as consistent with a previous health risk assessment report (Draft EIR Appendix I);
2. Identification of receptor locations surrounding the emission source(s) where the health risk impacts are calculated;
3. Application of an air dispersion model and attendant meteorological data to describe the rate of transport and magnitude of the air quality impacts of the estimated emissions; and
4. Comparison of the resulting health risk impacts with the relevant significance thresholds.

Assessment of the Project's Incremental Health Risk Impacts

The primary TAC emissions from the project result from the travel and idling of diesel-fueled vehicles and the operation of transport refrigeration units used to transport perishable products. Other TAC emissions include those resulting from the operation of customer and worker vehicles that travel to and from the project. Table 2-1 identifies the vehicular traffic associated with the project.

Table 2-1: Inventory of Project Walmart Vehicle Trips During Operations

Vehicle Class[(1)]	Project Vehicles	Project Vehicle Trips per Day
2 axle heavy duty truck	4	8
4+ axle heavy duty truck (with TRU)	2	4
4+ axle heavy duty truck (without TRU)	1	2
Customer and Worker Vehicles (DSL and GAS)	463	925

Notes:
(1) 2 axle vehicles are represented by the EMFAC medium heavy duty vehicle class; 4+ axle vehicles are represented by the EMFAC heavy-heavy duty vehicle class; all heavy duty vehicles are assumed to be diesel-fueled
TRU = transport refrigeration unit
Source: see Appendix J for the emission calculations

The project operations assumed a truck delivery schedule from 6:00 A.M. and 10:00 P.M. daily. Onsite truck travel assumed a speed of 15 miles per hour. All delivery trucks are assumed to idle for 5 minutes per day[2]. In addition, the project's vehicle traffic was distributed onto the local roadway network as identified in the project's traffic impact report (Draft EIR Appendix G).

Air Dispersion Model

In accordance with guidance from the SJVAPCD (SJVAPCD 2010), the assessment of health risk impacts from TAC emissions applied the EPA AERMOD Model. AERMOD represents a major scientific improvement over the ISC model that was previously recommended by the EPA for air quality assessments. AERMOD predicts pollutant concentrations from point, area, volume, line, and flare sources with variable emissions in terrain from flat to complex with the inclusion of building downwash effects from buildings on pollutant dispersion. It captures the essential atmospheric physical processes and provides reasonable estimates over a wide range of meteorological conditions and modeling scenarios.

Hourly meteorological data are also required to operate the AERMOD model to determine the direction and rate of dispersion of emissions released into the atmosphere. The SJVAPCD meteorological data set closest to the project site is from the Visalia Airport located approximately 6.5 miles west of the project site. These meteorological data are considered representative of the project site and were used in this assessment. Valid meteorological data are available from the Visalia Airport for the 4-year time period of 2006 to 2009.

The assessment also requires the specification of a network of receptors such that the impacts can be computed at the various locations within the network. For this purpose, a receptor grid was established centered on the project that covered an area of about 86 acres and included both residential and non-residential locations within the 1,000-foot zone of influence as shown earlier in Exhibit 2-2.

[2] The Walmart 4+ axle fleet trucks are equipped with anti-idling devices that limit truck idling to 3 minutes. To provide a conservative estimate of idling emissions, a 5-minute idling time per truck per day was assumed.

Results of the Project-Level Health Risks Assessment

Table 2-2 summarizes the project-level cancer risks.

Table 2-2: Project-Level Cancer Risks

Receptor	Receptor Location	Project Cancer Risk (risk/million)	SJVAPCD Significance threshold (risk/million)	Significant Project-Level Impact?
Location of the maximally exposed receptor from the Project's TAC emissions	Residents located at the southeast corner of the Walmart property near the intersection of East College Avenue and South Tracy Street	3.3	10.0	No

The project-level TAC emission-related risk results largely results from the incremental increase in truck deliveries required to serve the expansion of the existing Walmart as well as from the relocation of the truck access route along the eastern boundary of the project site, the only viable location. The HRA analysis found that risk associated with the expansion is slightly higher than the existing risk from the Walmart store, which is 1.7 in a million.

The project's highest non-cancer hazard index at any receptor was modeled at 0.002, which is orders of magnitude below the threshold of a 1.0 hazard index.

Significance of Project-Level Emissions of TACs on Cancer Risk and Non-Cancer Risk

On a project-level basis, the TAC emissions from the project would not exceed the project-level cancer risk significance threshold of 10 in one million or the non-cancer hazard index of 1.0 established by the SJVAPCD.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less than significant impact.

Cumulative Toxic Air Contaminant Impact Analysis

Impact AIR-2: The project would not expose sensitive receptors to a cumulatively considerable contribution of toxic air contaminant emissions.

Impact Analysis

The cumulative TAC assessment is based upon the 100 in a million threshold developed by the BAAQMD for this purpose as part of its CEQA Air Quality Guidelines (BAAQMD 2011), and found to be appropriate for use in this analysis with modifications that were necessary to ensure that the selected thresholds and methodology complied with the Court's ruling and CEQA provisions governing an EIR's evaluation of a project's potential to lead to or worsen a significant cumulative impacts.[3] The approach and thresholds used in this analysis are described in detail in the Cumulative Toxic Air Contaminant Threshold Document provided as Appendix A to the Health Risk Assessment (Appendix J).

A cumulative toxic air contaminant threshold of an increase in cancer risk of 100 in a million from existing, planned, and probable future TAC emissions sources combined with the project's emissions was used for this project. The BAAQMD's CEQA Air Quality Guidelines' lack of a cumulative contribution threshold was found to be a weakness in the agency's analysis. Therefore, an incremental cumulative contribution threshold has been identified to address a circumstance where the cumulative emissions without the project exceed (or come close to exceeding) the cumulative threshold. However, as demonstrated in this analysis, the impacts from cumulative sources of TAC emissions in the project's 1,000-foot analysis radius do not exceed the cumulative threshold; therefore, the cumulative contribution threshold was not triggered by this project.

The cumulative TAC assessment follows a two-step process. The first step of the cumulative assessment identified the location of sensitive receptor that would be maximally exposed to the project-level TAC emissions and resulting health risk impacts. This maximally exposed receptor serves as the receptor from which the emissions contribution for all existing, planned, and probable future TAC sources is determined. The maximally exposed sensitive receptor from the project is located among the residences at the southeast corner of the Walmart property near the intersection of East College Avenue and South Tracy Street. The residence closest to the loading dock and the truck maneuvering area would be the location of the maximally exposed receptor and the location from which the contribution from all existing, planned and probable future TAC sources located within a 1,000-foot analysis radius from the project were measured.

[3] A trial court set aside BAAQMD's adoption of its CEQA Air Quality Guidelines (2011), due to the agency's failure to consider its adoption of the Guidelines a "project" subject to CEQA review, prior to approval. BAAQMD supported its adoption of the Guidelines—including the 100 in a million cumulative TAC threshold—with substantial evidence that remains valid. The trial court's ruling did not find otherwise, and this firm has thoroughly assessed the data and findings underlying BAAQMD's cumulative TAC threshold during the process of establishing cumulative thresholds for this project's cumulative TAC analysis.

Sources of Existing and Reasonably Foreseeable Toxic Air Contaminant Emissions

The second step of the assessment involved the calculation of TAC emissions and resulting cancer risk from the existing, planned, and probable future sources of TACs at the location of the maximally exposed receptor. Various existing, planned, and probable future sources of toxic air contaminants were identified within the 1000-foot analysis radius established for the project. Exhibit 6 of Appendix J, Health Risk Assessment identifies the locations of sensitive receptors in relation to the project.

The 1,000-foot analysis radius is an approximate measurement; sources located beyond 1,000 feet should be evaluated for possible inclusion in the cumulative emissions inventory on a case-by-case basis. In this case, review of the project area beyond the 1,000-foot radius identified a number of sources with the potential to contribute to the cumulative impact.[4] The source farthest from the project site is a food processing facility located approximately 1,450 feet west of the project site. The sources assessed were in existence in the year 2010 or were reasonably foreseeable for development, based on information provided by the City of Visalia.

The existing sources included the existing Walmart, 10 restaurants, two gasoline service stations, four automobile dealerships, a large food processing facility, a large food market, a paint auto body shop, a rail line, and the local roadway network including SR-198 located just north of the project. The only newly identified planned emission source the City identified is a proposed fast-food restaurant and carwash use located on East Noble Avenue just north of the project. Its foreseeable TAC emissions have been included in the project area's emissions inventory. The Court ruling identified the existing Social Security Building as a possible cumulative source to be considered in the project's cumulative TAC analysis. However, office buildings do not generate notable TAC emissions, as office uses generate few if any diesel truck trips and do not typically include uses with processes that emit other toxics. The Social Security Building does not have characteristics that would suggest otherwise, and it is not included in the emissions inventory of cumulative TAC sources.

The operation of these emission sources release a variety of toxics air contaminant emissions including motor vehicle exhaust (diesel and gasoline vehicles), food processing process toxics, restaurant cooking emissions, gasoline service station evaporative hydrocarbon emissions, paint spray booth emissions, and rail locomotive diesel emissions.

The estimation of the relevant emission sources and their types of emissions are fully addressed in the Partial Recirculated DEIR Appendix J.

Table 2-3 summarizes the cumulative cancer risk from the operation of the project and from existing, planned, and probable future emission sources, compared with the cumulative toxic threshold. As Table 2-3 demonstrates, most of the cumulative risk derives from the SR-198 freeway and the major roadways near the project site. These mobile sources make up about 55 percent of the total risk.

[4] In some cases, large emission sources located just outside of the 1,000-foot zone of influence were also included in the assessment; these sources included the food processing facility, a restaurant, a auto dealership, a gasoline service station, the rail line, and potions of the local roadway network; see Appendix J for emission source details.

Exhibit 2-4 illustrates the importance of distance between a sensitive receptor and these mobile TAC sources, and the associated decrease in risk. The cumulative TAC-related health risk immediately adjacent to the SR-198/Ben Maddox Way interchange exceeds 100 in a million, while the risk drops to 27.2 in a million at the maximally exposed project receptor approximately 980 feet from the freeway but within 50 feet of the project site.

Table 2-3: Cumulative Cancer Risk at the Maximally Exposed Project Receptor

Receptor Location	Emission Source Category	Cancer Risk (risk per million)
Located in the Residential Area along the Walmart Southern Property Line	Existing Walmart Diesel PM SR-198 Diesel PM Local Street Diesel PM Rail Line Diesel PM Restaurants, Auto Dealers Gas Station, Food Related Diesel PM Subtotal of All Existing Diesel PM	1.7 12.0 2.9 0.4 2.1 19.1
	Existing Mobile Total Organic Compounds	2.5
	Existing Restaurant Cooking, Gas Station Evaporation, and Auto Body Spray Painting TAC Emissions	2.3
	Total for All Existing Sources	**23.9**
	Project Diesel PM Emissions	3.3
	Total for Project + Existing Sources	27.2
	Cumulative Significance Threshold	100
	Cumulatively Considerable Impact?	No
Note: Diesel PM = diesel particulate matter Source: see Appendix J		

The analysis also examined the cumulative non-cancer risk. The results of the analysis provided in Appendix J found a cumulative non-cancer health index of 0.03 compared with the cumulative threshold that is based on a health index of 10.0. Therefore, the project does not contribute to a cumulatively significant impact from the non-cancer effects of TAC emissions.

Conclusion

The analysis of cumulative toxic impacts of the Visalia Walmart Expansion project was prepared in accordance with guidance from the Tulare County Superior Court ruling and in accordance with CEQA. The analysis identifies a cumulative toxic threshold of an increase in cancer risk of 100 in a million based on substantial evidence contained in Appendix A (Cumulative Toxic Air Contaminant Threshold Document) to Appendix J (Cumulative Health Risk Assessment).

The analysis uses a geographic scope for the cumulative assessment of 1,000 feet—based on evidence that shows impacts from sources are substantially reduced within this distance as documented in Appendix A to Appendix J—yet retains the flexibility to include significant TAC sources outside the 1,000-foot radius, as was done in this analysis.

The results of the assessment found that the combined risk from existing, planned, and probable future sources of TAC emission sources combined with the project's TAC emissions totaled 27.2 in a million which is less than the cumulative TAC threshold of 100 in a million. Consequently, the project does not contribute to a significant cumulative impact from TAC emissions.

Significance of Cumulative Emissions of TACs on Cancer Risk and Non-Cancer Risk

The TAC emissions from the inventoried existing, planned, and probable future TAC sources combined with the project's TAC emissions do not exceed the cumulative cancer risk significance threshold of 100 in one million established for this assessment. In addition, the cumulative non-cancer risk form existing, planned, and probable future TAC sources combined with the project did not exceed the cumulative non-cancer risk threshold of a health index of 10. Therefore, the operation of the project would have a less than significant impact relative to toxic air contaminants on both a project-level and a cumulative basis.

Level of Significance Before Mitigation

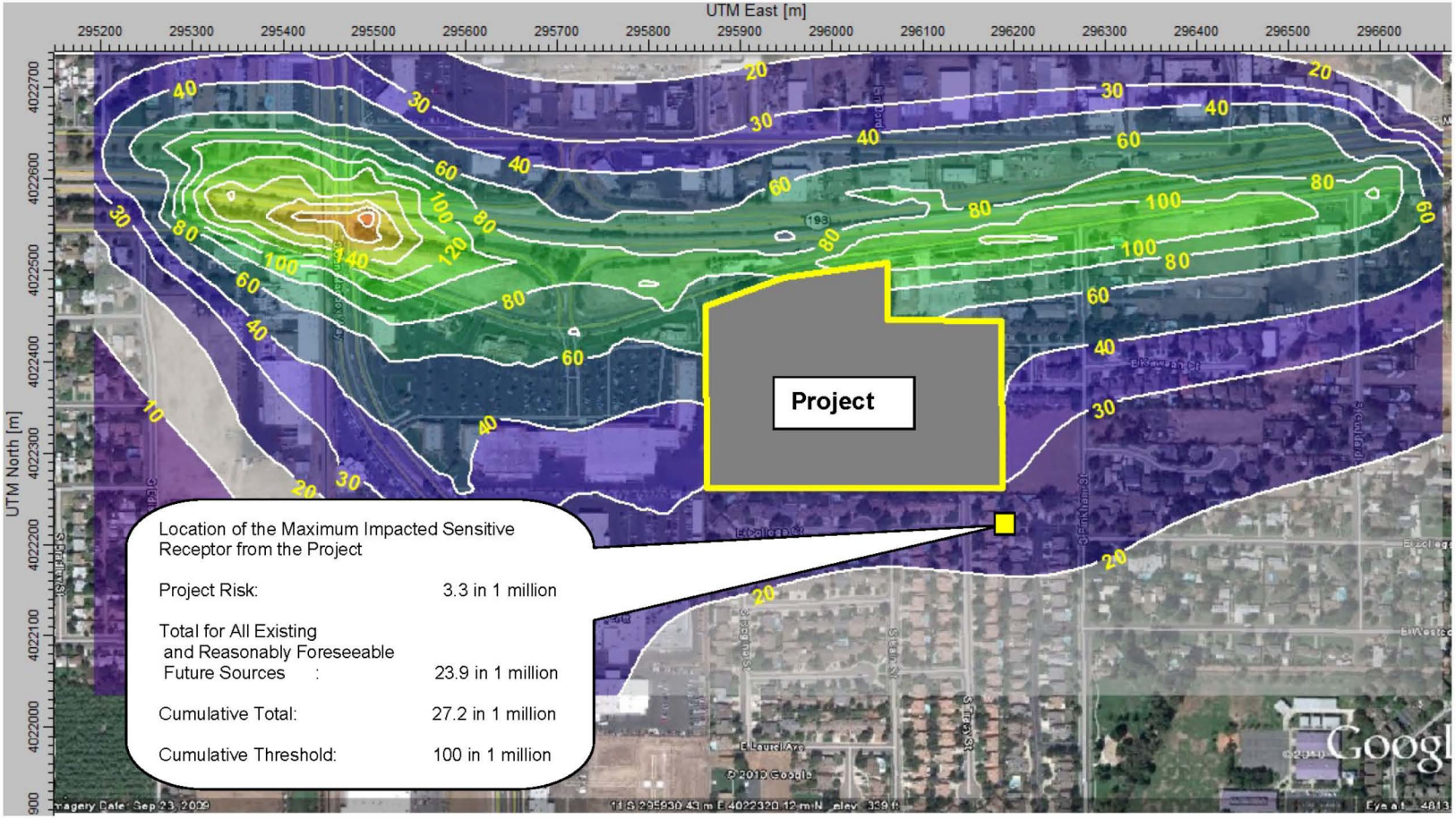
Less than significant impact.

Mitigation Measures

No mitigation measures are required.

Level of Significance After Mitigation

Less than significant impact.



Contours represent cumulative cancer risk for the project and existing, planned and probable future TAC emissions.

Contours are in units of cancer risk per million population.

SECTION 3: REFERENCES

Bay Area Air Quality Management District. 2011. CEQA Air Quality Guidelines (updated May 2011). Website: http://www.baaqmd.gov/~/media/Files /Planning%20and%20Research /CEQA/BAAQMD%20CEQA%20Guidelines_May%202011_5_3_11.ashx.

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