DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT

FOR THE

CENTRAL VALLEY TRANSPORTATION CENTER PROJECT

SCH # 2009091097

December 2009

Kings Canyon Unified School District, Lead Agency
675 W. Manning
Reedley, CA 93654

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#1965-09V1

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LIST OF ABBREVIATIONS AND ACRONYMS

ALTAID	Alta Irrigation District
APN	Assessor's Parcel Number
ARB	Air Resources Board
ATC	Authority to Construct
B20	20% Biodiesel
B5	5% Biodiesel
BMP	Best Management Practice
Cal EPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNG	Compressed natural Gas
CUPA	Certified Unified Program Agency
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted Decibel Scale
DEIR	Draft Environmental Impact Report
DPF	Diesel Particulate Filter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
E-10	10% Ethanol
E-85	85% Ethanol
EIR	Environmental Impact Report
EPA	Environmental Protection Act
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FRA	Federal Railway Administration
FTA	Federal Transit Administration
HRIC	Historical Resources Information Center
HWCL	Hazardous Waste Control Law
ITS	Indian Trust Assets
K	Kindergarten
KCUSD	Kings Canyon Unified School District

LIST OF ABBREVIATIONS AND ACRONYMS

kV	Kilo Volt
MBTA	Migratory Bird Treaty Act of 1918
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
PM	Particulate Matter
PTO	Permit to Operate
RCRA	Resource Conservation and Recovery Act
RMA	Root Mean Square Amplitude
RWQCB	Regional Water Quality Control Board
SR	State Route
SRA	State Responsibility Area
SWANCC	Solid Waste Agency of Northwestern Cook County
SWCV	Solid Waste Collection Vehicle
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
U.S.C.	United States Code
USACE	United State Army Corps of Engineers
USEPA	United State Environmental Protection Agency
USFWS	United Station Fish and Wildlife Service
USGS	United States Geologic Survey
UST	Underground Storage Tanks

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Project Description

The project proposes to relocate and operate a new Central Valley Transportation Center. The new facility would consist of a transportation center from which the District would maintain and operate a fleet of up to 110 buses and 35 fleet vehicles. To supplement the District facilities, the City of Reedley (City) would also relocate its Public Works Department and associated vehicle maintenance yard to the project site. The proposed project would combine the current daily operations of the District transportation facilities and the City Public Works Department into one facility.

The proposed actions for which this Environmental Impact Report (EIR) (State Clearinghouse Number 2009091097)/Environmental Impact Statement (EIS) is being prepared include approval by Fresno County of a Conditional Use Permit, as well as release of funding through the American Recovery and Reinvestment Act (ARRA) grant, as issued by the U.S. Department of Energy.

In this EIR/EIS, reference will be made to the Fresno County General Plan (2000). Such reference is made to avoid repetition of information contained in this readily available document. It is not; however, relied upon herein as a master or program EIR upon which this EIR is based as a supplement or subsequent document. This EIR is intended to be a separate, project-level analysis.

Project Objective

The objective of the project is to fulfill the area's goal of providing more sustainable transportation, which will in turn lead to cleaner air quality for the San Joaquin Valley.

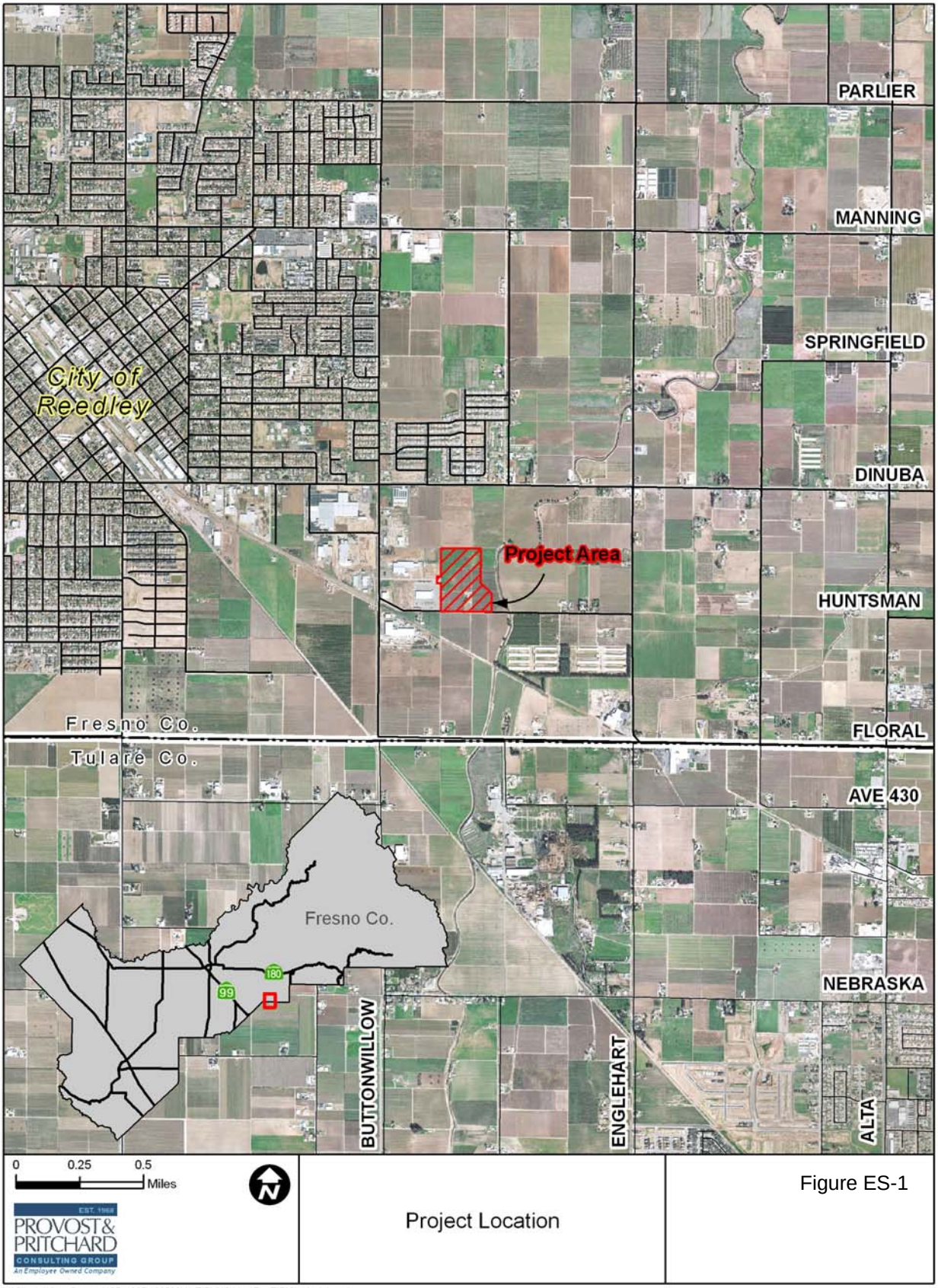
Summary of Impacts and Mitigation Measures

Section 15123(b)(1) of the Guidelines for Implementation of the California Environmental Quality Act (State CEQA Guidelines) provides that the summary shall identify each significant effect with proposed mitigation measures that would reduce or avoid that effect. This information is summarized in Table ES-1, Summary of Potential Impacts, Mitigation Measures, and Mitigation Monitoring Program, at the end of this Executive Summary.

Potential Areas of Controversy and Issues to be Resolved

The following issues are most likely to produce controversy in reviewing and considering the proposed project:

- Agricultural Resources
- Air Quality
- Biological Resources
- Hazards and Hazardous Materials/Health Risks/Vectors
- Traffic
- Water Quality Impacts
- Alternatives Analysis
- Cumulative Impacts



Project Location

Figure ES-1

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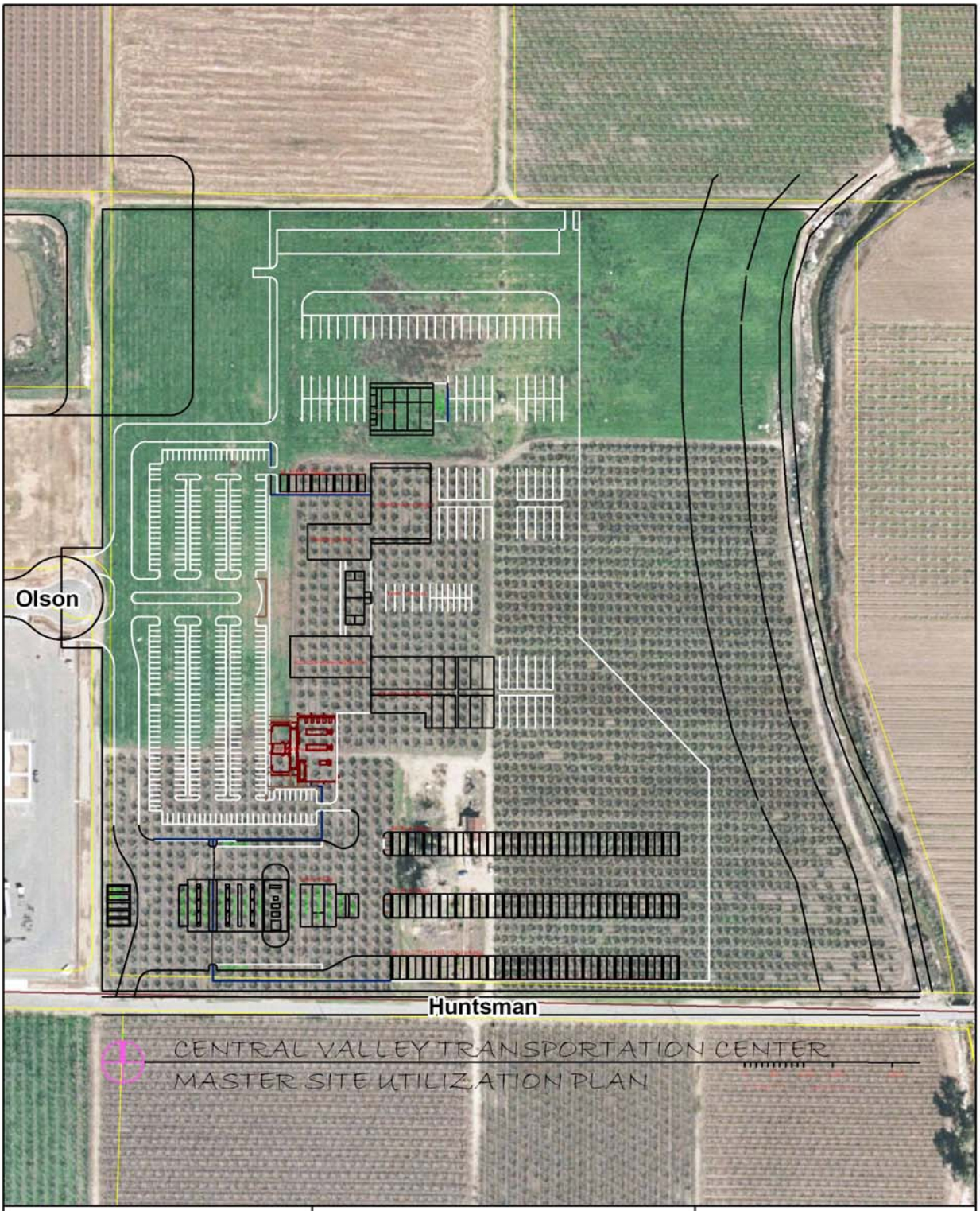

PROVOST & PRITCHARD CONSULTING GROUP
EST. 1998
An Employee Owned Company

Site Plan with Aerial

Figure ES-2

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Alternatives to the Proposed Project

Section 15126.6 of the State CEQA Guidelines requires the EIR/EIS to describe a reasonable project or location alternative range which would reduce or avoid significant impacts, and which could feasibly accomplish the basic project objectives, and to evaluate the comparative alternative project merits; however, if the environmentally superior alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative among the other alternatives.

The EIR evaluates the following alternatives:

- **No Project Alternative.** Under the No Project Alternative, the land would remain in agricultural use and the identified impacts associated with constructing and operating the proposed project would be avoided. Short-term construction impacts to air quality and noise would be avoided and potentially-significant long-term project impacts to biological resources, air and water quality, and traffic also would be avoided.

- **Alternative Site.** The alternate site is approximately two miles east of the city limits, zoned for agriculture and currently utilized by the school district for an elementary school. If the district used the site for their transit center, in combination with the elementary school, the additional agricultural land needed for the operation, would be minimal. The County General Plan EIR (dated October 2004) previously identified impacts and mitigation for losses of important farmland within the County, and a Statement of Overriding Considerations was adopted for project-level and cumulative impacts associated with loss/conversion of agricultural land. The amount of land acreage in agricultural production which would be converted to urban use if this site were chosen for the transit center would be considered a minimal loss and would result in a less-than-significant impact to agricultural resources.

- **Alternatives Rejected from Further Consideration.** A number of sites were evaluated for use as an alternate site. The utilization of some of these sites might involve impacts not present on the project site – incompatible land uses or significant transportation/traffic effects, for example. Because of the status of the air quality in the San Joaquin Valley Air Basin, there is no evidence that there are any other sites in Fresno County which would not have comparable air quality impacts.

Based upon the analysis contained and documented in this EIR/EIS, the no-project alternative is environmentally superior. Apart from this alternative, the proposed project is considered the environmentally superior alternative. Construction impacts would be short term and would not result in substantial new development on the site. The relatively low-impact land use would not substantially increase impacts to native plants and wildlife that currently use the agricultural site. Given the potential additional environmental impacts associated with the alternative provided and analyzed in Chapter Four of the EIR/EIS, the proposed project is considered the environmentally-superior alternative.

Mitigation Reporting / Monitoring Program

State and local agencies are required by Section 21081.6 of the California Public Resources Code to establish a monitoring and reporting program for all projects which are approved and which require CEQA processing. The mitigation monitoring and reporting program for the proposed project corresponds to mitigation measures outlined in the project EIR. The Program summarizes the environmental issues identified in the EIR, the mitigation measures required to reduce each potentially significant impact to less than significant, the person or agency responsible for implementing the measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures (see Chapter Seven).

TABLE ES-1
Summary of Possible Impact, Mitigation Measures, and Mitigation Monitoring Program

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
AESTHETICS						
3.1.1	**Visual Compatibility**	3.1-1		None Required		
3.1.2	**Light and Glare**	3.1-3		None Required		
AGRICULTURAL RESOURCES						
3.2.1	**Loss of Farmland, Conversion of Farmland**	3.2-6		None Required		
3.2.2	**Zoning and Williamson Act Conflicts**	3.2-6		None Required		
AIR QUALITY						
3.3.1	**Short Term Emissions**	3.3-11	**3.3.1a**	As the project shall be completed in compliance with SJVAPCD Regulation VIII, the following dust control measures shall be taken to ensure compliance specifically during grading and construction phases: Water previously exposed surfaces (soil) whenever visible dust is capable of drifting from the site or approaches 20% opacity. Water all unpaved haul roads a minimum of three-times/day or whenever visible dust from such roads is capable of drifting from the site or approaches 20% opacity. Reduce speed on unpaved roads to less than 15 miles per hour. Install and maintain a track out control device that meets the specifications of SJVAPCD Rule 8041 if the site exceeds 150 vehicle trips per day or more than 20 vehicle trips per day by vehicles with three or more axles. Stabilize all disturbed areas, including storage piles, which are not being actively utilized for production purposes using water, chemical stabilizers or by covering with a tarp or other suitable cover. Control fugitive dust emissions during land clearing, grubbing, scraping, excavation, leveling, grading, or cut and fill operations with application of water or by	Less Than Significant	SJVAPCD

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
				presoaking. When transporting materials offsite, maintain a freeboard limit of at least 6 inches and cover or effectively wet to limit visible dust emissions. Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and use of blowers is expressly forbidden). Stabilize the surface of storage piles following the addition or removal of materials using water or chemical stabilizer/suppressants. Remove visible track-out from the site at the end of each workday. Cease grading or other activities that cause excessive (greater than 20% opacity) dust formation during periods of high winds (greater than 20 mph over a one-hour period).		
			3.3-1b	The GAMAQI guidance document lists the following measures as approved and recommended for construction activities. These measures shall be required to ensure that the proposed project emissions do not exceed District thresholds: Maintain all construction equipment as recommended by manufacturer manuals. Shut down equipment when not in use for extended periods. Construction equipment shall operate no longer than eight (8) cumulative hours per day. Use electric equipment for construction whenever possible in lieu of diesel or gasoline powered equipment. Curtail use of high-emitting construction equipment during periods of high or excessive ambient pollutant concentrations. All construction vehicles shall be equipped with proper emissions control equipment and kept in good and	Less Than Significant	SJVAPCD

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
				proper running order to substantially reduce NO_x emissions. On-Road and Off-Road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines. On-Road and Off-Road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines. All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks. All construction activities within the project area shall be discontinued during the first stage smog alerts. Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).		
3.3.2	**Long Term Emissions**	3.3-12	**3.3.2**	The following mitigation measures are recommended to further reduce the potential for long-term project emissions. These measures shall be required to ensure that the proposed project emissions are not exceeded: Installation of a 1.2 MW Solar Collection and Charging System. Replacing older diesel vehicles with CNG vehicles. The project design shall comply with standards set forth in Title 24 of the Uniform Building Code to minimize total consumption of energy. Applicants shall be required to comply with applicable mitigation measures in the Air Quality Attainment Plan, District Rules, Traffic Control Measures, Regulation VIII and Indirect Source Rules for the SJVAPCD. The developer shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient.	Less Than Significant	SJVAPCD

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
				The applicant shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of: Rapid cure cutback asphalt; Medium cure cutback asphalt; Slow cure cutback asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.3); or Emulsified asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.4). The developer shall comply with applicable provisions of SJVAPCD Rule 9510 (Indirect Source Review).		
3.3.3	**Potential Impacts to Sensitive Receptors**	3.3-16		None Required		
3.3.4	**Health Risk Impacts**	3.3-17		None Required		
3.3.5	**Impacts to the Ambient Air Quality**	3.3-19		None Requires		
3.3.6	**Potential Impacts to Air Quality Attainment Plan**	3.3-21		None Required		
3.3.7	**Potential Odor Impacts**	3.3-22		None Required		
BIOLOGICAL RESOURCES						
3.4.1	**Substantial Adverse Effect on Candidate, Special-Status or Sensitive Species**	3.4-7	**3.4.1**	Construction, storage, travel and other types of disturbance should be restricted to the 27-acre project site and not take place in the offsite land adjacent to the riparian corridor of Travers Creeks. Trucks and equipment vehicles should approach from Huntsman or the western access road rather than the dirt road along the riparian/orchard interface. If this restriction is not possible, then a more extensive biological survey of the riparian corridor would be necessary to determine if the impacts will require further mitigation. Maintaining the current cable and lock system in place at the southern access to the corridor from Huntsman will continue to discourage traffic along the offsite riparian corridor. Adding signage in English along the west-to-east dirt access road to the riparian corridor will further discourage project traffic from within the	Less Than Significant	Fresno County Public Works the Applicant

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
				parcel. Vehicles shall use slow speeds (less than 15 miles per hour), especially at night, when driving through or around the project site to minimize potential for striking or disturbing animals. San Joaquin kit fox and other animals are vulnerable to collisions with autos. Pipes and culverts shall be inspected before being moved or altered to prevent wildlife from being injured or trapped. If special status species are encountered during an inspection, they shall be left alone to passively exit the area unless otherwise authorized by the California Department of Fish and Game or the U.S. Fish and Wildlife Service. Removal of trees shall occur outside of bird nesting season to minimize impact to nest activity. Any migratory birds and their nests shall be not be disturbed as outlined in the Migratory Bird Treaty Act of 1918 (MBTA). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations Part 10, including feathers or other parts, nests, eggs or products, except as slowed by implementing regulations (50 CFR 21).		
3.4.2	**Substantial Adverse Effect on Riparian Habitat or Other Sensitive Natural Community**	3.4-9		None Required		
3.4.3	**Substantial Adverse Effect on Federal Protected Wetlands**	3.4-9		None Required		
3.4.4	**Conflict with Local Policies or Ordinances**	3.4-10		None Required		
3.4.5	**Conflict with Local Policies or Ordinances**	3.4-10		None Required		
3.4.6	**Conflict with Adopted or**	3.4-10		None Required		

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
	Approved Conservation Plan					
CULTURAL RESOURCES						
3.5.1	**Disturbance of Cultural, Historic Resources, or Skeletal Remains**	3.5-2	**3.5.1**	If, in the course of project operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within 50 feet of the find area shall cease. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the County's Environmental Assessment Officer, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the project. In the event human remains are encountered during construction or operation activities, all work within the vicinity of the remains would halt in accordance with Health and Safety Code §7050.5, Public Resources Code §5097.98, and §15064.5 of the CEQA Guidelines. In addition to compliance with Public Resources Code §5097.98, in the event that any skeletal remains are discovered, a qualified archaeologist, the County Environmental Assessment Officer, County Coroner and local Native American organization shall be consulted, and appropriate measures shall be required that may include avoidance of the burial site or reburial of the remains.	Less Than Significant	County of Fresno
GEOLOGY, SOILS AND MINERAL RESOURCES						
3.6.1	**Impacts Resulting from Seismic Effects**	3.6-4		None Required		
3.6.2	**Landslides**	3.6-4		None Required		
3.6.3	**Soil Erosion, Loss of Topsoil and Impacts from Instable or Expansive Soils**	3.6-4		None Required		
3.6.4	**Hazards to Septic Tank or Alternative Waste Disposal System**	3.6-5		None Required		

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
3.6.5	**Impacts to Mineral Resources**	3.6-5		None Required		
HAZARDS AND HAZARDOUS MATERIAL / HEALTH RISKS AND VECTORS						
3.7.1	**Create Hazard to the Public or Environment**	3.7-6		None Required		
3.7.2	**Result in Hazardous Emissions or Hazardous Materials within the Vicinity of an Existing or Proposed School**	3.7-6		None Required		
3.7.3	**Hazardous Materials Site, Safety Hazard for People Working in Vicinity of a Public Airport, Public Use Airport, or Private Airstrip**	3.7-7		None Required		
3.7.4	**Impair or Interfere with Emergency Response/ Evacuation Plan**	3.7-7		None Required		
3.7.5	**Impacts Results from Proximity to Powerlines or Storage Tanks**	3.7-7		None Required		
3.7.6	**Wildland Fires**	3.7-8		None Required		
HYDROLOGY AND WATER QUALITY						
3.8.1	**Violation of Water Quality Standards or Waste Discharge Requirements**	3.8-5		None Required		
3.8.2	**Depletion of Groundwater Supplies**	3.8-7		None Required		
3.8.3	**Drainage Pattern Alternation**	3.8-7		None Required		
3.8.4	**Surface Runoff**	3.8-8		None Required		

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
	Increase or Water Quality Degradation					
3.8.5	**100-year Flood Hazards**	3.8-8		None Required		
3.8.6	**Dam Failure, Seiche, Tsunami, Mudflow**	3.8-8		None Required		
LAND USE AND PLANNING						
3.9.1	**Division of an Established Community**	3.9-2		None Required		
3.9.2	**Land Use Policy / Zoning Conformance**	3.9-2		None Required		
NOISE						
3.10.1	**Short-Term Construction Noise & Vibration**	3.10-2	**3.10.1**	Noise producing equipment used during construction and operation shall be restricted to the timeframe of 7:00 am to 7:00 pm, Monday through Friday, and 7:00 am to 6:00 pm on Saturday, Sunday and holidays. Construction outside of these hours shall require written approval by the County of Fresno.	Less Than Significant	Applicant
3.10.2	**Vibration Impacts**	3.10-3		None Required		
3.10.3	**Operational and Traffic Noise**	3.10-3		None Required		
3.10.4	**Airport Noise**	3.10-4		None Required		
POPULATION AND HOUSING						
3.11.1	**Population Impacts**	3.11-1		None Required		
3.11.2	**Housing Impacts**	3.11-2		None Required		
PUBLIC SERVICES AND UTILITIES						
3.12.1	**Public Services Impacts**	3.12-2		None Required		
3.12.2	**Impacts to Existing Infrastructure Capacity**	3.12-3		None Required		
3.12.3	**Energy Impacts**	3.12-3		None Required		
RECREATION						
3.13.1	**Impacts to Recreational**	3.13-1		None Required		

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
	Facilities					
TRANSPORTATION / TRAFFIC						
3.14.1	**Traffic Increase vs. Road Capacity / Exceedance of LOS Standard**	3.14-2		None Required		
3.14.2	**Change in Air Traffic Patterns**	3.14-3		None Required		
3.14.3	**Safety Hazards**	3.14-3		None Required		
3.14.4	**Emergency Access Adequacy, Parking Capacity Adequacy, Road Deterioration, Alternative Transportation Policies**	3.14-4		None Required		
CUMULATIVE IMPACTS						
	Aesthetics	5-2		None Required	No Cumulative Impact	
	Agricultural Resources	5-2		None Required	Less Than Significant	
	Air Quality	5-2		None Required	Less Than Significant	
	Greenhouse Gas/Climate Change	5-6	**5.3.1**	CEQA requires that all feasible and reasonable mitigation be applied to the project to reduce the impacts from construction and operations on air quality. The SJVAPCD's "Non-Residential On-Site Mitigation Checklist" was utilized in preparing the mitigation measures and evaluating the projects features. These measures include using controls that limit the exhaust from construction equipment and using alternatives to diesel when possible. Additional reductions will be achieved through the regulatory process of the air district and CARB as required changes to diesel engines are implemented which will affect the product delivery trucks and limits on idling.	Less Than Significant	SJVAPCD

Impact No.	Impact	EIR Page #	Mitigation Number	Mitigation Measures	Level of Significance After Mitigation	Monitoring Agency
	Biological Resources	5-9		None Required	No Cumulative Impact	
	Cultural Resources	5-10		None Required	No Cumulative Impact	
	Geology & Soils	5-10		None Required	No Cumulative Impact	
	Hazards & Hazardous Materials	5-10		None Required	No Cumulative Impact	
	Hydrology & Water Quality	5-10		None Required	No Cumulative Impact	
	Land Use & Planning	5-10		None Required	No Cumulative Impact	
	Mineral Resources	5-10		None Required	No Cumulative Impact	
	Noise	5-10		None Required	No Cumulative Impact	
	Population & Housing	5-10		None Required	No Cumulative Impact	
	Public Services	5-11		None Required	No Cumulative Impact	
	Recreation	5-11		None Required	No Cumulative Impact	
	Transportation/ Traffic	5-11		None Required	Less Than Significant	
	Utilities and Energy	5-11		None Required	Less Than Significant	

Chapter One

INTRODUCTION

CHAPTER ONE – INTRODUCTION

1.1 Proposed Action

The project proposes to relocate and operate a new Central Valley Transportation Center. The new facility would consist of a transportation center from which the District would maintain and operate a fleet of up to 110 buses and 35 fleet vehicles. To supplement the District facilities, the City of Reedley (City) would also relocate its Public Works Department and associated vehicle maintenance yard to the project site. The proposed project would combine the current daily operations of the District transportation facilities and the City Public Works Department into one facility.

The proposed actions for which this Environmental Impact Report (EIR) (State Clearinghouse Number 2009091097)/Environmental Impact Statement (EIS) is being prepared include approval by Fresno County of a Conditional Use Permit, as well as release of funding through the American Recovery and Reinvestment Act (ARRA) grant, as issued by the U.S. Department of Energy.

1.2 Project Objective

The objective of the project is to fulfill the area's goal of providing more sustainable transportation, which will in turn lead to cleaner air quality for the San Joaquin Valley.

1.3 Procedures

The Kings Canyon Unified School District has determined that an EIR must be prepared for the proposed project in accordance with the requirements of CEQA. Anticipating receipt of the grant, the District has initiated preparation of an EIS prepared pursuant NEPA, following the Department of Energy implementation guidelines. As required by Section 15082 of the CEQA Guidelines, and in an effort to comply with the intent to keep the public informed pursuant to Section 1506.6 of the *Council of Environmental Quality NEPA Regulations*, a Notice of Preparation (NOP)/Notice of Intent (NOI) was routed on September 23, 2009, for review and comment by responsible, trustee, and local agencies. In addition, a scoping meeting was held on October 13, 2009 (see Appendix A). Copies of written responses to the NOP/NOI are included in Appendix A of this EIR/EIS. As provided in Section 15063 of the *Guidelines for Implementation of the California Environmental Quality Act* (CEQA Guidelines), Kings Canyon Unified School District recognized that an EIR would be required.

As provided in Section 15063 of the CEQA Guidelines because the Kings Canyon Unified School District recognized that an EIR would be required, an initial study was not required or circulated with the NOP.

Section 15121(a) of the CEQA Guidelines defines an EIR as an informational document that will:

> *...inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.*

As defined by Section 15378 of the State CEQA Guidelines, a "project" is any action that "...has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment..." Section 15093 of the State CEQA Guidelines requires decision-makers to balance the benefits of a proposed project against any unavoidable adverse environmental effects of the project. If the benefits of the project outweigh the unavoidable adverse environmental effects, then the decision-makers may adopt a statement of overriding considerations, finding that the environmental effects are acceptable in light of the project's benefits to the public.

Under CEQA, the "Lead Agency" is usually the public agency that has the principal responsibility for carrying out or approving a project. In this case, the Kings Canyon Unified School District Board will act as Lead Agency with authority to certify the EIR. Under Section 15381 of the CEQA Guidelines, a "Responsible Agency" is a public agency other than the Lead Agency that has discretionary approval authority over the project and will utilize the EIR prepared for the County. Among the responsible agencies in this instance may be the Fresno County Public Works and Planning Department, the San Joaquin Valley Air Pollution Control District, Fresno County Health Department and the Fresno County Office of Education.

Both the CEQA and NEPA processes require that the Lead Agencies seriously consider input from other interested agencies, citizen groups, and individuals. In this regard, a Notice of Preparation for the project was circulated and a scoping meeting was noticed and held. CEQA and NEPA provide for a public process requiring full public disclosure of the expected environmental consequences of the proposed action. The public must be given a meaningful opportunity to comment. CEQA also requires monitoring to ensure that mitigation measures are carried out.

1.4 Methodology

Kings Canyon Unified School District has determined that a project level EIR should be prepared for the Central Valley Transportation Center project. A project level EIR is described in Section 15161 of the State CEQA Guidelines as one that examines the environmental impacts of a specific development project. A project level EIR must examine all phases of the project, including planning, construction, and operation. Similarly, the level of NEPA documentation prepared is a project level EIS. Section 1502 of the *Council of Environmental Quality NEPA Regulations* identifies the components of an EIS.

It has been determined that the EIR/EIS should focus on the environmental aspects below. Issues specifically related to NEPA, including Environmental Justice, have been discussed in detail in Chapter Six.

Air Quality. The EIR/EIS addresses potential short and long-term air quality impacts associated with the project.

Biological Resources. The topical area on biological resources addresses potential impacts to special status plant and animal species related to the proposed project. Results of biological field surveys are discussed.

Geology and Soils. The EIR/EIS summarizes and analyzes the soils-related findings of a geologic-hydrologic investigation for the project site.

Hazards and Hazardous Materials/Health Risks/Vectors. This topical area includes consideration of hazardous material storage and usage, refers to the health risks analyzed in the Air Quality and Hydrology and Water Quality subsections of the EIR/EIS, and evaluates vector impacts.

Hydrology and Water Quality. This area of the EIR/EIS summarizes and analyzes the results of the geologic-hydrologic studies. Issues related to water quality impacts, to alteration of drainage patterns, to storm water runoff, and to flood potential are evaluated.

Land Use. This topical area addresses potential project impacts on surrounding land uses and impacts related to project compliance with County of Fresno land use regulations and zoning.

Transportation/Traffic. This area of the EIR/EIS addresses existing traffic conditions, existing-plus-project traffic conditions, and site access. It also addresses road condition impacts related to the project.

Cumulative Impacts. Such impacts are analyzed in Chapter Five of the EIR/EIS.

Other topical areas are discussed where environmental analysis warrants inclusion in this EIR/EIS.

1.5 Organization of the EIR/EIS

CHAPTER ONE

Chapter One of the EIR/EIS briefly describes the proposed project, delineates the procedures and methodology for environmental evaluation of the project, outlines the contents of the project EIR/EIS, and lists agency actions and permits required for project implementation.

CHAPTER TWO

Chapter Two of the EIR/EIS describes the project in greater detail and summarizes the general characteristics of the project location. The project objectives are also presented. The project's environmental setting is briefly described, and the regulatory context within which the project is evaluated or must be approved is outlined.

CHAPTER THREE

The subsections of the Chapter are organized as outlined below:

Introduction

Each environmental topic is preceded by either a brief description of the topic-related environment or a brief statement of the rationale for addressing the topic.

Impact Evaluation Criteria

Impact Evaluation Criteria are the standards or thresholds by which impacts are measured, with the objective being the determination of whether an impact will be significant.

Setting

This section provides a description of the environment that may be affected by the project, by topic, and may also include a discussion of the regulatory environment that may be applicable to the project.

Impacts

Each impact associated with a subject area is described and listed by number for future reference.

Conclusion

This is a statement identifying whether the impact is significant or less than significant. If found to be significant, the conclusion states whether the impact can be avoided or reduced to an acceptable level through implementation of mitigation measures, or whether the impact is unmitigable, unavoidable, cumulative and/or irreversible.

Mitigation Measures

Each proposed or recommended legal, feasible, and enforceable mitigation measure is described and listed by number.

Effectiveness of Measure

This is a statement that identifies whether the recommended measure will substantially reduce significant environmental impacts, based on the impact evaluation criteria.

Implementation/Monitoring

This is a statement of how the measure will be implemented and monitored.

CHAPTER FOUR

Chapter Four describes and evaluates alternatives to the proposed project. The proposed project is compared to each alternative, and the environmental ramifications of each are analyzed.

CHAPTER FIVE

Chapter Five describes the cumulative effects of the proposed project.

CHAPTER SIX

Chapter Six evaluates or describes CEQA-required and NEPA-required subject areas: growth inducement, environmental justice, socioeconomics and significant environmental effects that cannot be avoided.

CHAPTER SEVEN

Chapter Seven provides a monitoring and reporting program that summarizes the environmental issues, the mitigation measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

APPENDICES

Following the text of this Draft EIR/EIS, several appendices and technical studies have been included to facilitate full environmental review of the proposed project.

1.6 Uses of the EIR/EIS and Required Agency Actions and Permits

If the Kings Canyon Unified School District approves the proposed project, subsequent actions, permits, and approvals will be necessary. This EIR/EIS may be used, when certified, for evaluation of such subsequent actions. The construction and operation of the project will require:

- ◇ The certification of an Environmental Impact Report by the Kings Canyon Unified School District.
- ◇ Approval of a Conditional Use Permit by Fresno County.
- ◇ Approval of a Stormwater Pollution Prevention (construction) Plan by the Central Valley Regional Water Quality Control Board.
- ◇ Approval of an Authority to Construct (ATC) and Permit to Operate (PTO) by the San Joaquin Valley Air Pollution Control District.
- ◇ Compliance with fugitive dust rules (Regulation VIII of the San Joaquin Valley Air Pollution Control District).
- ◇ Compliance with other federal, state and local requirements.

Chapter Two

PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

CHAPTER TWO – PROJECT DESCRIPTION AND ENVIRONMENTAL SETTING

2.1 Project Location

The Central Valley Transportation Center Project (project) is located in Fresno County, just outside the eastern City limits of Reedley, in the central San Joaquin Valley (see Figure 2.1). The San Joaquin Valley is approximately 250 miles long and extends from the Sacramento-San Joaquin Delta in the north to the Tehachapi Mountains in the south, and from the various California coastal ranges (Diablo in the north, Santa Ynez in the south) in the west to the Sierra Nevada in the east.

Eight counties comprise the San Joaquin Valley, including all of Kings County; most of Fresno, Kern, Merced and Stanislaus Counties; and portions of Madera, San Luis Obispo and Tulare Counties. The San Joaquin Valley is home to more than 3 million residents. The largest cities are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route (SR) 99 are the major north-south roads that run the entire length of the valley. The proposed project is located approximately 14 miles east of SR 99 and is located on a 27-acre section of a 36.62-acre parcel of land (Assessor Parcel Number 370-240-13T), Latitude 36.5829, Longitude -119.4253.

2.2 Project Objective and Need

The objective and need of the project is to fulfill the area's goal of providing more sustainable transportation, which will in turn lead to cleaner air quality for the San Joaquin Valley.

2.3 Project Purpose

The proposed project's purpose is:

- To provide a regional transportation center that can be used by multiple jurisdictions. Collaboration among multiple jurisdictions makes it more financially feasible for the rural communities of eastern Fresno County.
- To provide training opportunities for new sustainable transportation technologies.
- To provide colocation of various alternative fueling resources.

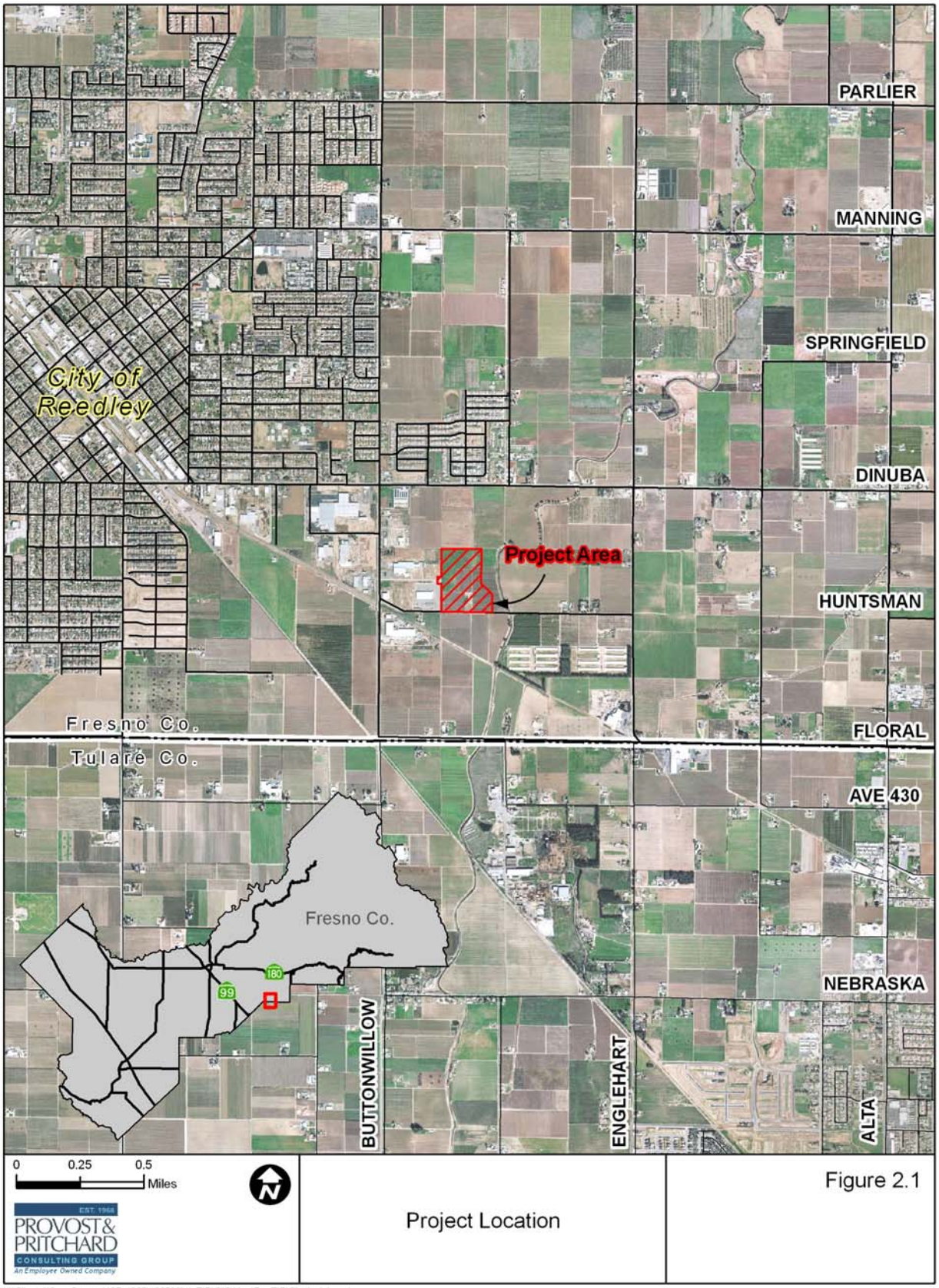
2.4 Project Background

The Kings Canyon Unified School District (District or KCUSD) is a K-12 public school system that serves the cities of Reedley and Orange Cove and the foothill and mountain communities of Navelencia, Squaw Valley, Dunlap and Miramonte. The District covers approximately 600 square miles and has a student population of 10,000. KCUSD operates 19 schools, including K-5, K-8, Middle School, and High School.

Kings Canyon Unified School District currently owns and operates one of the largest natural gas fleets in the San Joaquin Valley. Approximately one-third of the District's existing fleet have already converted to compressed natural gas (CNG) and the majority of their diesel school buses have Level I diesel particulate filter (DPF) retrofit devices and are in the process of receiving Level III DPF's.

2.5 Description of the Project

The Kings Canyon Unified School District (District) proposes to construct and operate a state-of-the-art solar-powered Central Valley Transportation Center. The site is currently in orchard production, which would be removed with project implementation. The new facility would consist of a transportation center from which the District would maintain and operate a fleet of up to 110 buses and 35 fleet vehicles. The land used by the current District transportation center would be absorbed by the adjacent Reedley High School and be converted to additional sports fields. The proposed Central Valley Transportation Center project (proposed project) would provide the District with new transportation administration and vehicle maintenance facilities, including a 10,900 square foot education center. The intent for the education center is to offer vocational training related to green technologies specifically those in use at the transportation center. These facilities would include a primary administration building with 23 bays for vehicle maintenance, repair, inspection, and wash racks, as well as office, storage, shop and staff support uses.



Project Location

Figure 2.1

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Project access would be available on both Olsen and Huntsman Avenues (see Figure 2.2). The proposed project would also incorporate compressed natural gas (CNG) fueling facilities and solar collection and charging facilities. In addition, there would be auxiliary facilities, fuel storage and associated dispensers (ethanol, biodiesel, ultra-low sulfur diesel and unleaded regular gasoline). Fuel storage at the project site would consist of the following:

- 2 10,000 gallon diesel underground storage tanks
- 1 10,000 gallon unleaded regular gasoline underground storage tank
- 1 10,000 gallon ethanol underground storage tank
- 1 10,000 biodiesel underground storage tank

To supplement the District facilities, the City of Reedley (City) would also relocate its Public Works Department and associated vehicle maintenance yard to the project site. The proposed project would combine the current daily operations of the District transportation facilities and the City Public Works Department into one facility.

The District currently maintains 21 CNG powered busses and 39 traditionally powered busses and the District and City, combined, maintain approximately 209 service and maintenance vehicles. There would be no increase in fleet size with the relocation. The proposed project would generate approximately 800 trips per day. The fueling station would be open 24 hours per day, seven days per week, while internal District and City operations would be from 5 am to 11 pm.

2.6 Construction

Construction of the proposed project would include site clearing, demolition, grading, site layout, utility infrastructure, fueling infrastructure, storm drain recovery system, pond basin expansion, street improvements, sidewalks, curbs, pad build out and construction of core buildings of both the city and school district. An average of 50-75 workers would be required on-site at one time to implement each construction phase. The staging areas, including construction parking, would be located on-site within the boundaries of the proposed project area. Construction of the proposed project is anticipated to begin in the fall of 2010 and continue for approximately 4-5 years depending on state and federal funding. The project site could be ready for operation by winter 2012, subject to variation of the construction schedule and funding cycles.

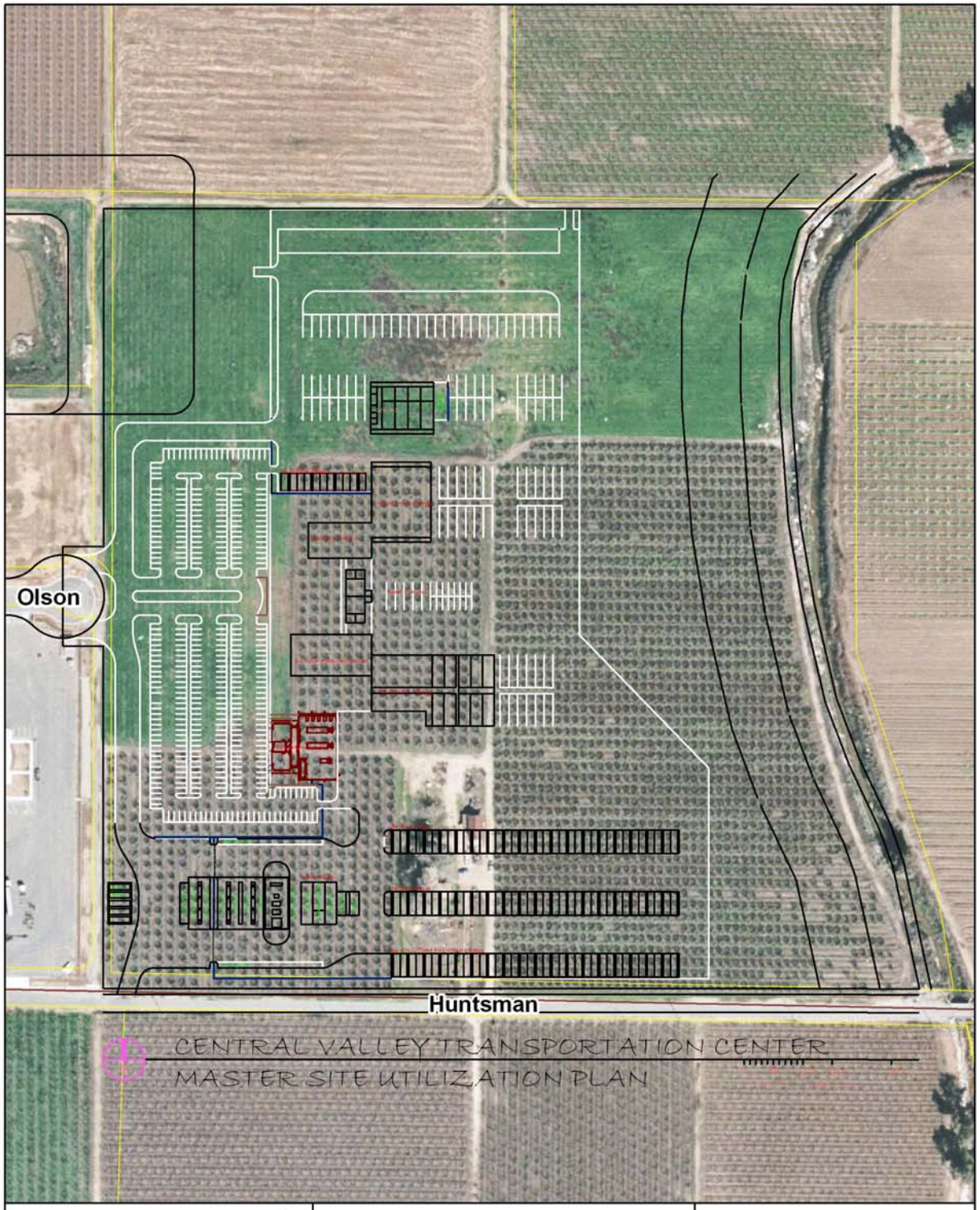
2.7 Environmental Setting

As set forth in Section 15125(a) of the State CEQA Guidelines:

> *"An EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the Notice of Preparation is published...from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives."*

The climate of the project area is characteristic of that of the Southern San Joaquin Valley. The summer climate is hot and dry, with daytime temperatures frequently above 100 degrees Fahrenheit, while winters are cool and periodically humid. There are between 250 and 300 frost-free days per year. Mean daily maximum temperatures range from a low of approximately 57 degrees Fahrenheit in December and January to a high of about 99 degrees Fahrenheit in July.

Rainfall is concentrated during the six months from November to April. Average rainfall is less than 10 inches per year, with the heaviest rains occurring between January and March (Munz and Keck, 1973).



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Site Plan with Aerial

Figure 2.2

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Beginning in November through February, the Valley typically experiences heavy fog, mostly nocturnal, caused when moist cool air is trapped in the valley by high-pressure systems. In extreme cases, this fog may last continuously for two or three weeks. Its depth is usually less than 3,000 feet.

Winds are predominantly up-valley (from the north) in all seasons, but more so in the spring and summer months. Winds in the fall and winter are generally lighter and more variable in direction, but generally blow towards the south and southeast.

The project lies within the Fresno County portion of the San Joaquin Valley Air Basin (Air Basin). The Air Basin is comprised of eight counties: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and parts of Kern County. The climate and meteorology within the Air Basin are conducive to the entrapment and creation of air pollution. Air pollution within the Air Basin is a combination of pollutant emissions inside an enclosed air basin, which experiences long periods of inversion, a relatively light wind flow and a generous amount of sunlight. The Air Basin periodically exceeds state and/or federal standards for ozone and particulate matter, and therefore is in non-attainment for these pollutants.

The natural vegetation communities of the southern San Joaquin Valley have historically supported a diverse assemblage of plant and animal species. The conversion of native and naturalized plant communities by agricultural development, road construction, dam construction, and urbanization has significantly reduced available wildlife and plant habitat. As a result of this conversion, several species of both plants and animals have been extirpated from the southern San Joaquin Valley, and populations of other species have declined significantly. As a result, and as directed by state and federal legislation, the California Department of Fish and Game and the United States Fish and Wildlife Service have listed many southern San Joaquin Valley species as threatened, endangered, candidates for state or federal listing “sensitive species”, “special-status species”, or “species of concern.” The likelihood of their existence on the site is reduced by the existence of intensive agriculture.

Fresh groundwater is principally contained in the unconsolidated continental deposits of the Pliocene to Holocene age, which extend to depths ranging from less than 100 to more than 3,000 feet.

The ultimate source of groundwater in the San Joaquin Valley is precipitation on the valley and its tributary drainage basins. Replenishment of the unconfined and semi-confined groundwater bodies can be by seepage from streams and by underflow in permeable materials flooring the river and stream canyons that border the valley.

The groundwater basin in the central San Joaquin Valley is the Kings subbasin, which covers the area south of the San Joaquin River and includes Kings County and the western (valley portions) of Fresno, Tulare and Kern Counties.

The southern San Joaquin Valley, approximately 10,000 square miles, is a broad structural trough bordered by the Sierra Nevada on the east, the Coast Ranges on the west and the Transverse Range on the south. The occurrence of groundwater is directly related to the geology and soils in the region.

2.8 Regulatory Context

Dependant on the project alternative selected, the construction and operation of the transportation center facilities may require the following regulatory action:

- ◇ The certification of an Environmental Impact Report by the Kings Canyon Unified School District.
- ◇ Approval of a Conditional Use Permit by Fresno County.
- ◇ Approval of a Stormwater Pollution Prevention (construction) Plan by the Central Valley Regional Water Quality Control Board.
- ◇ Approval of an Authority to Construct (ATC) and Permit to Operate (PTO) by the San Joaquin Valley Air Pollution Control District.
- ◇ Compliance with fugitive dust rules (Regulation VIII of the San Joaquin Valley Air Pollution Control District).
- ◇ Compliance with other federal, state and local requirements.

Chapter Three

SETTING, IMPACTS AND MITIGATION MEASURES

CHAPTER THREE – SETTING, IMPACTS AND MITIGATION MEASURES

Introduction

This section of the EIR/EIS addresses topics required by the *California Environmental Quality Act (CEQA)*. Each topic (e.g., biological resources, air quality) includes a description of existing environmental or regulatory conditions for the proposed project in the Setting section for each topic. The Impacts and Mitigation Measures section for each topic addresses impacts specifically related to the project. Corresponding mitigation measures, unless otherwise noted, will be assumed to be sufficient to reduce impacts to a less-than-significant level. When more than one mitigation measure is recommended for a specific impact, all the measures will be required to reduce the impact to a level of insignificance unless the word "or" or "alternatively" appears in the list of mitigation measures. Less-than-significant impacts have also been identified and discussed. No mitigation is mandated by CEQA for less-than-significant impacts.

The applicant must comply with the mitigation measures, including all reporting requirements, as a condition of approval of the project. Failure to fully comply with all required mitigation measures is potential cause for enforcement action by the County, which may include permit modification or revocation, in accord with procedures set forth by the County of Fresno. When monitoring of mitigation measures by Fresno County is required, the project applicant/operator shall maintain complete performance records on file for each such measure for agency review. Each impact is briefly described ("headed") and numbered in bold lettering. Text then follows to provide discussion and analysis. At the end of the impacts discussion, mitigation measures are listed and numbered to correspond to the numbered impact. The summary table in the Executive Summary includes the same text heading and the mitigation measures.

Focus

The EIR/EIS and the discussions in this Chapter have been focused in accord with the scoping process provided for in *Public Resources Code §21080.4(a)* and *CEQA Guidelines §15082*, relying upon the Notice of Preparation circulated by Kings Canyon Unified School District and the responsible agency/trustee agency responses thereto. Discussion of CEQA-required topics not identified by this process as requiring analysis in depth has not been eliminated but has been appropriately reduced to that essential for environmental analysis. A scoping meeting to assist in this determination was duly noticed and held by Kings Canyon Unified School District on October 13, 2009 (See Appendix A).

Determination of Significance

Under CEQA, a significant impact is defined as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code §21068). The guidelines implementing CEQA direct that this determination be based on substantial evidence in light of the whole record. The criteria for determining significance of a particular impact are identified prior to the impact discussion in each topical section, and are consistent with significance criteria set forth in Appendix G of the CEQA Guidelines as implemented by the County of Fresno's criteria and procedures for the evaluation of projects.

Reference Documentation

In this EIR/EIS, reference will be made to the *Fresno County General Plan* (2000), the EIR for the Fresno County General Plan, and the *City of Reedley General Plan 2012* (1993). Such reference is made to avoid repetition of information contained in these readily available documents. It is not, however, relied upon herein as a master or program EIR upon which this EIR/EIS is based as a supplement or subsequent document. This EIR/EIS is intended to be a separate, project-level, analysis. This project is intended to be in compliance with the requirements of the Fresno County General Plan and its EIR.

3.1 Aesthetics

Introduction

This section addresses project impacts on the visual and aesthetic character of the project site and vicinity. Issues include potential impacts to scenic views and vistas, potential disturbance of rural characteristics, visual alteration of agricultural uses, and impacts associated with an increase in light sources and glare.

Impact Evaluation Criteria

Criteria for evaluating adverse effects on scenic resources are:

Would the Project:

a) *Have a substantial adverse effect on a scenic vista?*

b) *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or county designated scenic highway or county designated scenic road?*

c) *Substantially degrade the existing visual character or quality of the site and its surroundings that are open to public view?*

d) *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?*

Setting

The proposed project site is within Fresno County, east of Buttonwillow Avenue (Road 64) and north of East Huntsman Avenue. The project site is not located near any highway designated by the Department of Transportation as a State Scenic Highway. The project site lies approximately one-quarter mile south of the Blossom Trail Route and Wildflower Route, which are both Designated Scenic Drives by the Open Space and Conservation Element of the Fresno County General Plan (2000). The Blossom Trail Route splits into a Blossom Trail and a Foothill Trail along East Manning Avenue at Alta Avenue, and traverses along East Dinuba Avenue to Buttonwillow Avenue, north of the project site. The routes are served by both vehicular and bicycle access.

Located in an unincorporated area, adjacent to and near the City of Reedley's City Limit and Sphere of Influence boundaries, the project site is surrounded by land that has been leveled and improved for intensive agricultural and industrial uses. Structures include industrial buildings for packaging and produce shipping, an irrigation supply company, a plant nursery, a mini-storage facility, a cold storage facility, a poultry farm, a furniture outlet store, and scattered rural single-family residences. Photographs documenting the existing views of the project site and surrounding area are depicted in Figures 3.1-1 through 3.1-3.

Impacts

Impact #3.1.1 – Visual Compatibility [Evaluation Criteria (a), (b), (c)]

Impact Description and Evaluation

The primary industrial and agricultural structures in the area consist of produce packaging and shipping warehouses, poultry farm houses, and cold storage warehouses. The proposed transportation center will be consistent in its structural design in both architectural quality and height for the facility's structures, compatible with the area's existing buildings. Figure 2.2 designates the locations of proposed fueling stations, a vehicle wash facility, service bays, a learning center, a regeneration center, and solar covered parking. The proposed building elevations will be approximately 35 to 50 feet in height, consistent with the industrial-type structures in the immediate vicinity. Commercial-type structures are exempt from building height restrictions in the agriculture zone, pursuant to the Fresno County Zoning Ordinance.

Section 816.5 of the Zoning Ordinance, regarding the designated AE District zone, allows increased height of non-dwelling structures, as follows *"Buildings may not exceed thirty-five (35) feet in height…Non-dwelling structures and other accessory farm buildings are excepted, amended by Ordinance T-243 adopted 7-28-80."*

Figure 3.1-1 -- View of the Project Site, looking to the North

Figure 3.1-2 -- View of the Project Site, looking to the South

Figure 3.1-3 -- View of the Project Site, looking to the East

Conclusion

The proposed project is located in an established agricultural and industrial area characterized by produce packing and shipping facilities, agricultural operations, small commercial businesses, and scattered rural residences. No identified scenic vista will be blocked by the project facilities since the Designated Scenic Drives, identified by the Open Space and Conservation Element of the County General Plan, are located at least one-quarter mile north of the project site. The project facilities meet the zoning requirements for building height, and would be consistent with the surrounding area's existing facilities and structures in both height and architectural compatibility. Therefore, the proposed project will not have an adverse effect on a scenic vista or degrade the existing visual character of the project's vicinity. There is no impact.

Mitigation Measures

None are required.

Impact #3.1.2 – Light and Glare
[Evaluation Criteria (d)]

Impact Description and Evaluation

The proposed transportation center facility will include the installation and operation of several new light sources, including lights to be installed on the fueling stations, vehicle wash facility, maintenance building and service bays, educational center, regeneration center, and solar covered parking structures. Proposed exterior lighting on all buildings will be required to be shielded to deflect lighting away from adjoining properties, while reducing the amount of ambient lighting produced by the overall facility, thus complying with the lighting standards set forth by the Fresno County Zoning Ordinance. The Zoning Ordinance sets forth lighting standards for Site Plan Review approval under Section 874.A.2.c, as follows: "*Proposed lighting is so arranged as to reflect the light away from adjoining properties*". Additionally, pursuant to Section 874.H.2.c, lighting onto surrounding residences would be reviewed, as follows: "*Fences or walls…subject to Director Review and Approval. The review shall include consideration of the effect of mass, noise, and lighting upon surrounding residences."* The County's adopted Environmental Impact Report (SCH# 1999051024) for the General Plan (2000) includes a policy document for

implementing mitigation measures for new development, which addresses lighting standards to minimize light exposure, pursuant to Part 4.16-2, as follows: "*In approving new development, the County shall require that lighting standards be designed and constructed to minimize the project contribution to ambient light production and to preclude "spillover" of light onto adjacent light-sensitive (e.g., residences, hospitals) properties*."

Conclusion

The project is designed to comply with the outdoor lighting standards set forth by the County's Zoning Ordinance and Environmental Impact Report for the General Plan for reducing ambient light production and spillover, which would ensure potential impacts remain less than significant.

Mitigation Measures

None are required.

3.2 Agricultural Resources

Introduction

Protection and preservation of agricultural resources is vital to the overall economic strength of the county. This section describes the issues associated with development of the project, and what effect, if any, the project will have on agricultural resources. The California Land Evaluation and Site Assessment (LESA) Model (1997) created by the Department of Conservation was utilized to analyze the potential impacts of the project on agricultural resources and can be seen in Appendix B.

Impact Evaluation Criteria

Criteria for evaluating adverse agricultural resource impacts are:

Would the Project:

a) Convert Prime Farmland, Unique Farmlands, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use or if the area is not designated on the Important Farmland Series Maps, would it convert prime agricultural land as defined in Section 51201(c) of the Govt. Code to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Involve other changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or otherwise adversely affect agricultural resources or operations?

Regulatory Setting

To accommodate population growth and take advantage of economic opportunities, Fresno County has determined that it may be necessary to convert existing "Important Farmland" to more urban uses. To offset the expected net loss of "Prime Farmland" or "Farmland of Statewide Importance" and provide necessary housing and support facilities, the County General Plan has designated areas where growth should be directed.

Under the Agriculture and Land Use Element of the County's General Plan (2000), policies and programs apply to agricultural land within the County's jurisdiction:

- Policy LU-A.1 - The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.
- Policy LU-A.13 - The County shall protect agricultural operations from conflicts with nonagricultural uses by requiring buffers between proposed non-agricultural uses and adjacent agricultural operations.
- Policy LU-A.14 - The County shall ensure that the review of discretionary permits includes an assessment of the conversion of productive agricultural land and that mitigation be required where appropriate.

Environmental Setting

The project site is located in the northeastern Fresno County, adjacent to the City of Reedley, as shown in Figure 2.1. The 27-acre site is bound to the south by Huntsman Avenue and by Maxco Packaging Company, a produce box manufacturing company, to the west. To the north and south of the project site is active agricultural land, specifically orchards and row crops. The project site is currently used for stone fruit, row crop and alfalfa production. The dominant land use in the project vicinity is agriculture with scattered rural residences throughout.

The project site is not located on land within a Williamson Act Contract. According to the Reedley City Clerk's records, on November 5, 1996, the site was removed from contract established in 1971, by a Resolution to Protest, Document No. 96148774. The site is currently zoned AE-20, Exclusive Agriculture – 20 acre minimum (see Figure 3.2-1).

For the evaluation of the quality of agricultural lands, the soils classification system adopted by the U.S. department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) was used, which determines the agricultural value of the soil based on a number of physical factors. The classifications of four major types of farmland are described below and depicted in Figure 3.2-2.

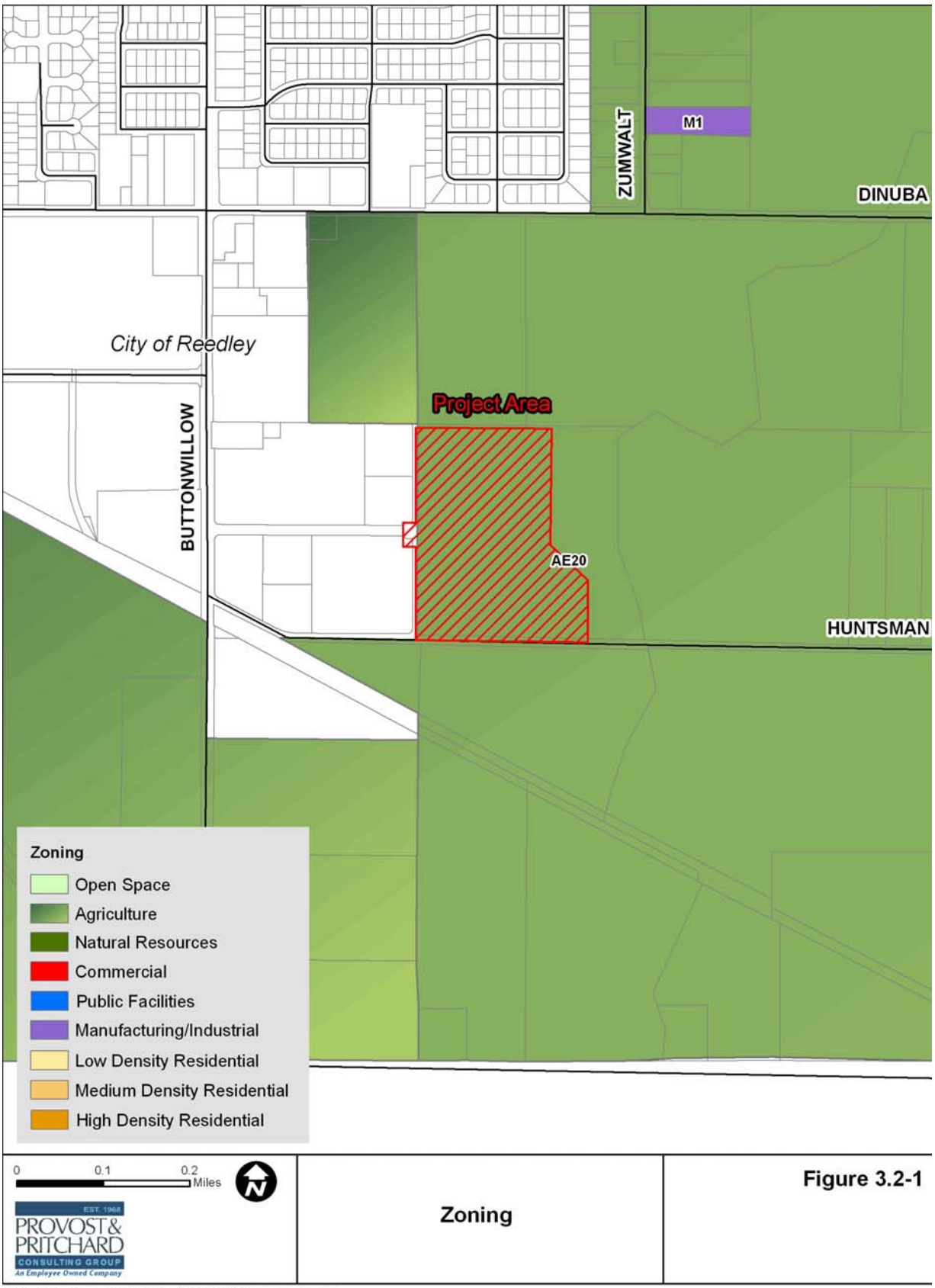
- "Prime Farmland" is best suited for producing food and fiber. This category has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when managed according to modern farming methods.
- "Farmland of Statewide Importance" is land other than prime farmland with a good combination of physical and chemical characteristics for producing food, feed, forage, and fiber.
- "Unique Farmland" is land other than prime farmland and farmland of statewide importance that has a special combination of soil quality, growing season, and moisture supply needed to produce sustained high yields of a specific crop.
- "Farmland of Local Importance" is defined as important to the local agricultural economy.

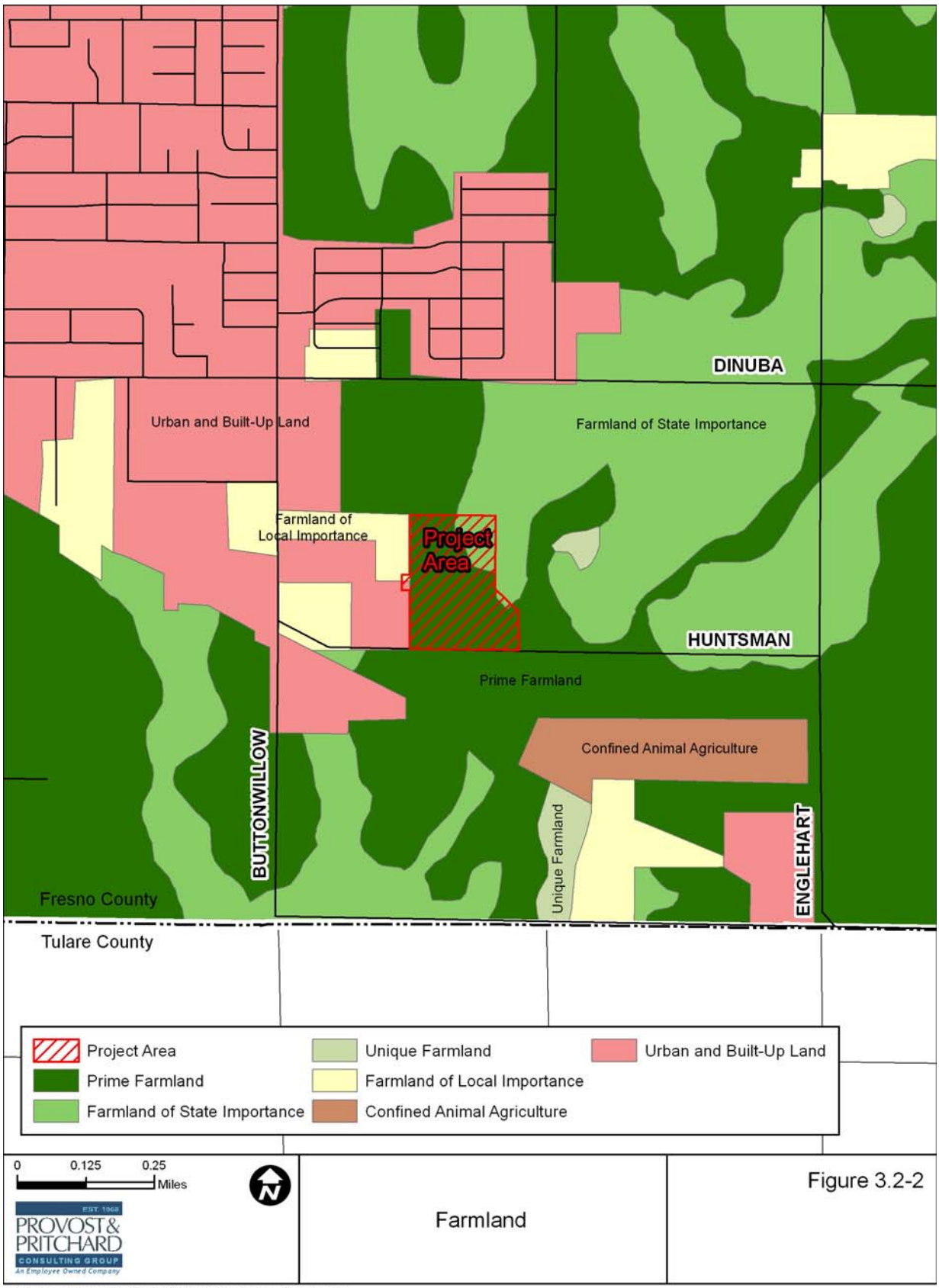
The State is required to prepare current maps of the farmland in agricultural counties of California and to monitor permanent farmland conversion. The California Department of Conservation's Farmland Mapping and Monitoring Program uses the above definitions for the classification of farmland. In addition to the above farmland classifications, the California Department of Conservation describes three other categories, as follows:

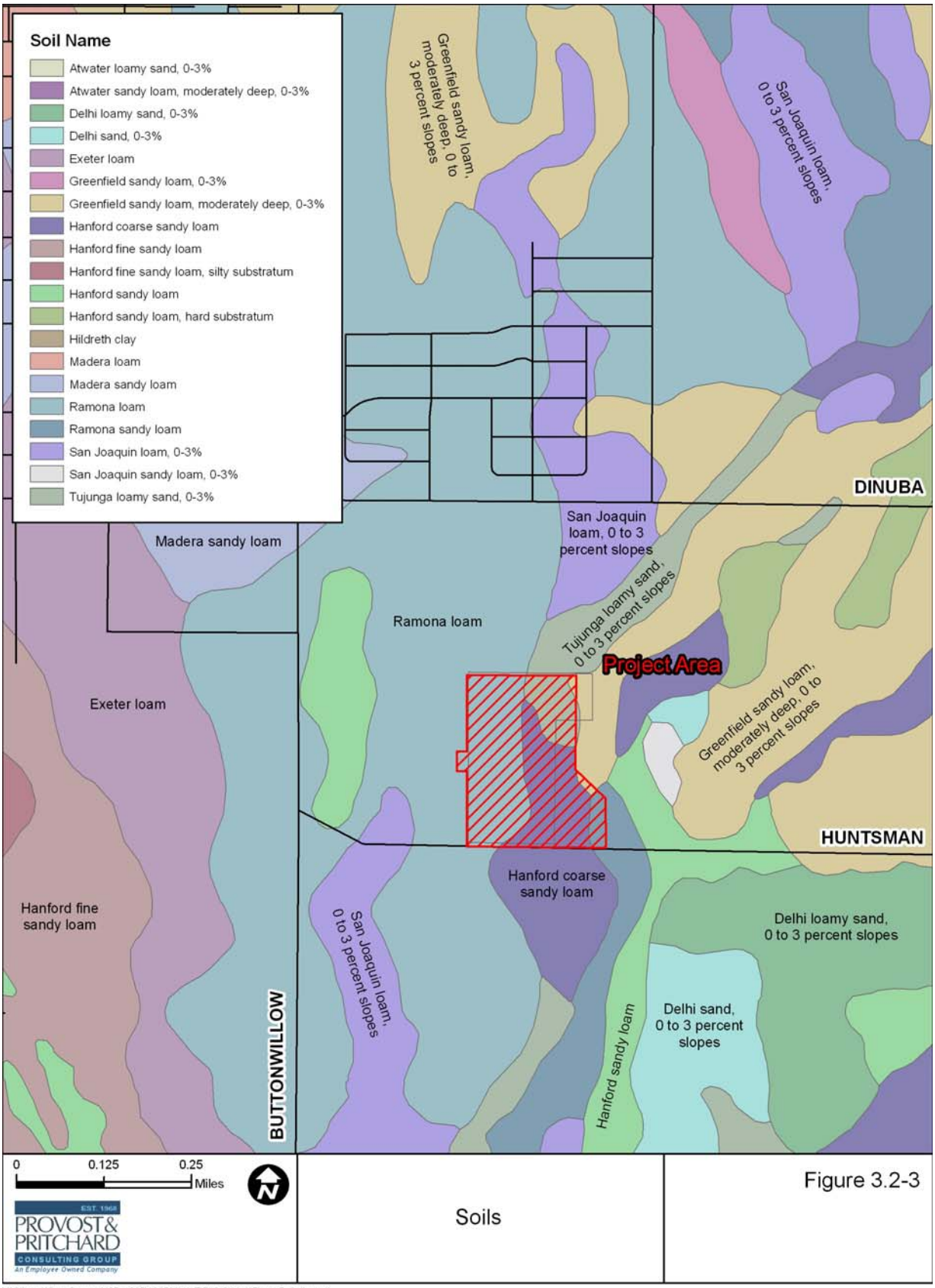
- "Grazing Land" is land on which the existing vegetation is suited to the grazing of livestock.
- "Urban and Built-Up Land" is land that does not fall within an agricultural category and is occupied by structures with a density of at least one structure to one and one-half acres.
- "Other Land" is all other land that does not meet the criteria of any other category.

The project site is located on Ramona loam, Hanford coarse sandy loam, Tujunga loamy sand, and Greenfield sandy loam soils (see Figure 3.2-3). These soils are irrigated orchards, row crops, and alfalfa which have been leveled, drained, and reclaimed with soil amendments.

The State of California is in its third year of drought. While drought conditions exist, the regional water supply available for farming is affected. Currently, the project site and surrounding area are receiving surface and ground waters through the Pine Flat Dam - Kings River system adequate to meet the irrigation needs for agricultural uses. The Alta Irrigation District (ALTAID) serves Fresno County and the City of Reedley with surface water supply. The District oversees the adjacent Travers Creek channel for irrigation purposes in the area. The District operates a "demand" system which allows farmers to order water on or off within the system.


ZUMWALT
M1
DINUBA
City of Reedley
Project Area
BUTTONWILLOW
AE20
HUNTSMAN
Zoning
Open Space
Agriculture
Natural Resources
Commercial
Public Facilities
Manufacturing/Industrial
Low Density Residential
Medium Density Residential
High Density Residential
0
0.1
0.2
Miles
EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company
Zoning
Figure 3.2-1
V:\Clients\KingsCanyonUSD-1965\196509\V1-EIR\GIS\Map\For EIR\Zoning.mxd


DINUBA
Urban and Built-Up Land
Farmland of State Importance
Farmland of Local Importance
Project Area
HUNTSMAN
Prime Farmland
Confined Animal Agriculture
BUTTONWILLOW
Unique Farmland
ENGLEHART
Fresno County
Tulare County
Project Area
Prime Farmland
Farmland of State Importance
Unique Farmland
Farmland of Local Importance
Confined Animal Agriculture
Urban and Built-Up Land
0
0.125
0.25
Miles
EST. 1968
PROVOST & PRITCHARD
CONSULTING GROUP
An Employee Owned Company
Farmland
Figure 3.2-2
V:\Clients\KingsCanyonUSD-1965\196509V1-EIR\GIS\Map\For EIR\Farmland.mxd



Soils

Figure 3.2-3

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Impacts

Impact #3.2.1 – Loss of Farmland, Conversion of Farmland [Evaluation Criteria (a), (c)]

Impact Description and Evaluation

The proposed project will result in the loss of approximately 27 acres of prime farmland. In order to determine the relative significance of this conversion, an agricultural conversion study was done in conformance with the Department of Conservation's Land Evaluation and Site Assessment (LESA) Model.

According to the LESA Model, the land for the project has a rating of 76.81 when land capability classification, Storie Index, project size, water resource availability, and surrounding agricultural lands factors are taken into account. Any score higher than 80, on a scale of 0 to 100, is considered significant. The LESA worksheets and scoring manual are can be seen in Appendix B.

Conclusion

The County's overall land use strategy, as reflected in the Fresno County General Plan (2000), is to minimize impacts to agricultural land through promotion of development in existing urban areas. Other key agricultural policies in the General Plan which address preservation of agricultural resources include allowing the County to condition permits for residential development adjacent to agricultural areas by recording a Right-to-Farm Notice, providing direction for the County to consider establishing several agricultural conservation programs, and establishing an agricultural mitigation fee program to help offset development on agricultural lands. The continued implementation of these adopted policies when applicable, in conjunction with the LESA Model results, determines that any potential impacts to farmland conversion are less than significant.

Mitigation Measures

None are required.

Impact #3.2.2 – Zoning and Williamson Act Contract Conflicts [Evaluation Criteria (b)]

Impact Description and Evaluation

The site is zoned by the County Zoning Ordinance for agricultural use AE-20. The Zoning Ordinance defines the "AE" District as an exclusive district for agriculture and for those uses which are necessary and an integral part of the agricultural operation. The Zoning Ordinance specifies governmental facilities are allowed in the AE District with approval as an Unclassified Conditional Use, pursuant to the Fresno County Zoning Ordinance, §853.B.7. Public facilities are allowed pursuant to §853.B.14 for "public utility and public services, structures, uses and buildings". The County Planning Commission would need to approve a Conditional Use Permit for the proposed development.

The project site is not under a Williamson Act Contract.

Conclusion

The proposed project would be in compliance with the County's land use plans and Zoning Ordinance with an approved Conditional Use Permit. The site is not under a Williamson Act contract. There is no impact.

Mitigation Measures

None are required.

3.3 Air Quality

Introduction

An air quality impact analysis (Appendix C) was conducted to address the impacts of the proposed project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations, including the type and quantity of emissions that would be generated by the construction and operation of the proposed project. The analysis of project emissions focuses on whether the project would cause an exceedance of a State or Federal ambient air quality standard or an exceedance of a threshold set forth by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Impact Evaluation Criteria

Generally, according to Appendix G of the *CEQA Guidelines,* the criteria for evaluating adverse impacts on air quality are:

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

d) Expose sensitive receptors to substantial pollutant concentrations?

e) Create objectionable odors affecting a substantial number of people?

Measures Adopted for the Evaluation of Air Quality Impacts Under CEQA

In order to maintain consistency with CEQA, the SJVAPCD has adopted the Guidelines for Assessing and Mitigating Air Quality Impacts (GAMAQI) to assist applicants in complying with the various requirements. According to the GAMAQI, potentially significant air quality impacts are identified as effects that:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Cause a violation of any air quality standard or substantial contribution to an existing or projected air quality standard;
- Cause a cumulatively considerable net increase of any criteria pollutant for which the project region is designated non-attainment under an applicable Federal or State ambient air quality standard (including emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Cause the creation of objectionable odors that affect a substantial number of people.

The GAMAQI thresholds are designed to implement the general criteria for air quality emissions as encouraged and required in the State CEQA Guidelines. As such, SJVAPCD thresholds provide a means by which the general standards set forth by Appendix G may be used to quantitatively measure the air quality impacts of a specific project.

Measures Based on Ambient Air Quality Impacts

State CEQA Guidelines – Appendix G (Environmental Checklist) states that a project that would "*violate any air quality standard or contribute substantially to an existing or projected air quality violation*" would be considered to create significant impacts on air quality. Therefore, an air quality impact analysis should determine whether the emissions from a project would cause or contribute significantly to violations of the National (NAAQS) or California Ambient Air Quality Standards (CAAQS) when added to existing ambient concentrations.

In order to determine what comprises "significant impact levels" the U.S. EPA has established the federal Prevention of Significant Deterioration (PSD) program to assess whether a project should be required to conduct a detailed cumulative increment analysis in areas deemed to be in attainment with the NAAQS. A project's impacts are considered negligible if emissions are below PSD significant impact levels (SIL) for a particular pollutant. When a SIL is exceeded, an additional "increment analysis" is required. The increment analysis encompasses both the project and certain other existing, proposed, and reasonably foreseeable projects. Incremental increases in deterioration of air quality may be considered minor or insignificant. Emissions impacts below these thresholds are considered insignificant on both a project level and a cumulative level. The projected emissions for the proposed project are significantly below levels that would require analysis under the federal PSD program. Similarly, the San Joaquin Valley Air Basin is classified as non-attainment for the ozone NAAQS and, as such, is subject to "non-attainment new source review" (NSR). PSD SILs and increments are more stringent than the state or NAAQS and represent the most stringent significance criteria. As the project is not considered a "stationary source" under NSR, it will not be subject to either PSD or NSR review.

Measures Used With the Air Quality Attainment Plan

Air quality impacts from proposed projects near Reedley, California are controlled through policies and provisions of the San Joaquin Valley Air Pollution Control District (SJVAPCD), and the City of Reedley and Fresno County General Plans. In order to demonstrate that a proposed project will not cause further air quality degradation in either of the SJVAPCD's plan to improve air quality within the air basin or federal requirements to meet certain air quality compliance goals, each project should also demonstrate consistency with the SJVAPCD's adopted Air Quality Attainment Plans (AQAP) for ozone and PM_{10}. The SJVAPCD is required to submit a "Rate of Progress" document to the California Air Resources Board (CARB) that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The California Clean Air Act (CCAA) requires air pollution control districts with severe or extreme air quality problems to provide for a 5 percent reduction in non-attainment emissions per year. The AQAP prepared for the San Joaquin Valley by the SJVAPCD complies with this requirement. CARB reviews, approves or amends the document and forwards the plan to the U.S. Environmental Protection Agency (U.S. EPA) for final review and approval within the State Implementation Plan (SIP).

Air pollution sources associated with stationary sources are regulated through the permitting authority of the SJVAPCD under the New and Modified Stationary Source Review Rule (SJVAPCD Rule 2201). Owners of any new or modified equipment that emits, reduces or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010). Additionally, best available control technology (BACT) is required on specific types of stationary equipment and such projects are required to offset both stationary source emission increases along with increases in mobile emissions if the specified threshold levels are exceeded (SJVAPCD Rule 2201, 4.7.1). Through this mechanism, all stationary sources within the project area would be subject to the standards of the SJVAPCD to ensure that new developments do not result in net increases in stationary sources of criteria air pollutants.

Measures Used in Areas with Severe Air Quality Issues

Several special interest groups have suggested what has come to be known as the "one-molecule theory". This theory supposes that the addition of even one molecule of a criteria pollutant in a non-attainment air basin would constitute a significant increase. While these groups have attempted to enforce this theory in various jurisdictions, the Court of Appeals has held that CEQA does not require this approach. One court has stated, "the 'one [additional] molecule rule' is not the law" (*Communities for a Better Environment v California Resources Agency* 2002, 103 Cal.App.4th 98, 119). Therefore, the Measures of Significance included in Tables 3.3-1 through 3.3-7 were applied to the subject project to determine the project's level of significance.

Table 3.3-1 Measures of Significance – OZONE (ROG and NOx Emissions)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	10 tons/yr NOx	SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts, August 20, 1998 (Revised January 10, 2002)
	10 tons/yr ROG	
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-3 and 6-4 are implemented as appropriate.

Table 3.3-2 Measures Based on Ambient Air Quality Impacts (NOx)

Agency	Level	Description
CARB	338 µg/m^3	California One-Hour AAQS for NO_2
USEPA	100 µg/m^3	National annual AAQS for NO_2
USEPA	1.0 µg/m^3	Class II significant impact level for PSD
USEPA	25 µg/m^3	Class II increment for PSD

Table 3.3-3 Measures of Significance – CARBON MONOXIDE (CO)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	9 ppm, 8-hr avg	SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts, August 20, 1998 (Revised January 10, 2002)
	20 ppm, 1-hr avg	
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Table 6-4 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	23,000 µg/m^3	California 1-hour AAQS for CO
	10,000 µg/m^3	National and California 8-hour AAQS for CO

Table 3.3-4 Measures of Significance – SULFUR DIOXIDE (SO_2)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Table 6-4 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	655 µg/m^3	California 1-hour AAQS for SO_2
	105 µg/m^3	California 24-hour AAQS for SO_2
USEPA	1,300 µg/m^3	National 3-hr AAQS for SO_2
	80 µg/m^3	National annual AAQS for SO_2
	25 µg/m^3	3-hr Class II significant impact level for PSD
	5 µg/m^3	24 hr Class II significant impact level for PSD
	1.0 µg/m^3	Annual Class II significant impact level for PSD
	512 µg/m^3	3-hr Class II increment for PSD
	91 µg/m^3	24 hr Class II increment for PSD
	50 µg/m^3	Annual Class II increment for PSD

Table 3.3-5 Measures of Significance – RESPIRABLE PARTICULATES (PM_{10})

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-2 and 6-3 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	50 $\mu g/m^3$	California 24 hour AAQS for PM_{10}
	20 $\mu g/m^3$	California Annual AAQS for PM_{10}
USEPA	5 $\mu g/m^3$	24 hr Class II significant impact level for PSD
	1 $\mu g/m^3$	Annual Class II significant impact level for PSD
	30 $\mu g/m^3$	24 hr Class II increment for PSD
	17 $\mu g/m^3$	Annual Class II increment for PSD

Table 3.3-6 Measures of Significance – RESPIRABLE PARTICULATES ($PM_{2.5}$)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-2 and 6-3 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	12 $\mu g/m^3$	California Annual AAQS for $PM_{2.5}$
USEPA	35 $\mu g/m^3$	National 24 hr AAQS for $PM_{2.5}$

Table 3.3-7 Measures of Significance – TOXIC AIR CONTAMINANTS (TACs)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors during operation, then construction impacts are assumed to be *less than significant* when compliance with Regulation VIII is achieved and the control measures of CEQA Appendix G Tables 6-3 and 6-4 are implemented as appropriate.
	10 in one million	Carcinogenic Risk Limit for Maximally Exposed Individual
	Hazard Index >1	Chronic and Acute Hazard Index Risk for Maximally Exposed Individual.

Setting

The project area is located in the San Joaquin Valley Air Basin (Basin) and Fresno County which is included among the eight counties that comprise the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD acts as the regulatory agency for air pollution control in the Basin and is the local agency empowered to regulate air pollutant emissions for the plan area.

The project site is located at an elevation of approximately 341' above mean sea level. Currently the project site is in agriculture production. The project site has agriculture land to the north, east and south with agricultural processing facilities to the west.

Climate

The most significant single control on the weather pattern of the San Joaquin Valley is the semi-permanent subtropical high-pressure cell, referred to as the "Pacific High." During the summer, the

Pacific High is positioned off the coast of northern California, diverting ocean-derived storms to the north. Hence, the summer months are virtually rainless. During the winter, the Pacific High moves southward allowing storms to pass through the San Joaquin Valley. Almost all of the precipitation expected during a given year occurs from December through April. During the summer, the predominant surface winds are out of the northwest. Air enters the Valley through the Carquinez strait and flows toward the Tehachapi Mountains. This up-valley (northwesterly) wind flow is interrupted in early fall by the emergence of nocturnal, down-valley (southeasterly) winds which become progressively more predominant as winter approaches. Wind speeds are generally highest during the spring and lightest in fall and winter. The relatively cool air flowing through the Carquinez strait is warmed on its journey south through the Valley. On reaching the area of the Valley where the proposed project is located, the average high temperature during the summer is nearly 97 degrees Fahrenheit (^{o}F). Relative humidity during the summer is quite low, causing large diurnal temperature variations. Temperatures during the summer often drop into the upper 50s to low 60s. In winter, the average high temperatures reach into the mid-50s and the average low drops to the mid-30s. In addition, another high-pressure cell, known as the "Great Basin High," develops east of the Sierra Nevada Mountain Range during winter. When this cell is weak, a layer of cool, damp air becomes trapped in the basin and extensive fog results. During inversions, vertical dispersion is restricted, and pollutant emissions are trapped beneath the inversion and pushed against the mountains, adversely affecting regional air quality. Surface-based inversions, while shallow and typically short-lived, are present most mornings. Elevated inversions, while less frequent than ground-based inversions, are typically longer lasting and create the more severe air stagnation problems. The winter season characteristically has the poorest conditions for vertical mixing of the entire year.

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the project site is expected to be similar to the data recorded at the Visalia monitoring station. This data is provided in Table 3.3-8 – Visalia Weather Data, which contains average precipitation data recorded at the Visalia monitoring station. Over the 114-year period from 1895 to 2009 (the most recent data available), the average annual precipitation was 10.13 inches.

Table 3.3-8 – Visalia Weather Data

Period of Record Monthly Climate Summary for the Period 2/1/1895 to 4/30/2009													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Maximum Temp (F)	55.9	62.7	68.1	74.8	82.7	91.2	97.7	96.3	90.1	80.3	67.4	56.9	77.0
Average Minimum Temp (F)	36.8	40.8	43.7	47.5	53.0	59.0	63.3	61.5	57.1	50.1	41.6	36.7	49.3
Average Total Precip.(in.)	1.99	1.84	1.73	0.96	0.37	0.08	0.01	0.01	0.14	0.48	0.99	1.54	10.13
Average Snowfall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent of possible observations for period of record: Max. Temp.: 97.4% Min. Temp.: 97.4% Precipitation: 99.3% Snowfall: 97.0% Snow Depth: 96.8%													

Regulatory Setting

Under the provisions of the Federal Clean Air Act, the San Joaquin Valley Air Basin has been classified as non-attainment, attainment, unclassified/attainment or unclassified under the established Federal and State standards. Table 3.3-9 provides the San Joaquin Valley Air Basin's designation and classification based on the various criteria pollutants under both state and federal standards. Table 3.3-10 provides the Federal and California Air Quality Standards.

TABLE 3.3-9 - SJVAB Attainment Status

Pollutant	Federal Standards[a]	State Standards[b]
Ozone, 1 hour	No Federal Standard[f]	Nonattainment/Severe
Ozone, 8 hour	Nonattainment/Serious	Nonattainment
PM10	Attainment[c]	Nonattainment
PM2.5	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing particulates	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.
[d] The Valley is designated nonattainment for the 1997 PM 2.5 federal standards. EPA designations for the 2006 PM 2.5 standards will be finalized in December 2009. The District has determined, as of the 2004-06 PM 2.5 data, that the Valley has attained the 1997 24-Hour PM 2.5 standard.
[e] On April 30, 2007 the Governing Board of the San Joaquin Valley Air Pollution Control District voted to request EPA to reclassify the San Joaquin Valley Air Basin as extreme nonattainment for the federal 8-hour ozone standards. The California Air Resources Board, on June 14, 2007, approved this request. This request must be forwarded to EPA by the California Air Resources Board and would become effective upon EPA final rulemaking after a notice and comment process; it is not yet in effect.
[f] Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked in the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
Sources: SJVAPCD 2008

Table 3.3-10 - Federal & California Standards

		Federal Standards	California Standards
Pollutant	**Averaging Time**	**Concentration**	
Ozone	8 Hour	0.075 ppm (147 µg/m^3)[d]	0.070 ppm (137 µg/m^3)
	1 Hour	[a]	0.09 ppm (180 µg/m^3)
Carbon Monoxide	8 Hour	9 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)
	1 Hour	35 ppm (40 mg/m^3)	20 ppm (23 mg/m^3)
Nitrogen Dioxide	Annual Average	0.053 ppm (100 µg/m^3)	0.030 ppm (56 µg/m^3)
	1 Hour		0.18 ppm (338 µg/m^3)
Sulfur Dioxide	Annual Average	0.03 ppm (80 µg/m^3)	
	24 Hour	0.14 ppm (365 µg/m^3)	0.04 ppm (105 µg/m^3)
	1 Hour		0.25 ppm (655 µg/m^3)
Particulate Matter (PM10)	Annual Arithmetic Mean	[c]	20 µg/m^3
	24 Hour	150 µg/m^3	50 µg/m^3
Fine Particulate Matter (PM2.5)[b]	Annual Arithmetic Mean	15 µg/m^3	12 µg/m^3
	24 Hour	35 µg/m^3	
Sulfates	24 Hour		25 µg/m^3
Lead[e]	Calendar Quarter	1.5 µg/m^3	
	30 Day Average		1.5 µg/m^3
Hydrogen Sulfide	1 Hour		0.03 ppm (42 µg/m^3)
Vinyl Chloride (chloroethene)	24 Hour		0.010 ppm (26 µg/m^3)
Visibility Reducing particles	8 Hour (1000 to 1800 PST)		(See Note 1)

ppm = parts per million mg/m3 = milligrams per cubic meter µg/m ^{3}= micrograms per cubic meter

[a] 1-Hour ozone standard revoked effective June 15, 2005.
[b] The 1997 PM 2.5 standards were replaced by the 2006 PM 2.5 standards, effective December 18, 2006. The 2008 PM 2.5 Plan due to EPA in April 2008 addresses attainment of the 1997 PM 2.5 standards. For this reason, the District continues to list the 1997 24-hour PM 2.5 standard.
[c] Annual PM 10 standard revoked effective December 17, 2006.
[d] EPA finalized the revised (2008) 8-hour ozone standard of 0.075 ppm on March 27, 2008. The 1997 8-hour ozone standard of 0.08 ppm has not been revoked.
[e] On October 15, 2008, EPA strengthened the lead standard.

The SJVAPCD along with the CARB operates an air quality monitoring network that provides information on average concentrations of those pollutants for which state or Federal agencies have established ambient air quality standards. Information from the various monitoring stations is available from the agency web sites. A map of the various monitoring stations in the San Joaquin Valley is provided in Figure 3.3-1.

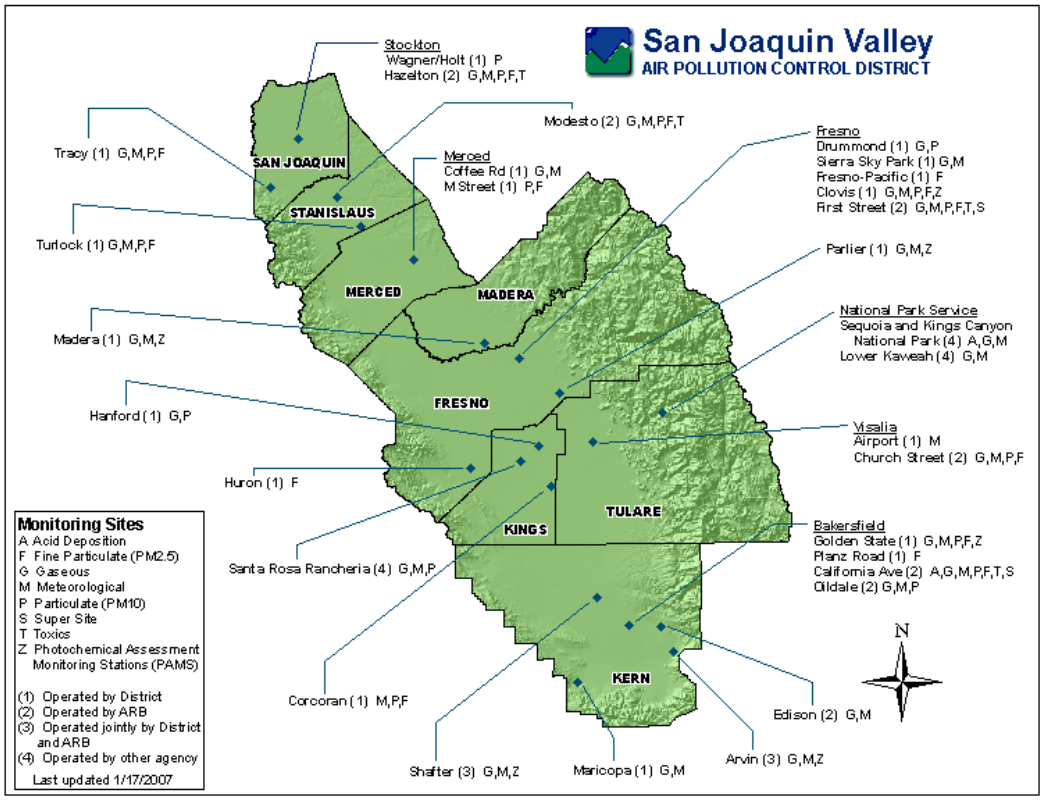


Figure 3.3-1 – San Joaquin Valley APCD Monitoring Network

Existing Air Quality

For the purposes of background data and this air quality assessment, this analysis relied on data collected in the last three years for the CARB monitoring stations that are located in the closest proximity to the project site. Tables 3.3-11 through 3.3-17 provide the background concentrations for ozone, particulate matter of 10 microns (PM_{10}), particulate matter of less than 2.5 microns ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NOx), sulfur dioxide (SO_2), and lead (Pb) as of June 2009. Information is provided for the Fresno – Drummond Street, Fresno – Hamilton and Winery, Fresno – 1st Street, Visalia – N Church Street and Parlier monitoring stations for 2006 through 2008. Additional information for these monitoring stations is also presented in Attachments A, B, C and D of Appendix C. No data is available for Hydrogen Sulfide, Vinyl Chloride or other toxic air contaminants in Fresno County.

Table 3.3-11 - Background Ambient Air Quality Data – Ozone

CARB Air Monitoring Station	Number of Days Exceeding 8-Hour NAAQS (0.075 ppm)			Number of Days Exceeding 8-Hour CAAQS (0.07 ppm)			Maximum 8-Hour Concentration (ppm)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	21	9	20	34	18	36	0.097	0.092	0.112
Visalia – N Church Street	51	31	60	72	56	94	0.096	0.0099	0.121
Parlier	61	30	51	85	54	73	0.107	0.096	0.116

Table 3.3-12 - Background Ambient Air Quality Data – PM_{10}

CARB Air Monitoring Station	Days Exceeding 24-hour NAAQS (150 µg/m^3)			Annual Arithmetic Mean NAAQS (µg/m^3)			Days Exceeding 24-hour CAAQS (50 µg/m^3)			Maximum Concentration (µg/m^3)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	0	0	0	43.3	38.0	40.0	16	10	21	132.0	92.0	98.8
Visalia – N Church Street	0	0	0	47.2	42.6	47.3	26	15	26	145.0	98.0	103.9

Table 3.3-13 - Background Ambient Air Quality Data – $PM_{2.5}$

CARB Air Monitoring Station	Days Exceeding 24-hour NAAQS (35 µg/m^3)			Annual Arithmetic Mean NAAQS (µg/m^3)			Maximum 24-Hour Concentration (µg/m^3)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Hamilton and Winery	13	16	11	17.6	16.8	16.5	87.0	65.1	46.6
Visalia – N Church Street	10	18	17	18.8	20.4	19.8	65.0	71.0	68.2

Table 3.3-14 - Background Ambient Air Quality Data – CO

CARB Air Monitoring Station	Number of Days Exceeding 8-Hour NAAQS (9.0 ppm)			Number of Days Exceeding 8-Hour CAAQS (9.0 ppm)			Maximum 8-Hour Concentration NAAQS (9.0 ppm) CAAQS (9.0 ppm)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	0	0	0	0	0	0	3.31	2.37	2.14
Fresno – 1st Street	0	0	0	0	0	0	3.20	2.60	2.34
NR = Not Reported									

Table 3.3-15 - Background Ambient Air Quality Data – NOx

CARB Air Monitoring Station	Annual Average (ppm)			Number of Days Exceeding CAAQS (0.03 ppm)			Maximum 1-Hour Concentration CAAQS (0.18 ppm)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	0.017	0.016	0.015	0	0	0	0.072	0.067	0.076
Visalia – N Church Street	0.014	0.015	0.014	0	0	0	0.063	0.071	0.077
Parlier	0.011	0.011	0.009	0	0	0	0.062	0.055	0.049
NR = Not Reported									

Table 3.3-16 - Background Ambient Air Quality Data – SOx

CARB Air Monitoring Station	Annual Average NAAQS (0.03 ppm)			Maximum 24-Hour Concentration NAAQS (0.14 ppm) CAAQS (0.04 ppm)		
	2006	2007	2008	2006	2007	2008
Fresno – 1st Street	NR	0.007	0.010	NR	0.067	0.030
NR = Not Reported						

Table 3.3-17 - Background Ambient Air Quality Data – Lead

CARB Air Monitoring Station	Days Exceeding CAAQS 30-day Standard (1.5 µg/m^3)			Calendar Quarter NAAQS (1.5 µg/m^3)			Maximum 30-Day Concentration CAAQS (1.5 µg/m^3)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – 1st Street	NR	NR	NR	NR	NR	NR	NR	NR	NR
NR = Not Reported									

The following is a discussion of the governmentally regulated air pollutants and their recent documented levels in the vicinity of the project area that are expected to be emitted from the construction and operation of the proposed project. Sources and health effects of these air pollutants can be seen in Section 5 of Appendix C.

Ozone (O_3)

The most severe air quality problem in San Joaquin Valley is high concentrations of O_3. High levels of O_3 cause eye irritation and can impair respiratory functions. High levels of O_3 can also affect plants and materials. Particularly vulnerable to O_3 damage are grapes, lettuce, spinach and many types of garden flowers and shrubs. O_3 is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving hydrocarbons (HC) and nitrogen oxides (NOx). Significant O_3 generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April through October comprise the "ozone season." O_3 is a regional pollutant because O_3 precursors are transported and diffused by wind concurrently with the reaction process. The data contained in Table 3.3-11 shows that for the 2006 through 2008 period, the project area exceeded the State one-hour average ambient O_3 standard, and the Federal and State eight-hour average ambient O_3 standards.

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)

Both state and Federal particulates standards now apply to particulates under 10 microns (PM_{10}) rather than to total suspended particulate (TSP), which includes particulates up to 30 microns in diameter. Continuing studies have shown that the smaller-diameter fraction of TSP represents the greatest health hazard posed by the pollutant; therefore, EPA has recently established ambient air quality standards for $PM_{2.5}$. The project area is classified as attainment per the EPA for $PM_{10,}$ while non-attainment for the state for $PM_{10.}$ The project area is classified as non-attainment for $PM_{2.5}$ for both the Federal and State.

The largest sources of PM_{10} and $PM_{2.5}$ in Fresno County are vehicle movement over paved and unpaved roads, demolition and construction activities, farming operations, and unplanned fires. PM_{10} and $PM_{2.5}$ are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during periods of high atmospheric stability and low wind speed.

Table 3.3-12 shows that PM_{10} levels at two monitoring stations regularly exceeded the corresponding 24-hour state ambient standard over the three-year period of 2006 through 2008 but did not exceeded the Federal ambient standards. Table 3.3-13 shows that $PM_{2.5}$ exceedences were recorded over the three-year period of 2006 through 2008 of the Federal 24-hour ambient standards. Similar levels can be expected to occur in the vicinity of the project site.

Carbon Monoxide (CO)

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions prevalent in the valley, CO concentrations may be more uniformly distributed over a broad area. High concentrations of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease, causing fatigue, headaches, and dizziness. Table 3.3-14 shows that CO levels at two Fresno monitoring stations are well below the standards for the three-year period of 2006 through 2008; therefore, the vicinity of the project site is expected to be even lower than levels measured in Fresno.

Nitrogen Dioxide (NO_2)

NO_2 is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of the county's nitrogen oxides (NOx) emissions, most of which is emitted as NO_2. Fresno County has been designated as an attainment/unclassified area for the NAAQS and attainment for the CAAQS for NO_2. In addition, Table 3.3-15 shows that no excesses of the Federal or State NO_2 standards have been recorded at the Fresno, Visalia, or Parlier area-monitoring stations investigated over the three-year period of 2006 through 2008.

Sulfur Dioxide (SO_2)

Fuel combustion for oil and gas production and petroleum refining account for nearly all of the County's SO_2 emissions. Fresno County has been designated as an attainment/unclassified area for the NAAQS attainment for the CAAQS for SO_2. Table 3.3-16 shows one exceedance of the more stringent state air quality standard over the three-year period in Fresno.

Lead (Pb) and Suspended Sulfate

Ambient Pb levels have dropped dramatically due to the increase in the percentage of motor vehicles that run exclusively on unleaded fuel. No ambient Pb levels were taken in Fresno over the three-year period of 2006 through 2008 as demonstrated in Table 3.3-17.

Impacts

Impact #3.3.1 – Short Term Emissions [Evaluation Criteria (b), (c), (d)]

Impact Description and Evaluation

Short-term emissions are primarily related to the grading and construction phases of a project and are recognized to be short in duration and without lasting impacts on air quality.

As the precise construction details about the proposed project were unknown at the time this analysis was conducted, the default equipment provided in URBEMIS along with estimates from the project's architectural firm were used to estimate the (short-term) grading, construction, and paving phase emissions. While emissions from the project are expected to vary substantially from day to day, they are expected to be approximately equal over the course of the construction period. Many variables are factored into the calculation of construction emissions such as length of the construction period, number of each type of equipment, site characteristics, area climate, and construction personnel activities. In order to present the most conservative approach to estimating construction emissions from the project; all equipment was assumed to be in use 6 to 8 cumulative hours per day at full power, which is the URBEMIS default. In reality, much of this equipment will be used significantly less than this due to idling time, operator breaks, equipment breakdowns, etc.

According to the GAMAQI, it is recommended that projects with buildout periods in excess of five (5) years also model the proposed project's emissions at the projected mid-way point. As the subject project is *not* expected to have a buildout of more than five years an additional (intermediate) URBEMIS modeling run is not required for the project. Table 3.3-18 presents the project's unmitigated and mitigated short-term emissions based on the expected full buildout period.

Table 3.3-18 – Short-Term Project Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NOx	CO*	SOx*	PM_{10}	$PM_{2.5}$*
Unmitigated Emissions						
Construction Emissions – 2009	0.06	0.47	0.26	0.00	1.65	0.36
Construction Emissions – 2010	0.61	1.54	1.17	0.00	0.58	0.20
SJVAPCD Annual Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded Before Mitigation?	No	No	-	-	No	-
Mitigated Emissions						
Construction Emissions – 2009	0.06	0.47	0.26	0.00	0.18	0.06
Construction Emissions – 2010	0.58	1.54	1.17	0.00	0.15	0.11
SJVAPCD Annual Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	No	No	-	-	No	-
NOTES: * The SJVAPCD has not established significance thresholds for CO, SOx or $PM_{2.5}$.						

Conclusion

As calculated (see Attachment E of Appendix C) the short-term emissions, for each year of construction, are predicted to be less than SJVAPCD significance threshold levels. Short-term emissions from the project as calculated by URBEMIS, using the default equipment listing would be less than SJVAPCD significance levels. Project short term construction emissions would be less than significant. Although short term emissions would not exceed SJVAPCD standards, mitigation measures are included to ensure that project emissions are minimized.

Mitigation Measure #3.3.1a

As the project shall be completed in compliance with SJVAPCD Regulation VIII, the following dust control measures shall be taken to ensure compliance specifically during grading and construction phases:

- Water previously exposed surfaces (soil) whenever visible dust is capable of drifting from the site or approaches 20% opacity.
- Water all unpaved haul roads a minimum of three-times/day or whenever visible dust from such roads is capable of drifting from the site or approaches 20% opacity.
- Reduce speed on unpaved roads to less than 15 miles per hour.
- Install and maintain a track out control device that meets the specifications of SJVAPCD Rule 8041 if the site exceeds 150 vehicle trips per day or more than 20 vehicle trips per day by vehicles with three or more axles.
- Stabilize all disturbed areas, including storage piles, which are not being actively utilized for production purposes using water, chemical stabilizers or by covering with a tarp or other suitable cover.
- Control fugitive dust emissions during land clearing, grubbing, scraping, excavation, leveling, grading, or cut and fill operations with application of water or by presoaking.
- When transporting materials offsite, maintain a freeboard limit of at least 6 inches and cover or effectively wet to limit visible dust emissions.
- Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and use of blowers is expressly forbidden).
- Stabilize the surface of storage piles following the addition or removal of materials using water or chemical stabilizer/suppressants.
- Remove visible track-out from the site at the end of each workday.
- Cease grading or other activities that cause excessive (greater than 20% opacity) dust formation during periods of high winds (greater than 20 mph over a one-hour period).

Mitigation Measure #3.3.1b

The GAMAQI guidance document lists the following measures as approved and recommended for construction activities. These measures shall be required to ensure that the proposed project emissions do not exceed District thresholds:

- Maintain all construction equipment as recommended by manufacturer manuals.
- Shut down equipment when not in use for extended periods.
- Construction equipment shall operate no longer than eight (8) cumulative hours per day.
- Use electric equipment for construction whenever possible in lieu of diesel or gasoline powered equipment.
- Curtail use of high-emitting construction equipment during periods of high or excessive ambient pollutant concentrations.
- All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions.
- On-Road and Off-Road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
- On-Road and Off-Road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.
- All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
- All construction activities within the project area shall be discontinued during the first stage smog alerts.
- Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).

Effectiveness of Mitigation Measure

Implementation of the above mitigation measures would ensure that any potentially significant impacts would remain less than significant.

Implementation and Monitoring

Kings Canyon Unified School District shall be responsible for implementation and monitoring shall be the responsibility of the SJVAPCD.

Impact #3.3.2 – Long Term Emissions
[Evaluation Criteria (b), (c), (d)]

Long-term emissions are related to the activities that will occur indefinitely because of project operations and are the primary focus of the SJVAPCD and of this analysis. Long-term emissions are caused by operational (mobile) sources and area (heating, cooling and structural) sources. The greatest of these emissions impacts emanate from mobile sources traveling to and from the project area. Although emissions from existing mobile equipment will be occurring prior to completion of the proposed project, these long-term emissions will cease at the existing locations and start at the new location with the completion of construction. Therefore, in order to get a true representation of the impact of the project current operational emissions were calculated and compared to the new project operational emissions to determine the incremental increase this project will cause. Long-term emissions will consist of primarily fugitive dust emissions and equipment and vehicle exhaust.

Fugitive Dust Emissions

Operation of the project site at full buildout is not expected to present a significant source of fugitive dust (PM_{10}) emissions. The main source of PM_{10} emissions will be from vehicular traffic associated with project operations.

PM_{10} generated as a part of fugitive dust emissions, as noted by the regulatory agencies, pose a potentially serious health hazard, alone or in combination with other pollutants. Control measures required and enforced by the SJVAPCD under Regulation VIII will assist in minimizing these emissions to

a less than significant level. The following SJVAPCD Rules and Regulations apply to the control of fugitive dust from the proposed project:

- Rule 4102 - Nuisance
- Rule 8011 - General Requirements
- Rule 8021 - Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities
- Rule 8041 - Carryout and Trackout
- Rule 8051 - Open Areas

Compliance with applicable SJVAPCD Rules and Regulations, the local zoning codes, and additional mitigation measures required in this analysis will reduce PM_{10} fugitive dust emissions even further to ensure that the project's emissions remain at a "*less than significant*" level.

Equipment and Vehicle Exhaust

Exhaust emissions from this project include emissions produced on-site as consumers, employees, and residences travel to and from the site (see Table 3.3-19). Emitted pollutants include CO, ROG, NOx, SOx, and PM_{10}.

Exhaust emissions will vary from day to day. The variables factored into estimating total project emissions include: level of activity, site characteristics, weather conditions, and predicted number of residents.

Table 3.3-19 – Emissions Sources

Emissions Source	Service and Pollutants
Facility Buildings[1]	Air conditioning and heating system as well as water heater emissions will occur from the manufacturing facility. While most of the facility will operate with electrical power, minor sources of combustion are used for these incidental items. Criteria pollutant emissions will consist of ROG, NOx, CO, SO_2 and PM_{10}.
Vehicles[1]	Delivery and employee vehicles will be used to transport product and employees to and from the facility. Criteria pollutant emissions will consist of ROG, NOx, CO, SO_2 and PM_{10}.
NOTES: [1] Emissions factors and emissions were based on URBEMIS.	

The emissions from this project were evaluated based on the incremental difference between the current location of the facility and the new facility location. If the proposed project is approved using, at a minimum, the mitigation measures identified, this project is expected to have the long-term air quality impacts shown in the Table 3.3-20.

Table 3.3-20 – Long-Term Incremental Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	**NOx**	**CO***	**SOx***	**PM_{10}**	**$PM_{2.5}$***
Baseline						
Direct Exhaust Emissions	0.06	0.41	0.31	0.00	0.02	0.02
Indirect Exhaust Emissions	0.71	14.96	6.34	0.02	0.50	0.46
Area Source Emission[1]	0.00	0.00	0.00	0.00	0.00	0.00
Baseline Total	**0.77**	**15.37**	**6.65**	**0.02**	**0.52**	**0.48**
Project Emissions						
Direct Exhaust Emissions	0.08	0.56	0.43	0.00	0.03	0.03
Indirect Exhaust Emissions	0.98	20.95	10.28	0.03	0.69	0.64
Area Source Emission	0.05	0.03	0.31	0.00	0.00	0.00
Project Total	**1.11**	**21.53**	**11.03**	**0.03**	**0.73**	**0.67**
Total Mitigated Incremental Increase Long-Term Emissions[2]	**0.34**	**6.16**	**4.38**	**0.01**	**0.21**	**0.19**
SJVAPCD Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	**No**	**No**	-	-	No	-

NOTES:
[1] Since current facilities will not be demolished and continue to be used in some capacity the baseline area emissions will be zero.
[2] Numbers may not add due to rounding by the URBEMIS for Windows 9.2.4 Model.
* The SJVAPCD has not established significance thresholds for CO, SOx or $PM_{2.5}$.

Conclusion

As calculated (see Attachment E of Appendix C), the mitigated long-term operational (mobile) and area source emissions associated with the proposed project would be *less than* SJVAPCD threshold levels and would, therefore*, not pose a significant impact.* Although long term emissions would not exceed SJVAPCD standards, mitigation measures are included to ensure that project emissions are minimized.

Mitigation Measure #3.3.2

The following mitigation measures are recommended to further reduce the potential for long-term project emissions. These measures shall be required to ensure that the proposed project emissions are not exceeded:

- Installation of a 1.2 MW Solar Collection and Charging System.
- Replacing older diesel vehicles with CNG vehicles.
- The project design shall comply with standards set forth in Title 24 of the Uniform Building Code to minimize total consumption of energy.
- Applicants shall be required to comply with applicable mitigation measures in the Air Quality Attainment Plan, District Rules, Traffic Control Measures, Regulation VIII and Indirect Source Rules for the SJVAPCD.
- The developer shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient.
- The applicant shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of:
    - Rapid cure cutback asphalt;
    - Medium cure cutback asphalt;

- Slow cure cutback asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.3); or Emulsified asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.4).
- The developer shall comply with applicable provisions of SJVAPCD Rule 9510 (Indirect Source Review).

Effectiveness of Mitigation Measure

Implementation of the above mitigation measures would ensure that any potentially significant impacts would remain less than significant.

Implementation and Monitoring

Kings Canyon Unified School District shall be responsible for implementation and monitoring shall be the responsibility of the SJVAPCD.

Impact #3.3.3 – Potential Impacts to Sensitive Receptors [Evaluation Criteria (d)]

Impact Description and Evaluation

Based on the emissions impacts expected, the proposed project is not expected to affect sensitive receptors. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. The nearest sensitive receptors to the project site are listed in Table 3.3-21.

Table 3.3-21 – Sensitive Receptors Located ≤ 2 Miles from Project

Receptor	Type of Facility	Distance from Project (miles)	Direction from Project
Monte View School	1-12 Public	0.96	NW
Jefferson Elementary School	K-5 Public	1.07	NW
Aly's Angles Day Care	Daycare	1.27	NW
YMCA	Daycare	1.43	NW
General Grant Middle School	6-8 Public	1.51	NW
Lincoln Elementary School	K-5 Public	1.64	NW
Chapter One School	Daycare	1.68	NW
Kids Corner After School Program	Daycare	1.69	NW
Washington Elementary School	K-5 Public	1.70	NW
Palm Village Retirement Community	Nursing Home	1.75	W
Cym Learning Center	Daycare	1.84	NW
Immanual Schools	K-12 Private	1.85	NW
St La Salle Elementary School	PK-8 Public	1.86	NW

Therefore, based on the predicted emissions from the project during both intermediate and completion phases, the project is *not expected to have any adverse impacts on any known sensitive receptor*.

Conclusion

The impact would be less than significant.

Mitigation Measure

None are required.

Impact #3.3.4 – Health Risk Impacts
[Evaluation Criteria (d)

Impact Description and Evaluation

As noted previously, the GAMAQI recommends that Lead Agencies also consider the situations wherein a new or modified source of hazardous air pollutants (HAPs) is proposed for a location near an existing residential area or other sensitive receptor when evaluating potential impacts related to HAPs. The proposed facility will result in emissions of HAPs and will be located near existing residences and businesses; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed project is required.

Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Similarly, predicted concentrations were used to calculate non-cancer chronic hazard indices (HIs), which are the ratio of expected exposure to acceptable exposure. Individuals at businesses are not subject to a continuous exposure over a 70-year lifetime; therefore worker exposure duration for cancer risk may be adjusted to HARP default worker exposure assumptions.

The basis for evaluating potential health risk is the identification of sources of hazardous air pollutants. Diesel exhaust particulate matter has been identified as a hazardous air pollutant with the potential to produce carcinogenic and non-cancer chronic health impacts. Gasoline pumps operation's emissions have been identified as a hazardous air pollutant with the potential to produce carcinogenic and non-cancer chronic and acute health impacts. Therefore, diesel exhaust particulate matter emissions from the on-site travel of heavy-duty diesel vehicles and gasoline pump emissions from the filling station operations were evaluated.

Health risk is determined using the Hotspots Analysis and Reporting Program (HARP) software distributed by the California Air Resources Board, which requires annual-averaged emission rates for each modeling source to estimate carcinogenic and non-cancer chronic and acute health impacts. The modeled emission rates were based on the estimated number of vehicles, the on-site distance of travel, five minutes of idling per vehicle, gasoline pump operations and SJVAPCD-approved emission factors. Annual emissions for truck travel, idling, and gasoline pump operations are provided in Attachment F of Appendix C.

The most recent version of EPA's AMS/EPA Regulatory Model - AERMOD (recompiled for the Lakes ISC-AERMOD View interface) was used to predict the dispersion of emissions from the proposed project. All of the regulatory default AERMOD model keyword parameters were employed. Elevated terrain options were not employed due to the lack of complexity of the project area terrain in the specified model domain. Structure-induced downwash was included in the air dispersion modeling. AERMOD was used to generate ambient concentrations for the 1-hour, 4-hour, 6-hour, monthly and annual periods. Diesel combustion emissions from the diesel vehicles traveling were modeled as area sources with a point source representing the location where idling emissions may occur and two point sources and two volume sources were used to represent the gasoline refueling operations. SJVAPCD-approved release parameters were employed. Unit emission rates of 1 g/sec for the volume and point sources were input to AERMOD. A total of 561 receptors were modeled in order to assess risk to the nearest receptors. An SJVAPCD AERMET-processed meteorological data set for the Fresno Airport (2004-2008) was input to the AERMOD model. Rural dispersion parameters were used because the operation and the majority of the land surrounding the facility is considered "rural" under the Auer land use classification method. The facility boundary, emission sources and coordinate locations for each of the modeled receptors can be seen in Figure 3.3-2.

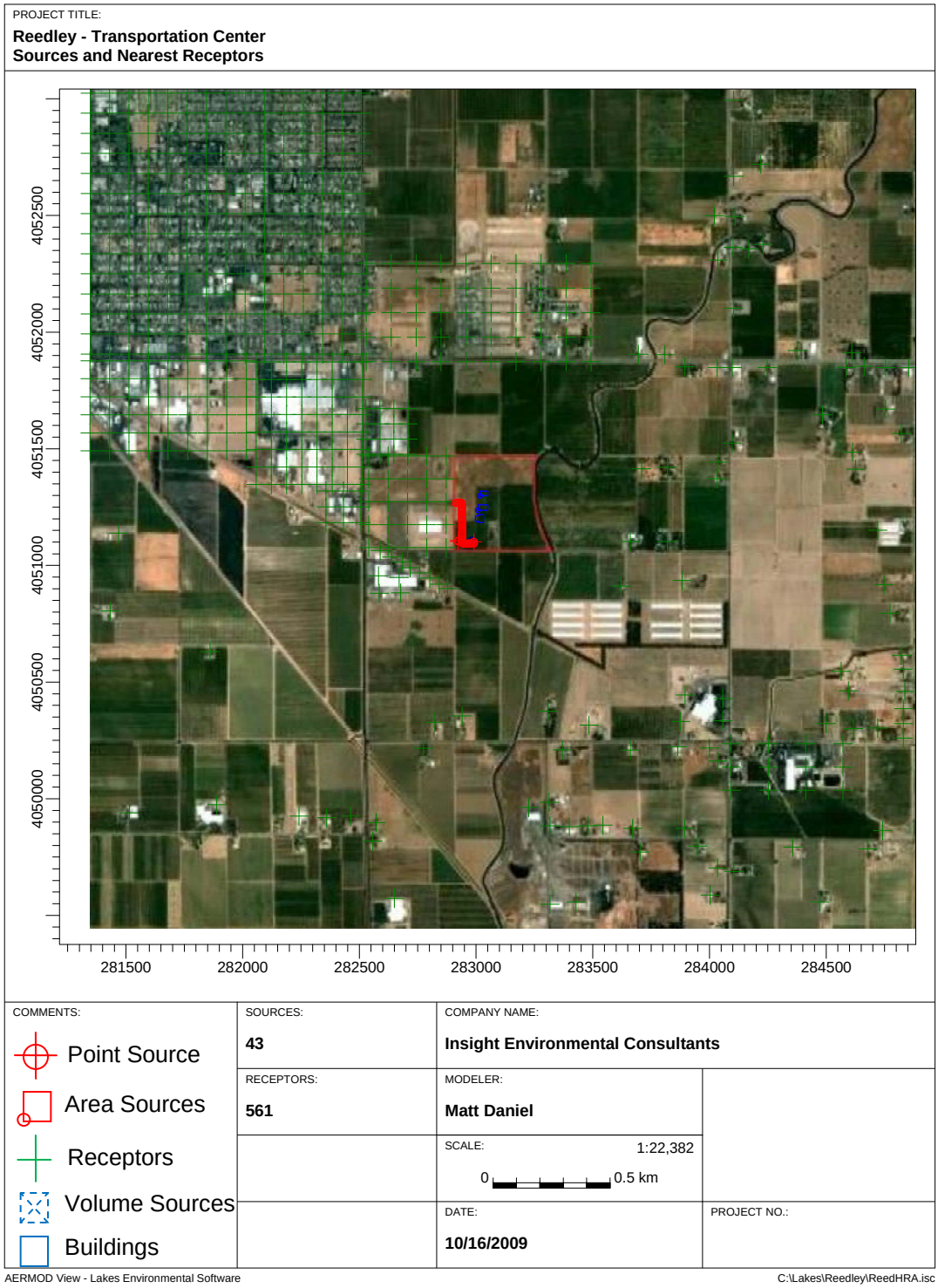


Figure 3.3-2 – Predicted Health Risk Modeled Receptors Impacts

Plot files generated by AERMOD were imported to HARP ONRAMP software wherein pollutant-specific emission rates were assigned to adjust the AERMOD-predicted air concentrations calculated with unit emission rates. HARP ONRAMP was used to generate source, X/Q and emission import files for HARP.

HARP post-processing was used to assess the potential for excess cancer risk and chronic non-cancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA) are used in the HRA. Risk reports were generated using the derived OEHHA analysis method for carcinogenic risk and non-carcinogenic chronic risk. Site parameters are included in the HARP output files. Total cancer risk was predicted for inhalation and non-inhalation pathways at each receptor. A hazard index was computed for chronic and acute non-cancer health effects for each applicable endpoint and each receptor. SJVAPCD has set the level of significance for carcinogenic risk to ten in one million, which is understood as the possibility of causing ten additional cancer cases in a population of one million people. The level of significance for chronic and acute non-cancer risk is a hazard index of 1.

The carcinogenic risk and the health hazard index (HI) for chronic and acute non-cancer risk at all of the modeled receptors do not exceed the significance levels of less than ten in one million (10×10^{-6}) and 1, respectively except for one business receptor. Therefore, the application of HARP default worker exposure assumptions to reduce continuous exposure to less than a 70-year lifetime was not necessary for the business receptors. The risk predicted by HARP for the potential maximum impacts, as identified by receptor number, type, risk and location, are provided in Table 3.3-22.

Table 3.3-22 - Potential Maximum Impacts Predicted By HARP

	Receptor	Value	UTM East	UTM North	Pathway
Excess Cancer Risk[a]	332	5.10E-06	282872	4071175	Inhalation
Chronic Hazard Index[b]	332	2.47E-03	282872	4071175	Respiratory System
Acute Hazard Index[b]	327	1.99E-04	282872	4051077	Respiratory System

[a] Based on continuous, 70-year residential exposure for the residential receptors and default worker exposure assumptions for all business receptors.
[b] Based on continuous, 70-year residential exposure for the most sensitive receptor.

As shown above in Table 3.3-22, the maximum predicted cancer risk for the facility is 5.10E-06. The maximum chronic and acute non-cancer hazard indexes are 2.47E-03 and 1.99E-04 respectively. Cancer risk and chronic and acute non-cancer risk are attributable to emissions of diesel exhaust particulate matter from the on-site travel of heavy-duty vehicles and gasoline pump operation emissions.

It should be noted that the health risk results presented herein were produced by following extremely conservative analysis methods that most likely represent an overestimate of potential health impacts.

Conclusion

In accordance with the GAMAQI, the potential health risk attributable to the proposed project is determined to be *less than significant* based on the following conclusions:
Potential chronic carcinogenic risk from the proposed project is *below* the significance level of ten in a million at each of the modeled receptors; and
The hazard index for the potential chronic non-cancer risk from the proposed project is *below* the significance level of one at each of the modeled receptors.

Mitigation Measure

None are required.

Impact #3.3.5 – Impacts to the Ambient Air Quality [Evaluation Criteria (a)]

Impact Description and Evaluation

An ambient air quality analysis was performed to determine if the proposed project has the potential to impact ambient air quality through a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. The basis for the analysis is dispersion

modeling, the project's specifications described in previous sections and the project's long-term air quality impacts shown in the Table 3.3-20.

The maximum off-site ground level concentration of each pollutant for the 1-hour, 3-hour, 8-hour, 24-hour and annual periods was predicted using the most recent version of EPA's AMS/EPA Regulatory Model (AERMOD) dispersion software under the Lakes Environmental ISC-AERMOD View interface. An approved pre-processed AERMET meteorological data set for the Fresno area (2004-2008) was supplied by the SJVAPCD for input to the AERMOD model. All of the regulatory default AERMOD model keyword parameters were employed. Rural dispersion parameters were used for this project, which differs from the urban setting used in the URBEMIS model. The URBEMIS selection criteria is based on trip distances to the project site and the AERMOD selection criteria is based on the majority of the land use surrounding the facility. The majority of the land surrounding the project site is considered "rural" under the Auer land use classification method.

Emissions were evaluated for each pollutant on a short-term (correlating to pollutant averaging period) and long-term (annual) basis, with the exception of CO that was evaluated only for short-term exposures. Emissions were modeled as an area source with a release height of 1.0 meters.

A fenceline coordinate grid of receptor points was constructed. The grid consisted of a 25-meter fenceline spacing and 25-meter tier spacing extending a distance of 100 meters with initial receptors starting 25-meters from the facility boundary. Elevated terrain options were not employed due to the lack of complex terrain in the project area.

The results of the air dispersion modeling, presented in Table 3.3-23, demonstrate that the maximum impacts attributable to the project, when considered in addition to the existing background concentrations, are below the applicable ambient air quality standard for NO_x, SO_x and CO. The AERMOD output files are provided in the appendices.

Table 3.3-23 - Predicted Ambient Air Quality Impacts

Pollutant	Averaging Period	Background (μg/m3)	Project (μg/m3)	Project + Background (μg/m3)	NAAQS (μg/m3)	CAAQS (μg/m3)	PSD SIL (μg/m3)
NO2	1-hour	7.80E-02	2.73E+02	2.73E+02	---	470	0
	Annual	2.10E-02	8.93E+00	8.95E+00	100	---	1
SO2	1-hour	3.00E-02	5.90E-01	6.20E-01	---	655	0
	3-hour	1.50E-02	2.45E-01	2.60E-01			25
	24-hour	5.00E-03	8.24E-02	8.74E-02	---	105	5
	Annual	2.00E-03	1.93E-02	2.13E-02	80	---	1
CO	1-hour	3.20E+00	2.59E+02	2.62E+02	40,000	23,000	2000
	8-hour	2.10E+00	7.84E+01	8.05E+01	10,000	10,000	500
PM10	24-hour	1.07E+02	1.73E+00	1.09E+02	150	50	10.4*
	Annual	4.30E+01	4.06E-01	4.34E+01	---	20	NA*
PM2.5	24-hour	7.51E+01	1.57E+00	7.67E+01	35	---	10.4*
	Annual	1.87E+01	3.67E-01	1.91E+01	15	12	NA*

* District recommended significant impact level in lieu of PSD levels. If the 24-hour averaging period passes then it is accepted that the Annual averaging period also passes.

Pre-project concentrations of PM_{10} and $PM_{2.5}$ exceed their respective ambient air quality standards. PM_{10} is evaluated in accordance with the SJVAPCD recommended significant impact level (SIL) for fugitive PM_{10} emissions of 10.4 $\mu g/m^3$. It is the District's policy to use significant impact levels to determine whether a proposed new or modified source will cause or contribute significantly to an AAQS or PSD increment violation. If a project's maximum impacts are below the District or PSD SIL, the project is judged to not cause or contribute significantly to an AAQS or PSD increment violation. A comparison of the proposed impact from the project to the District and PSD SIL values is provided in Table 3.3-22. The modeled PM_{10} impacts directly attributable to the project are *below the District's significance levels*.

Pre-project concentrations of $PM_{2.5}$ also exceed the ambient air quality standard. The U.S. Environmental Protection Agency proposed to adopt key elements of the PSD program for $PM_{2.5}$, including three options for developing SILs for $PM_{2.5}$. The original comment period was extended to January 21, 2008. Until a SIL is adopted for $PM_{2.5}$, pursuant to District's guidance the PM_{10} program is to be used as a surrogate. A comparison of the proposed impact from the project to the District and PSD SIL values is provided in Table 3.3-22. The modeled $PM_{2.5}$ impacts directly attributable to the project are *below the District's significance levels*.

Conclusion

The impact would be less than significant.

Mitigation Measure

None are required.

Impact #3.3.6 – Potential Impacts to Air Quality Attainment Plan [Evaluation Criteria (a)]

Impact Description and Evaluation

State CEQA Guidelines and the Federal Clean Air Act (Sections 176 and 316) contain specific references on the need to evaluate consistencies between the proposed project and the applicable Air Quality Attainment Plan (AQAP) for the project site. To accomplish this, CARB has developed a three-step approach to determine project conformity with the applicable AQAP:

1. *Determination that an AQAP is being implemented in the area where the project is being proposed*. The SJVAPCD has implemented the current, modified, AQAP as approved by the CARB. The current AQAP is under review by the U.S. EPA.
2. *The proposed project must be consistent with the growth assumptions of the applicable AQAP*. The proposed project is included within the population and commercial property increases projected in the City of Reedley and Fresno County General Plans.
3. *The project must contain in its design all reasonably available and feasible air quality control measures*. The proposed project incorporates various policy and rule-required implementation measures that will reduce related emissions.

The CCAA and AQAP identify transportation control measures as methods to further reduce emissions from mobile sources. Strategies identified to reduce vehicular emissions such as reductions in vehicle trips, vehicle use, vehicle miles traveled, vehicle idling and traffic congestion, can be implemented as control measures under the CCAA as well. Additional measures may also be implemented through the building process such as providing electrical outlets on exterior walls of structures to encourage use of electrical landscape maintenance equipment or measures such as electrical outlets for electrical systems on diesel trucks to reduce or eliminate idling time.

As the growth represented by the proposed project was anticipated by the City of Reedley and Fresno County General Plans and incorporated into the AQAP, conclusions may be drawn from the following criteria:

1. The findings of the analysis conducted using Traffic Analysis Zones show that sufficient employment increase is planned for the project area;
2. The proposed emissions from the project are by definition below the SJVAPCD's established emissions impact thresholds;
3. The primary source of emissions from the project will be vehicular traffic that are licensed through the State of California and whose emissions are already incorporated into the CARB's San Joaquin Valley Emissions Inventory.

Based on these factors, the project is *consistent with the AQAP*.

Conclusion

The impact would be less than significant.

Mitigation Measure

None are required.

Impact #3.3.7 – Potential Odor Impacts
[Evaluation Criteria (e)]

Impact Description and Evaluation

The San Joaquin Valley Air Pollution Control District's (SJVAPCD) GAMAQI states that an evaluation "*should be conducted for both of the following situations: 1) a potential source of objectionable odors is proposed for a location near existing sensitive receptors, and 2) sensitive receptors are proposed to be located near an existing source of objectionable odors.*" The criteria for this evaluation are based on the Lead Agency's determination of the proximity to one another of the proposed project and the sensitive receptors. The SJVAPCD identifies a sensitive receptor as a location where human populations, especially children, senior citizens and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e. the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors. As shown in Table 3.3-21, there are sensitive receptors that are in relative close proximity (within a two mile radius) to the project area.

Based on the provisions of the SJVAPCD's GAMAQI, the proposed project is not considered a source of objectionable odors or odorous compounds. Furthermore, there does not appear to be any significant source of objectionable odors in close proximity that may adversely impact the project site when it is in operation. Additionally, the dispersion modeling presented in this analysis indicates that emissions from the project site will not adversely impact surrounding receptors. As such, the proposed project is not expected to be a source of any odorous compounds nor will it likely be impacted by any odorous source.

Conclusion

The impact would be less than significant.

Mitigation Measure

None are required.

3.4 Biological Resources

Introduction

The natural vegetation communities of the central and southern San Joaquin Valley historically supported a diverse assemblage of plant and animal species. This section identifies and addresses potential project-related effects on special-status animal and plant species that could potentially be present on the project site.

Impact Evaluation Criteria

Public Resources Code Section 21001(c) finds and declares that it is the policy of the State to prevent the elimination of fish or wildlife species due to human activities, ensure that fish and wildlife populations do not drop below self-sustaining levels, and preserve for future generations representations of all plant and wildlife communities and examples of the major periods of California history. In addition, Section 15065(a) of the CEQA Guidelines states that a project may have a significant effect on the environment if it has the potential to substantially reduce the habitat of a fish or wildlife species or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species.

In further definition of these described potential impacts, pertinent criteria for evaluation of biological resources impacts are included in Appendix G of the CEQA Guidelines as:

Would the project:

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*

c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

In the evaluation process, it is noted that Section 15380 of the CEQA Guidelines defines endangered, rare or threatened species as follows:

1. *"Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, over-exploitation, predation, competition, disease, or other factors; or*
2. *"Rare" (all animals designated as rare by the Fish and Game Commission prior to January 1, 1985, were automatically reclassified as threatened by Fish and Game Code Sec. 2067) when either:*
   a) *Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or*
   b) *The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.*

c) *A species of animal or plant shall be presumed to be endangered, rare or threatened, if it is listed in:*
   1) *Sections 670.2 or 670.5, Title 14, California Administrative Code of Regulations; or*
   2) *Title 50, Code of Federal Regulations Sections 17.11 or 17.2 pursuant to the Federal Endangered Species Act as rare, threatened, or endangered.*

d) *A species not included in any listing identified in subsection (c) shall nevertheless be considered to be rare or endangered if the species can be shown to meet the criteria in subsection (b).*

e) *This definition shall not include any species of the Class Insecta which is a pest whose protection under the provisions of CEQA would present an overwhelming and overriding task to man as determined by:*
   1) *The Director of Food and Agriculture with regard to economic pests; or*
   2) *The Director of Health Services with regard to health risks.*

Regulatory Framework

Federal

Federal Endangered Species Act

Under the Federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce jointly have the authority to list a species as threatened or endangered (16 USC 1533 (c)). Pursuant to requirements of FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed or proposed species may be present in the project region and determine whether the proposed project would have a potentially significant impact on such species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under FESA or result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536(3), (4)). Project-related impacts to these species or their habitats would be considered “significant.” The “take” prohibition of the FESA prohibits any action that adversely affects a member of an endangered or threatened species.

Section 4(a)(3) and (b)(2) of the FESA requires the designation of critical habitat to the maximum extent possible and prudent based on the best available scientific data and after considering the economic impacts of any designations. Critical habitat is defined in section 3(5)(A) of the FESA as (1) areas within the geographic range of a species that are occupied by individuals of the species and contain the primary constituent elements (physical and biological features) essential to the conservation of the species, thus warranting special management consideration or protection, and (2) areas outside of the geographic range of a species at the time of listing but that are considered essential to the conservation of the species.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) (16 U.S.C., Sec. 703, Supp. I 1989) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. Bird species and their nests that occur within the proposed project area would be protected under MBTA.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), the California Department of Fish and Game (CDFG) is responsible for maintaining a list of threatened and endangered species (California Fish and Game Code 2070), candidate species, and species of special concern. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state listed endangered or threatened species may be present on the project region and determine whether the proposed project would have a potentially significant impact on such species. In addition, the CDFG encourages informal consultation on any proposed project that may impact a candidate species. If there were project-related impacts to species on the CESA threatened and endangered list, they would be considered “significant”. Impacts to “species of concern” would be considered “significant” under certain circumstances, discussed below.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants or animals. This section was included in the CEQA Guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not yet been listed by either the USFWS or CDFG. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

California Department of Fish and Game Code

Fully-Protected Species

The California Fish and Game Code provides protection from "take" for a variety of species that possess "fully-protected species" status. Fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Bird and Nest Protection

Section 3503 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests. Birds of prey are protected in California under the State Fish and Game Code, Section 3503.5 1992). Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Project impacts to these species would not be considered "significant" in this EIR unless they are known or have a high potential to nest on the site or rely on it for primary foraging.

Wetland Regulations

U.S. Army Corps of Engineers

Wetlands and other waters, e.g., rivers, streams and natural ponds, are a subset of "waters of the U.S." and receive protection under Section 404 of the Clean Water Act (CWA). The U.S. Army Corps of Engineers (USACE) has primary federal responsibility for administering regulations that concern waters and wetlands on the project site under statutory authority of the CWA (Section 404). In addition, the regulations and policies of various federal agencies (e.g., U.S. Department of Agriculture, and Natural Resource Conservation Service [NRCS], USEPA) mandate that the filling of wetlands be avoided to the extent feasible. The USACE requires obtaining a permit if a project proposes placing structures within navigable waters and/or alteration of waters of the United States.

The term "waters of the United States" as defined in Code of Federal Regulations (33 CFR 328.3[a] and [b]; 40 CFR 230.3[s]) includes those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. In extant regulations, these may be taken to be sloughs, wet meadows, or natural ponds; however, the Supreme Court of the United States recently ruled (January 8, 2001: *Solid Waste Agency of Northwestern Cook County (SWANCC) v. United State Army Corps of Engineers et al.)* that certain isolated wetlands do not fall under the jurisdiction of the CWA.

Based on the Supreme Court ruling (SWANCC), non-navigable, isolated, intrastate waters are no longer defined as waters of the United States. Jurisdiction of non-navigable, isolated, intrastate waters may be possible if their use, degradation, or destruction could affect other waters of the Unites States, or interstate or foreign commerce. Jurisdiction over such other waters is analyzed on a case-by-case basis. Impoundments of waters, tributaries of waters, and wetlands adjacent to waters should be analyzed on a case-by-case basis.

A more recent Supreme Court case, Rapanos v. United States (2006), also questioned the definition of "waters of the United States" and the scope of federal regulatory jurisdiction over such waters, but left open the question as to whether the CWA extends to those waters and wetlands that have a "significant nexus" to navigable waters of the United States, or whether it is limited to waters with a continuous

connection. The implications of this ruling are still being tested in the courts. For example, the California Ninth Circuit Court of Appeals decision, in Northern California River Watch v. City of Healdsburg (August 10, 2006), relied on the "significant nexus" definition, an interpretation that suggests little change in the scope of the CWA. To date, neither the USEPA nor the USACE have issued guidelines as to how to implement the CWA in light of these latest rulings. In practice, USACE jurisdictional authority remains as it was prior to Rapanos, although the potential exists for changes in the future based on Court decisions and pending regulatory guidance.

Central Valley Regional Water Quality Control Board

Under Section 401 of the federal CWA, the Central Valley Regional Water Quality Control Board (RWQCB) must certify that actions receiving authorization under section 404 of the CWA also meet state water quality standards. The RWQCB also regulates waters of the state under the Porter-Cologne Act Water Quality Control Act (Porter Cologne Act). The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. The RWQCB typically requires compensatory mitigation for impacts to wetlands and/or waters of the state. The RWQCB also has jurisdiction over waters deemed 'isolated' or not subject to Section 404 jurisdiction under *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC). Dredging, filling, or excavation of isolated waters constitutes a discharge of waste to waters of the state and prospective dischargers are required obtain authorization through an Order of Waste Discharge or waiver thereof from the RWQCB and comply with other requirements of Porter-Cologne Act.

California Department of Fish and Game

Under Sections 1600 - 1616 of the California Fish and Game Code, the CDFG regulates activities that would substantially divert, obstruct the natural flow, or substantially change of rivers, streams and lakes. The jurisdictional limits of CDFG are defined in Section 1602 of the California Fish and Game Code as, "bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake...." The CDFG requires a Lake and Streambed Alteration Agreement for activities within its jurisdictional area. Impacts to the jurisdictional area of the CDFG would be considered "significant" in this EIR.

Local

Fresno County General Plan

Biology within the area of the proposed project is also governed by the *Fresno County General Plan* (2000). Within the Land Use, Open Space, and Conservation Element General Provisions Section of the County General Plan, there are policies and implementation measures that are applicable to the proposed project:

- OS-D.1: The County shall support the “no-net-loss” wetlands policies of the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.
- OS-E.1: The County shall support efforts to avoid the “net” loss of important wildlife habitat where practicable. In cases where habitat loss cannot be avoided, the County shall impose adequate mitigation for the loss of wildlife habitat that is critical to supporting special-status species and/or other valuation or unique wildlife resources. Mitigation shall be at sufficient ratios to replace the function, and value of the habitat that was removed or degraded. Mitigation may be achieved through any combination of creation, restoration, conservation easements, and/or mitigation backing. Conservation easements should include provisions for maintenance and management in perpetuity. The County shall recommend coordination with the U.S. Fish and Wildlife Services and the California Department of Fish and Game to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed. Important habitat and habitat components include nesting, breeding, and foraging areas, important spawning grounds, migratory routes, migratory stopover areas, oak woodlands, vernal pools, wildlife movement corridors, and other unique wildlife habitats (e.g., alkali scrub) critical to protecting and sustaining wildlife populations.

- OS-E.2: The County shall require adequate buffer zones between construction activities and significant wildlife resources, including both onsite habitats that are purposely avoided and significant habitats that are adjacent to the project site, in order to avoid the degradation and disruption of critical life cycle activities such as breeding and feeding. The width of the buffer zone should vary depending on the location, species, etc. A final determination shall be made based on informal consultation with the U.S. Fish and Wildlife Service and/or the California Department of Fish and Game.
- OS-E.3: The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the value of the habitat for wildlife is maintained.
- OS-E.4: The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by the California Department of Fish and Game officials and the U.S. Fish and Wildlife Service.
- OS-E.8: The County shall promote effective methods of pest (e.g., ground squirrel) control on croplands bordering sensitive habitat that do not place special-status species at risk, such as the San Joaquin kit fox.
- OS-E.9: Prior to approval of discretionary development permits, the County shall require, as part of any required environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the present or absence of significant resource and/or special-status plants or animals. Such evaluation will consider the potential for significant impact on these resources and will either identify feasible mitigation measures or indicate why mitigation is not feasible.
- OS-F.2: The County shall require developers to use native and compatible non-native plant species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permit approval or for project mitigation.
- OS-F.7: The County should encourage landowners to maintain natural vegetation or plant suitable vegetation along fence lines, drainage and irrigation ditches and on unused or marginal land for the benefit of wildlife.

Setting

The project site consists of the western 27 acres of a 36.62 acre parcel (APN 370-240-13T), located east of the City of Reedley Industrial area, in an intensely developed agricultural region of Fresno County, California. The surrounding properties are primarily agricultural farmland, pasture, food packing/industrial facilities, a ponding basin and a riparian area (Travers Creek). The riparian area at the eastern edge of the parcel is approximately 170 feet from the nearest edge of the proposed project site boundary. A detailed description of the land use in the vicinity of the proposed project site is found in Section 3.9 of this EIR.

A reconnaissance-level biological survey was conducted on July 8, 2009 by Jason Thomas, Biologist, and Gavin O'Leary, Biologist, of Provost & Pritchard Consulting Group, to determine whether special-status plant and animal species or their habitats exist on the project site (see Appendix D).

A query of the California Natural Diversity Database (CNDDB), maintained by the California Department of Fish and Game, was conducted to provide information on state and federal species of concern for the project site and vicinity (see Appendix D). The search included queries from the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and the California Native Plant Society. In addition there are four natural communities that provide habitat for many of the protected species. A list of all protected or special status species potentially located in the Vicinity of the project site is provided in Table 3.4-1.

While the CNDDB search indicates there are 30 protected or special status species potentially located in the vicinity of the project site, none of these species or associated vegetation communities was observed at the project site during the reconnaissance level biological survey. The project site is on a piece of land that has been cultivated with orchard trees and used as a family residence for many years.

Table 3.4-1
Potential Species Within the Vicinity of the Project Site

Scientific Name	*Federal*	*State*	*CNPS*	*Common Name*
Animals				
Branchinecta lynchi	T,X			vernal pool fairy shrimp
Desmocerus californicus dimorphus	T			valley elderberry longhorn beetle
Lepidurus packardi	E			vernal pool tadpole shrimp
Lytta molesta				molestan blister beetle
Talanites moodyae				Moody's gnaphosid spike
Ambystoma californiense	T			California tiger salamander, central population
Lithobates pipiens				Northern leopard frog
Rana aurora draytonii	T			California red-legged frog
Spea hammondii		SC		western spadefoot
Actinemys marmorata		SC		western pond turtle
Gambelia sila	E	E		blunt-nosed leopard lizard
Thamnophis gigas	T			giant garter snake
Athene cunicularia		SC		burrowing owl
Coccyzus americanus occidentalis	C	E		western yellow-billed cuckoo
Antrozous pallidus		SC		pallid bat
Lasiurus cinereus				Hoary bat
Dipodomys nitratoides exilis	E	E		Fresno kangaroo rat
Eumops perotis californicus		SC		western mastiff bat
Vulpes macrotis mutica	E	T		San Joaquin kit fox
Hypomesus transpacificus	T			delta smelt
Plants				
Atriplex depressa			1B.2	brittlescale
Atriplex erecticaulis			1B	Earlimart orache
Atriplex miniscula			1B.1	lesser saltscale
Chamaesyce hooveri	T,X		1B.2	Hoover's spurge
Delphinium recurvatum			1B	recurved larkspur
Eryngium spinosepalum			1B.2	Spiny-sepaled button-celery
Imperata brevifolia			2.1	California satintail
Orcuttia inaequalis	T,X	E	1B.1	San Joaquin Valley Orcutt grass
Pseudobahia peirsonii	T	E	1B.1	San Joaquin adobe sunburst
Tuctoria greenei	E	R	1B.1	Greene's tuctoria
Sensitive Communities				
Great Valley Valley Oak Riparian Forest		CN		
Northern Claypan Vernal Pool		CN		
Northern Hardpan Vernal Pool		CN		
Valley Sacaton Grassland		CN		

Federal Status (Federal)

E	Listed Endangered
T	Listed Threatened
P	Proposed for listing
C	Candidate for listing
X	Critical Habitat designated for this species
PX	Proposed Critical habitat

State Status (State)

E	Listed Endangered
T	Listed Threatened
R	Listed Rare
C	Candidate for listing
D	Delisted, previously listed
SC	CDFG Species of Concern
CN	Recorded in CNDDB for conservation purposes

California Native Plant Society List (CNPS)

1A	Plant presumed extinct in CA
1B	Plants rare, threatened, or endangered in CA and elsewhere
2	Plants rare, threatened, or endangered in CA but more common elsewhere
3	Plants about which more information is needed
4	Plants of limited distribution
	Threat Ranks
0.1	Seriously threatened in California
0.2	Fairly threatened in California
0.3	Not very threatened in California

Table 3.4-2
Flora and Fauna Species Observed During the Field Survey

Scientific Name	***Common Name***
Flora	
Tribulus terrestris	puncturevine
Amaranthus albus	pigweed
Geranium sp.	cranesbill
Bromus rigidus	Ripgut brome
Salsola sp.	thistle
Fauna	
Turdus migratorius	American robin
Carpodacus mexicanus	House finch
Spermophilus beecheyi	California ground squirrel
Cathartes aura	Turkey vulture
Zenaida macroura	Mourning dove
Tyrannus verticalis	Western kingbird
Mimus polyglottos	Northern mockingbird

A review of the National Wetlands Inventory maps has also been conducted (see Appendix D). The inventory shows a small area classified as freshwater pond over one-half mile from the project site and another over two-thirds of a mile from the site. Although it is not included in the NWI data, Travers Creek flows north to south approximately 200 feet east of the project site.

Impacts

Impact #3.4.1 – Substantial Adverse Effect on Candidate, Special-Status or Sensitive Species [Evaluation Criteria (a)]

Impact Description and Evaluation

The Hoary bat (*L. cinereus*), pallid bat (*Antrozous pallidus*), California satintail (*Imperata brevifolia*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), Moody's gnaphosid spider (*Talanites moodyae*), valley elderberry long horn beetle (*Desmocerus californicus dimorphus*), burrowing owl (*Athene cunicularia*) and San Joaquin kit fox (*Vulpes macrotis mutica*) were not observed during the survey but have been documented within ten miles of the project site.

Two bat species have been observed and recorded within five miles of the project site – hoary bat and pallid bat. These bats forage in open areas and over water features such as lakes and ponds which are not available in or around the project site. The outbuildings on site have wide open eaves and do not provide protection or cover to potential roosting bats. It is not likely that bats would be impacted the project.

California satintail is a conspicuous grass species that spreads from scaly rhizomes and has a white feathery panicle up to one foot long. California satintail was recorded near the town of Reedley in 1933,

when the area was significantly less developed. None of the habitat typed listed for California satintail are present in the project site, however outside the project area is a riparian corridor approximately 170 feet each of the project site. As long as construction traffic and site drainage are not permitted to enter the riparian corridor, potential California satintail habitat would not be impacted by the project.

San Joaquin adobe sunburst only grows in heavy adobe clay soils that retain moisture longer in the dry season. The soil textures on the project site are loams and sands. The soil conditions are not viable to San Joaquin adobe sunburst.

San Joaquin Valley orcutt grass was recorded about seven and a half miles from the project site in 1936. This species is dependent on vernal pools which require clay soils and are not present in the area around the project and are found primarily in the Sierra foothills and foothill/valley interface at last eight miles to the east of the project site.

Two invertebrate species have been observed and recorded within five miles of the project site – Moody's gnaphosid spider and the valley elderberry longhorn beetle. These two species have very specific habitat requirements, which are not available within the project site or surrounding area. Moody's gnaphosid spider is endemic to serpentine soil communities and the valley elderberry longhorn beetle is dependent on a specific host, the elderberry tree/shrub that is associated with riparian corridors. There is no riparian vegetation in the project area. There is a riparian corridor about 170 feet to the east of the project site; however the majority of plant species observed during the site visit were non-native. No elderberry shrubs were observed in the project site or in the nearby riparian corridor. The project is not expected to impact either Moody's gnaphosid spider or the valley elderberry longhorn beetle.

Two adult burrowing owls were observed approximately three miles from the project site, at a burrow in a fallow field that field years previously had been a vineyard. Borrowing owls can establish burrows near residential or farming operations. Burrowing owls are dependent on availability of both open areas to hunt prey and burrows. Due to this dependency, burrowing owls are closely associated with populations of California ground squirrels which excavate appropriately sized burrows. There are a large number of active ground squirrel burrows on the northern portion of the project site, however the ground squirrel burrows are in a field that is irrigated when cropped and the burrows are subject to inundation. Burrowing owls typically select burrow site that are slightly above the surrounding soil surface to avoid inundation and thereby avoid their young being flooded. As a result, none of the burrows seen on the project site are suitable for burrowing owl use. It is not likely that the proposed project will impact burrowing owls.

The San Joaquin kit fox has been observed within ten miles of the project site. San Joaquin kit foxes are primarily active at night. They inhabit various human impacted habitats, including grasslands and scrublands with active oil fields, agricultural fields (row crops, orchards, irrigated pasture, vineyard), and grazed annual grasslands. Native vegetation communities of the San Joaquin Valley are also utilized by San Joaquin kit foxes. It is not likely that the proposed project will impact San Joaquin kit foxes.

Other sensitive native plants have been recorded on properties approximately seventeen miles from the project site. Earlimart orache, lesser saltscale, brittlescale and recurved larkspur are native plant species associated with chenopod scrub and valley grassland vegetation communities in alkaline or saline soils. These species are typically found on land that has never been disturbed for cultivation. The project site has been under intensive cultivation for decades and does not have alkaline or saline soils. None of these species or associated vegetation communities was observed at the project site during the reconnaissance level biological survey. The proposed project is on a piece of land that has been cultivated with orchard trees and used as a family residence for many years. It is not likely that the proposed project will impact sensitive native plants or sensitive vegetation communities.

Conclusion

No endangered, threatened, or otherwise sensitive species were found on the project site during reconnaissance field surveys. The project will not result in the significant loss of habitat for special status or sensitive species. It is not likely the project would impact these species, however mitigation measures are included to minimize any potential impacts to less than significant.

Mitigation Measures

1. Construction, storage, travel and other types of disturbance should be restricted to the 27-acre project site and not take place in the offsite land adjacent to the riparian corridor of Travers Creeks. Trucks

and equipment vehicles should approach from Huntsman or the western access road rather than the dirt road along the riparian/orchard interface. If this restriction is not possible, then a more extensive biological survey of the riparian corridor would be necessary to determine if the impacts will require further mitigation.

2. Maintaining the current cable and lock system in place at the southern access to the corridor from Huntsman will continue to discourage traffic along the offsite riparian corridor. Adding signage in English along the west-to-east dirt access road to the riparian corridor will further discourage project traffic from within the parcel.
3. Vehicles shall use slow speeds (less than 15 miles per hour), especially at night, when driving through or around the project site to minimize potential for striking or disturbing animals. San Joaquin kit fox and other animals are vulnerable to collisions with autos.
4. Pipes and culverts shall be inspected before being moved or altered to prevent wildlife from being injured or trapped.
5. If special status species are encountered during an inspection, they shall be left alone to passively exit the area unless otherwise authorized by the California Department of Fish and Game or the U.S. Fish and Wildlife Service.
6. Removal of trees shall occur outside of bird nesting season to minimize impact to nest activity.
7. Any migratory birds and their nests shall be not be disturbed as outlined in the Migratory Bird Treaty Act of 1918 (MBTA). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations Part 10, including feathers or other parts, nests, eggs or products, except as slowed by implementing regulations (50 CFR 21).

Effectiveness of Mitigation Measures

Implementation of the above mitigation measures will reduce any potential impacts to less than significant.

Monitoring and Implementation

The mitigation measures shall be a condition of the Conditional Use Permit. The applicant will be responsible for their implementation. Monitoring shall be the responsibility of Fresno County Public Works and Planning.

Impact #3.4.2 – Substantial Adverse Effect on Riparian Habitat or Other Sensitive Natural Community [Evaluation Criteria (b)]

Impact Description and Evaluation

No sensitive natural vegetative communities occur on the project site. A narrow riparian corridor occurs along the Travers Creek, located approximately 170 feet east of the project site. Project construction and operation activities will not occur within 170 of the riparian community.

Conclusion

There will be no project impact on riparian habitat or a sensitive nature community.

Mitigation Measures

None are required.

Impact #3.4.3 – Substantial Adverse Effect on Federal Protected Wetlands [Evaluation Criteria (c)]

Impact Description and Evaluation

There are no jurisdictional waters or wetlands on the project site that would be impacted by this project. Travers Creeks is located approximately 200 feet east of the project site. The riparian corridor along Travers Creek will not be disturbed by this project.

Conclusion

There will be no project impact on wetlands.

Mitigation Measures

None are required.

Impact #3.4.4 – Substantial Adverse Effect on Movement of Native or Migratory Wildlife [Evaluation Criteria (d)]

Impact Description and Evaluation

The riparian corridor along Travers Creek, 170 feet east of the project site, provides habitat for birds and other migratory wildlife and likely functions as a movement corridor for wildlife. The riparian corridor along Travers Creek will not be disturbed by this project.

Conclusion

The proposed project will have a less than significant impact on any riparian habitats or other sensitive natural communities.

Mitigation Measures

None are required.

Impact #3.4.5 – Conflict with Local Policies or Ordinances [Evaluation Criteria (e)]

Impact Description and Evaluation

This project is in compliance with all of the local policies or ordinances related to Biological Resources in Fresno County.

Conclusion

Project implementation will not conflict with any local policies or ordinances. There is no impact.

Mitigation Measures

None are required.

Impact #3.4.6 – Conflict with Adopted or Approved Conservation Plan [Evaluation Criteria (f)]

Impact Description and Evaluation

There are no applicable adopted or approved conservation plans within the project area.

Conclusion

There is no impact.

Mitigation Measures

None are required.

3.5 Cultural Resources

Introduction

This section evaluates the potential effect the project may have on historical, archaeological and/or paleontological resources.

Impact Evaluation Criteria

Criteria for evaluating adverse agricultural resource impacts are:

Would the Project:

a) Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature of paleontological or cultural value?

d) Disturb any human remains, including those interred outside of formal cemeteries?

Regulatory Framework

Potential effects on cultural resources were considered with respect to local, state, and federal regulations as outlined in the *Public Resources Code, Section 21083.2*. In general, this code seeks to identify "significant" sites and/or properties, determine the possible effects on the resource, and provide ways to avoid or reduce potential impacts. A unique archaeological resource is defined as an archaeological artifact, object, or site which it can be clearly demonstrated there is a high probability that it meets any of the following criteria:

- *is associated with an event or person of recognized significance in California or American history or of recognized scientific importance in prehistory.*
- *can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions;*
- *has a special and particular quality such as being the oldest of its type or the best available example of its type;*
- *is at least 100 years old and possesses substantial stratigraphic integrity (i.e., it is essentially undisturbed and intact).*
- *involves important research questions that historic research has shown can be answered only with archaeological methods*

Virtually any physical evidence of past human activity can be considered a cultural resource, although not all such resources are considered to be significant. They often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

Section 15064.5 of the State CEQA Guidelines provides guidance for determining the significance of impacts to archaeological and historical resources. This section of the State CEQA Guidelines includes the following information:

- *definition of "historic resources"*
- *discussion of significant effects on historical resources*
- *discussion of effects on archaeological sites*

- *identification of procedures to be followed in the event that Native American or other human remains are discovered on a project site.*

Setting

The proposed project site currently contains irrigated cropland and orchards. The site has been leveled for a number of years. Surrounding lands have been intensively farmed and adjacent lands developed with industrial-type uses.

The project site was part of lands originally designated for school purposes under the California Enabling Act of 1853. The 76 Land and Water Company secured the rights to the land in order to build an irrigation system for some 30,000 acres in southern Fresno County and northern Tulare County, east of the Kings River. The company took its name from Tulare State senator and cattleman Thomas Fowler's "76 Ranch" which had significant land holdings in the area. The irrigation system was constructed and subsequently sold to the Alta Irrigation District in 1890.

A cultural resources records search (RS#09-291b; RSOC Project No. 200902) was conducted for the project on July 21, 2009 by RSO Consulting Archaeological and Historic Resource Management, at the Southern San Joaquin Valley Historical Resources Information Center (HRIC) at California State University, Bakersfield (Appendix E).

The results of the records search showed that no surveys have been performed on the subject site, consisting of the entire 37-acre parcel owned by KCUSD. Two surveys within one-half to one mile of the project site were performed in 1997 and 2000, with negative results for cultural resources. No archaeological or historical sites have been recorded within the subject site or within one-half to one mile of the subject site. The records search included an examination of the *National Register of Historic Places, the California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources*, *California State Historic Landmarks Registry,* and the HRIC files of pertinent historical and archaeological data.

No formal cemeteries or other places of human internment are known to exist at the site.

The Native American Heritage Commission performed a record search of its Sacred Land File for the project area. There was no indication of the presence of Native American cultural resources in the immediate project area (Appendix E).

Indian Trust Assets (ITAs) are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individual Indians. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. "Assets" are anything owned that holds monetary value. "Legal interests" means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. ITAs cannot be sold, leased or otherwise alienated without United States' approval. ITAs may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, ITAs may be located off trust land. There are no tribes possessing legal property interests held in trust by the United States in the project area.

Impacts

Impact #3.5.1 – Disturbance of Cultural, Historic Resources or Skeletal Remains [Evaluation Criteria (a), (b), (c), (d)]

Impact Description and Evaluation

Proposed construction and ground disturbance activities will occur to clear the site of existing structures and to grade the site for new structures and facilities. As found in the cultural resources records search, two surveys near the project location were performed with negative results and no archaeological or historical sites were recorded in the area.

Conclusion

Although there is no record evidence of archaeological sites on the project site, there is the potential during project-related excavation and construction for the discovery of cultural resources. This impact is potentially significant, but can be mitigated to a less than significant level.

Mitigation Measure #3.5.1

If, in the course of project operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within 50 feet of the find area shall cease. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the County's Environmental Assessment Officer, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the project.

In the event human remains are encountered during construction or operation activities, all work within the vicinity of the remains would halt in accordance with Health and Safety Code §7050.5, Public Resources Code §5097.98, and §15064.5 of the CEQA Guidelines. In addition to compliance with Public Resources Code §5097.98, in the event that any skeletal remains are discovered, a qualified archaeologist, the County Environmental Assessment Officer, County Coroner and local Native American organization shall be consulted, and appropriate measures shall be required that may include avoidance of the burial site or reburial of the remains.

Effectiveness of Mitigation Measures

This measure will assure that any archaeological, historical or cultural resources are properly evaluated, and will reduce potential impacts to these resources to a less than significant level.

This measure will also assure that appropriate procedures are followed with respect to unidentified skeletal remains or Native American burial grounds that may be found during project construction or operation. This measure will assure that any Native American burial sites encountered are avoided, treated in accordance with the recommendations of the most likely descendant (for Native American remains), or relocated and will reduce potential impacts to skeletal remains to a less than significant level.

Monitoring and Implementation

This requirement shall be implemented by the applicant, and monitoring shall be performed by the County of Fresno.

3.6 Geology, Soils, and Mineral Resources

Introduction

This section presents a description of the geologic, soils, seismic conditions and mineral resources at the project site and expected impacts associated with implementation of the proposed project. The description of these conditions is based on information prepared by the U.S. Geologic Survey (USGS), the California Geologic Survey (CGS), the Natural Resources Conservation Service (NRCS), and the Fresno County General Plan (2000).

Impact Evaluation Criteria

Evaluation criteria for geology, soil impacts, and mineral resources are determined by evaluating whether the project will:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.

ii) Strong seismic ground shaking

iii) Seismic-related ground failure, including liquefaction

iv) Landslides

b) Result in substantial soil erosion or the loss of topsoil

c) Be located on a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater

f) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state

g) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan

In addition to general CEQA requirements, projects involving school site acquisition to be funded under the state School Facilities Program must also satisfy specific requirements established in the California Education Code and California Code of Regulations as seen below:

h) Would the project involve the construction, reconstruction, or relocation of any school building on the trace on a geological fault along which surface rupture can reasonably be expected to occur within the life of the school building?

Setting

The San Andreas Fault is located approximately 75 miles west of the project site, the Owens Valley fault is located approximately 75 miles to the east, and the White Wolf fault is located about 100 miles southeast of the site, respectively.

The project site is located in Zone V1 as defined in the Five-County Seismic Safety Element (Envicom, 1974). The description of this zone is:

Zone V1 includes most of the eastern San Joaquin Valley, and is characterized by a relatively thin section of sedimentary rock overlying a granitic basement. Amplification of shaking that would affect low to medium-rise structures is relatively high, but the distance to either of the faults that are the expected sources of the shaking is sufficiently great that the effects are expected to be minimal. The requirements of the Uniform Building Code are adequate for normal facilities.

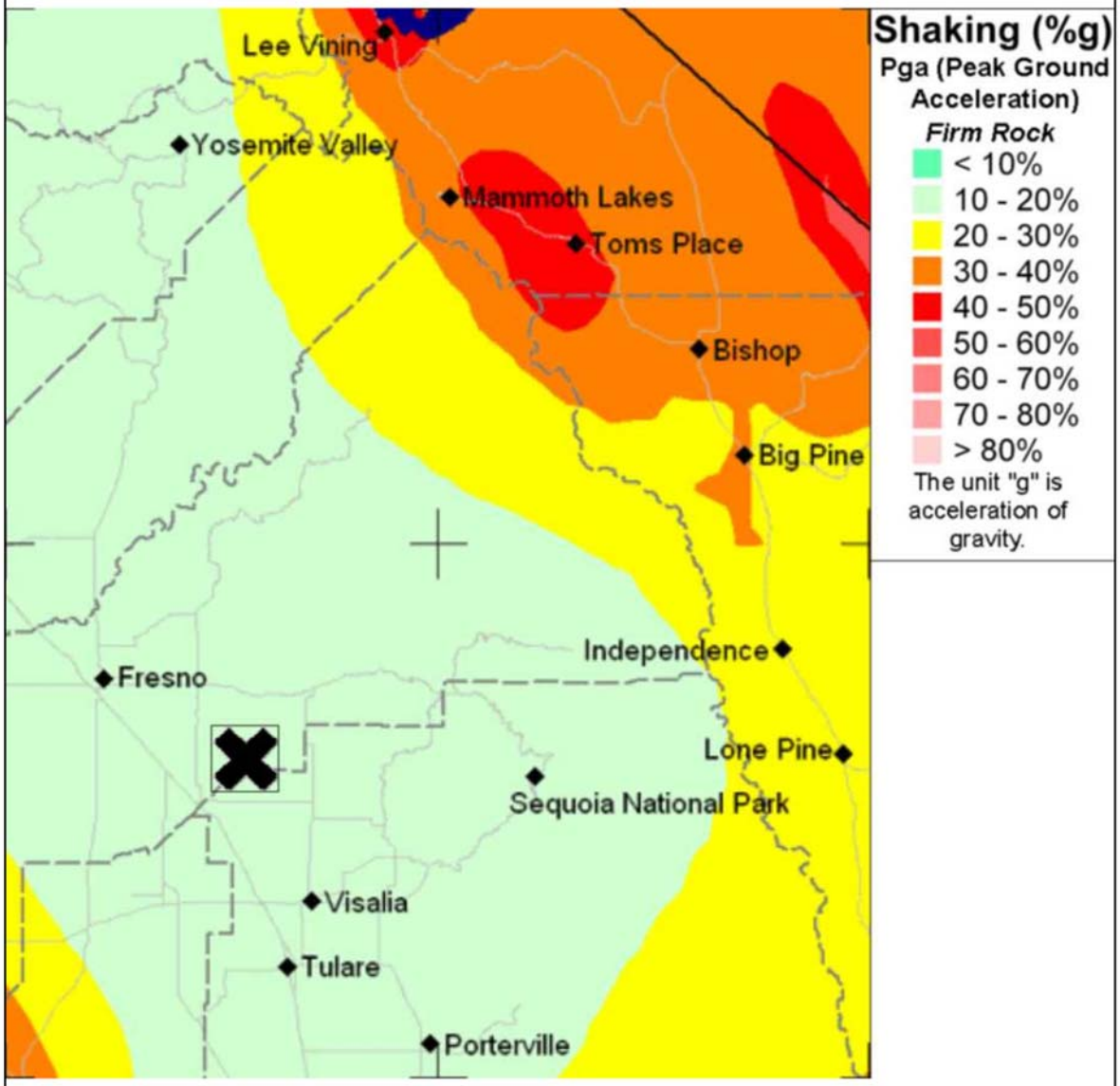
The California Geological Survey has prepared seismic shaking maps using consensus information on historical earthquakes, faults, and geologic materials. Historic earthquakes, areas damaged, the slip rates of major faults, and geologic materials were combined to calculate the shaking hazard at peak ground acceleration. The shaking hazard map, seen in Figure 3.6-1, shows the level of ground motion that has a 10% probability of being exceeded in 50 years.

The Valley fill consists of thick sequences of Jurassic to Holocene aged marine, lacustrine, fluvial, and eolian sediments. The eastern San Joaquin Valley is dominated by extensive alluvial fans and floodplains developed by rivers entering the valley from the Sierra Nevada. These broad, gently sloping, alluvial fans consist predominantly of gravel, sand and silt. The subject site is located on non-marine sedimentary deposits of the Pleistocene Epoch (1.6 million to 10,000 years ago), which are low alluvial terraces of the Kaweah River. These alluvial deposits are often referred to as Older Alluvium.

The Soil Survey for Eastern Fresno Area, California from the NRCS web soil survey (Soils Maps, Version 1, Jan 20, 2005, Soil Data, Version 4, Jan 2, 2008), was reviewed to identify soil types present on the project site. The Soil Survey identified soils on the project site and in the surrounding area as Hanford coarse sandy loam (Ha), Tujunga loamy sand, (TzbA), Ramona loam (Rc) and Greenfield sandy loam (GuA), as indicated in Table 3.6-1 and Figure 3.2-3.

Table 3.6-1
Soil Descriptions

Series Name	Linear Extensibility (percent)	Plasticity Index (percent)	USDA Texture	Description
Hanford coarse sandy loam	1.5	2.5	Sandy Loam	Low shrink-swell potential
Tujunga loamy sand	1.5	0.0	Loamy sand and sand	Low shrink-swell potential
Ramona loam	2.2	5.0	Sandy Loam or loam	Low shrink-swell potential
Greenfield sandy loam	1.5	2.5	Sandy Loam	Low shrink-swell potential



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California Geological Survey – Probalistic Seismic Hazard Assessment for the State of California

Figure 3.6-1

Impacts

Impact #3.6.1 – Impacts Resulting from Seismic Effects [Evaluation Criteria (a) i) ii) iii), (h)]

Impact Description and Evaluation

Review of California Seismic Regulatory Zones reveals that no Earthquake Fault Zones are located on or near the project site. Additionally, review of the list of affected cities and counties on the California Geological Survey's Seismic Hazards Mapping Program website shows that Fresno County is not listed in an Official Seismic Hazard Zone.

The Five County Seismic Safety Element places the project site in an area of minimal ground shaking, with no likelihood of ground failure or liquefaction. Project structures are required to comply with Building Code regulations, including seismic requirements.

Conclusion

There are no significant seismic-related project impacts.

Mitigation Measures

None are required.

Impact #3.6.2 – Landslides [Evaluation Criteria (a) iv)]

Impact Description and Evaluation

Site topography is essentially level and is not conducive to landslides.

Conclusion

There is no potential landslide impact.

Mitigation Measures

None are required.

Impact #3.6.3 – Soil Erosion, Loss of Topsoil, and Impacts from Instable or Expansive Soils [Evaluation Criteria (b) (c) (d)]

Impact Description and Evaluation

The project site has been in agricultural production and has been laser-leveled. The site is essentially flat, and site soils are not highly erodible. Existing cropland and orchards and structures will be removed, and any topsoil lost will be replaced with building site development and landscaping. Alta Irrigation District has confirmed that there is no groundwater overdraft in the project area, therefore, liquefaction probability is low. Soils in the project area have low shrink-swell potential and are not considered to be expansive.

Conclusion

The project will not create soil erosion, occasion loss of topsoil, or create any other negative soil impacts. There is no impact.

Mitigation Measures

None are required.

Impact #3.6.4 – Hazards to Septic Tank or Alternative Waste Disposal System [Evaluation Criteria (e)]

Impact Description and Evaluation

The proposed project will not utilize septic tanks or alternative waste disposal systems. The project will connect to the City of Reedley's existing municipal sanitary infrastructure.

Conclusion

There is no impact.

Mitigation Measures

None are required.

Impact #3.6.5 – Impacts to Mineral Resources [Evaluation Criteria (f), (g)]

Impact Description and Evaluation

Although there are sand and gravel resources located several miles northeast of the project site, along the Kings River, the project site area does not lie within a designated resource area.

Conclusion

There is no impact to mineral resources as the project site is not located near or within a known resource area.

Mitigation Measures

None are required.

3.7 Hazards and Hazardous Materials / Health Risks / Vectors

Introduction

This section focuses on the impacts of the proposed project with respect to hazards and hazardous materials. The creation or expansion of hazardous conditions is the primary area of focus under this environmental issue. Hazards include, but are not limited to, hazardous materials, public health and environmental risks, hazards associated with aircraft and airports, and wildland fires. An additional concern is the consistency of the project with emergency response plans or emergency evacuation plans.

Impact Evaluation Criteria

Evaluation criteria for hazardous condition and health risks impacts are determined by evaluating whether the project will:

a) *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*

b) *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or risk of explosion;*

c) *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;*

d) *Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;*

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;*

f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;*

g) *Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;*

h) *Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

In addition to general CEQA requirements, projects involving school site acquisition to be funded under the state School Facilities Program must also satisfy several specific requirements established in the California Education Code and California Code of Regulations as seen below:

i) *Locate a school site at:*

   i. *The site of a current or former hazardous waste disposal site or solid waste disposal site and, if so, have the wastes be removed;*

   ii. *A hazardous substance release waste site identified by the State Department of Health Services in a current list adopted pursuant to §25356 for removal or remedial action pursuant to Chapter 6.8 of Division 20 of the Health and Safety Code; or*

   iii. *A site that contains one or more pipelines, situated underground or above ground, which carry hazardous substances, acutely hazardous materials or hazardous wastes, unless the pipeline is a natural gas line that is used only to supply natural gas to that school or a neighborhood?*

j) *Locate a school within 2,000 feet of a significant disposal of hazardous waste? (If so, the DTSC will determine whether the property is to be considered a Hazardous Waste Property or Border Zone Property.)*

k) Locate a school on a site containing or underlined by naturally occurring hazardous materials?

l) Locate a school where the property line is less than the following distances from the edge of respective power line easements:

i. 100 feet of a 50-133 kV line;

ii. 150 feet of a 220-230 kV line; or

iii. 350 feet of a 500-550 kV line?

m) Locate a school near an above-ground water or fuel storage tank or within 1,500 feet of an easement of an above-ground or underground pipeline that can pose a safety hazard to the site?

Definition of Hazardous Material

A substance may be considered hazardous due to a number of criteria, including toxicity, ignitability, corrosivity, or reactivity. The term "hazardous material" is defined in law as any material that, because of quantitative, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Once a hazardous material becomes ready for discard, it becomes a hazardous waste. A hazardous waste, for the purpose of this report, is any hazardous material that is abandoned, discarded, or (planned to be) recycled. In addition, hazardous wastes may occasionally be generated by actions that change the composition of previously non-hazardous material. The same criteria (toxicity, ignitability, corrosivity, or reactivity) that render a material hazardous also make waste hazardous.

The use of hazardous material and disposal of hazardous waste are subject to numerous laws and regulations at all levels of government. Below is a brief overview of federal and state laws and regulations.

Regulatory Framework

Federal

Resource Conservation and Recovery Act

Under the Resource Conservation and Recovery Act (RCRA), individual states may implement their own hazardous waste programs in lieu of RCRA as long as the state program is at least as stringent as federal RCRA requirements. The EPA must approve state programs intended to implement federal regulations. In California, the California Environmental Protection Agency (Cal EPA) and the Department of Toxic Substances Control (DTSC), a department within Cal EPA, regulate the generation, transportation treatment, storage, and disposal of hazardous waste. The EPA approved the California RCRA program, called the Hazardous Waste Control Law (HWCL), in 1992. DTSC has primary hazardous material regulatory responsibility, but can delegate enforcement responsibilities to local jurisdictions that enter into agreements with DTSC for the generation, transport, and disposal of hazardous material under the authority of the HWCL.

The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe the management of hazardous wastes; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in ordinary landfills. The generator (producer) must retain hazardous waste manifests for a minimum of three years. Hazardous waste manifests provide a description of the waste, its intended destination, and regulatory information about the waste. A copy of the manifest must be filed with the state. The generator must match copies of hazardous wastes manifests with receipts from treatment, storage, and disposal facilities.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, otherwise known as Superfund) and associated Superfund Amendments provide the EPA with the authority to identify hazardous sites, to require site remediation, and to recover the cost of site remediation from

polluters. California has enacted similar laws intended to supplement the federal program. DTSC is primarily responsible for implementing California's Superfund Law.

State

California Code of Regulations, Title 22, §66261.20.20-24 contains technical descriptions of characteristics that would cause a soil to be classified as a hazardous waste.

The California Hazardous Materials Release Response Plans and Inventory Law of 1985

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan, which must include the following:

- Detail, including floor plans, of the facility and business conducted at the site
- An Inventory of hazardous materials that are stored or handled on site
- An emergency response plan
- A safety and emergency response training program for new employees with annual refresher courses

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

In January 1996, the Cal EPA adopted regulations implementing the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; above ground storage tanks; hazardous materials release response plans and inventories; risk management and prevention program; and Uniform Fire Code hazardous materials management plan and inventories. The plan is implemented at the local level.

Cortese List Identification

Data resources and information pertaining to hazardous waste sites are compiled pursuant to Government Code §65962.5 and provided through the "Cortese List". The Cortese List is required to be updated annually, based on the following list:

- List of hazardous waste and substance sites from the Department of Toxic Substances Control (DTSC) EnviroStor database;
- List of leaking underground storage tank sites by County and Fiscal Year from the State Water Resources Control Board Ger Tracker database;
- List of solid waste disposal sites identified by the State Water Resources Control Board with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from the State Water Resources Control Board; and
- List of hazardous waste facilities subject to corrective action pursuant to §25187.5 of the Health and Safety Code, identified by the DTSC.

Hazardous Materials Transportation Regulations

California regulates the transportation of hazardous waste originating in the state and passing through the state (26 CCR). The two state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and California Department of Transportation (Caltrans).

Underground Storage Tanks

Storage of hazardous materials in underground storage tanks (UST) is regulated by the State Water Resources Control Board (SWRCB), which has overall responsibility for implementing regulations set forth in Title 23 of the California Code of Regulations. State standards cover the installation and monitoring of tanks in use, and corrective actions for removed tanks. Implementation of State UST

regulations, including permitting, is enforced locally by the Fresno County Fire Department and the Fresno County Certified Unified Program Agencies.

The following fuels are typically stored in underground storage tanks:

Biodiesel

Biodiesel is derived from vegetable oils that are chemically converted into biodiesel. It is similar to diesel fuel except that it is produced from crops, typically canola, soybean, sunflower, and safflower.

Effective June 1, 2009, an emergency regulatory action was approved by the State of California Office of Administrative Law which allows for the lawful storage of certain biodiesel blends up to 20 percent biodiesel and 80 percent petroleum diesel, commonly known as B20, in underground storage tanks (USTs) that have been tested and approved for storing petroleum diesel, if specified conditions are met. Prior to this, no blend of biodiesel was approved for storage in USTs.

With the exception of biodiesel blends up to 5 percent (B5), which has been designated as meeting the specifications for petroleum diesel approval, underground tank systems manufactured to date have not received independent testing organization approvals for biodiesel or other biodiesel blends. Further, leak detection equipment and method approvals have not been obtained for biodiesel or any blend of biodiesel.

Not having yet completed testing for these two regulatory requirements (compatibility and functionality) has significantly contributed to the delay in the use of biodiesel blends greater than B5 in California. In response, the State Water Resources Control Board demonstrated its commitment to facilitating the use of alternative fuels by adopting emergency regulations which provide a temporary variance from these testing requirements to allow the storage of biodiesel blends up to B20 in USTs.

Diesel

Diesel is a hydrocarbon-based fuel used in compression ignition engines and results in a complex mixture of air pollutants with potential to cause cancer, premature death and other health problems in large quantities. The Air Resources Board (ARB) regulates fuel specifications for diesel fuel sold in California in the California Diesel Fuel Regulations outlined in Title 13, and Title 17 of the California Code of Regulations.

Solid waste collection vehicles that are diesel fueled are required by the ARB to comply with the Solid Waste Collection Vehicle (SWCV) regulation. Owners of solid waste collection vehicles or diesel-fueled trucks with over 14,000 pounds gross vehicle weight, with model-year engines from 1969 to 2006, used to collect residential and commercial solid waste, are required to use Best Available Control Technology for reducing diesel particulate matter (PM).

Ethanol

Used as a biofuel alternative to gasoline, it is widely used by flex-fuel light vehicles and as an oxygenate to gasoline. Ethanol is a liquid alcohol made of oxygen, hydrogen and carbon, primarily corn and wheat based. The type of ethanol used in vehicles has been distilled and dehydrated to create a high-octane, water-free alcohol. Most gasoline-powered vehicles can run on a gasoline-ethanol blend of 10% ethanol (E-10); however, there are vehicles specifically designed to run on 85% ethanol (E-85), requiring only 15% gasoline. When combined with gasoline, the ethanol blend has environmental benefits, compared to using strictly gasoline. It burns cleaner and more completely than gasoline or diesel. Ethanol from corn produces 3-4% fewer greenhouse gas emissions than gasoline. In March of 2000, the California State Water Resources Control Board issued an advisory to UST stakeholders regarding ethanol-blend fuel capabilities and discussed specific UST requirements to accommodate ethanol blends.

Gasoline

Gasoline is a nonrenewable fuel made from petroleum and used in most U.S. passenger vehicles with internal combustion engines. When gasoline is used, carbon dioxide is produces. Carbon dioxide is a greenhouse gas that is linked with global climate change (project impacts to global climate change are discussed in Chapter 5). The use of gasoline also gives off pollutants- carbon monoxide, nitrogen oxides, particulate matter, and unburned hydrocarbons- that help form air pollution. Since the 1960's,

increasingly stringent environmental standards have led to vehicle designs that have reduced vehicle exhaust emissions by 95 percent. The Clean Air Act Amendments of 1990 require that reformulated gasolines be used in areas of the country that do not meet air quality standards, to reduce emissions and improve air quality.

Local

Certified Unified Program Agencies (CUPA)

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. The state agencies responsible for these programs set the standards for their program while local governments implement the standards. Cal/EPA oversees the implementation of the program as a whole. CUPA policies for Fresno County include the administration and enforcement of the California Accidental Release Prevention Program, underground storage tanks, hazardous waste and universal waste reporting, and onsite treatment/tiered permitting. In addition to the above mentioned enforcement areas, CUPA also require business plans for projects that handle hazardous materials above specific thresholds. The business plan must include policies on the following topics:

- Release Prevention
- Immediate Notification and Evacuation
- Emergency Response Protocols and Cleanup Procedures

The business plan must also include a Risk Management Plan (RMP), which, at minimum, must discuss safety information, hazard review, operating procedures, training policies, maintenance schedules, compliance audits, and incident investigation.

The business plan and RMP must be reviewed annually by the Fresno County Health Department in compliance with the Fresno County CUPA.

The County of Fresno General Plan (2000)

The Fresno County General Plan discusses hazardous waste in Section 9.6. Fresno County has prepared a Hazardous Waste Management Plan (HWMP) in accordance with California Health and Safety Code Section 24135 et seq. The HWMP identifies the need for any potential future locations of treatment, storage, and disposal facilities and includes policies and potential impacts for the management of hazardous waste within the county. The major goal of the HWMP is to reduce the need for new hazardous waste facilities by reducing waste at its source through recycling, reduced use of hazardous materials, and public education.

Fresno County's Health Services Division coordinates an Emergency Response Program that provides technical oversight and assistance for all emergency situations, including hazardous materials incidents that occur in Fresno County.

Both urban and wildland fire hazards exist in Fresno County, creating the potential for injury, loss of life, and property damage. The type and amount of fuels, topography, and climates are the primary factors influencing the degree of fire risk. Public Resources Code Section 4290 et seq. set minimum fire safety standards for development in State Responsibility Areas (SRAs). Current development in Fresno County is subject to "Fire Safe" requirements (Public Resources Code §4291), which include minimum roadway width for access to parcels, turnarounds and maximum length limitations for dead-end roads, driveway width and length standards, and fuel clearance. Factors that exacerbate urban structural fires include substandard building construction, highly flammable materials, delay in response time, and inadequate fire protection services.

The project site borders the boundary of the City of Reedley. The City proposes to partner with the Kings Canyon Unified School District in the transportation center and to relocate the Public Works Yard to the project site. This would allow for shared use of the City's equipment during times of emergency.

Setting

The project includes the construction and operation of a 27-acre transportation center, where a fleet of 209 busses, trucks and other vehicles would be housed, maintained, and stored. Additional facilities include administration offices, an educational center, maintenance shops, service bays, and fuel storage and associated dispensers for compressed natural gas (CNG), ethanol, biodiesel, ultra-low sulfur diesel, and unleaded regular gasoline. Fuel storage at the project site would consist of the following:

- 2-10,000 gallon diesel underground storage tanks
- 1-10,000 gallon unleaded regular gasoline underground storage tank
- 1-10,000 gallon ethanol underground storage tank
- 1-10,000 gallon biodiesel underground storage tank

There are no existing or proposed schools within one-quarter mile of the project site; however, the project is a school facility with an educational center onsite.

The Reedley Municipal Airport is located near the intersection of Reed Avenue and Central Avenue, approximately six miles north of the project site. It is a relatively small, uncontrolled airport, with approximately 50 planes stored on site. The Kings River Community College Airport is located near the intersection of Reed Avenue and Manning Avenue, approximately 2.25 miles northwest of the project site. It is a small, uncontrolled airport, with only one plane stored on site.

The project site is currently cultivated agricultural lands and orchards and is not within a wildland fire hazard area.

The project site is not located on a site which is included on Cortese List.

Impacts

Impact #3.7.1 – Create Hazard to the Public or Environment [Evaluation Criteria (a), (b)]

Impact Description and Evaluation

The construction and operation of the Central Valley Transportation Center Project will involve the routine use, transport and/or storage of hazardous materials. These include fuels such as gasoline, diesel, biodiesel, ethanol and CNG. Hazardous materials such as pesticides and fertilizers will likely be used in areas of the project during normal landscaping maintenance. Other hazardous materials that will be used and stored on the site include vehicle maintenance and cleaning products.

Conclusion

The use, transport and storage of hazardous materials are regulated at the federal, state and local level. Existing regulations will reduce the impacts associated with the use, storage, transport, and accidental release of hazardous materials to a less than significant impact.

Mitigation Measures

None are required.

Impact #3.7.2 – Result in Hazardous Emissions or Hazardous Materials within the Vicinity of an Existing or Proposed School [Evaluation Criteria (c), (i), (j), (k)]:

Impact Description and Evaluation

The proposed project is a school facility. There are no other existing or proposed schools within one-quarter mile of the project site. There is one compressed natural gas pipeline running in close proximity to the site which will be utilized by the Transportation Center. There are no naturally occurring hazards in the vicinity of the project site.

Conclusion

There is no impact regarding hazardous emissions or hazardous materials within one-quarter mile of an existing or proposed school.

Mitigation Measures

None are required.

Impact #3.7.3 –Hazardous Materials Site, Safety Hazard for People Working in Vicinity of a Public Airport, Public Use Airport, or Private Airstrip [Evaluation Criteria (d), (e) and (f)]:

Impact Description and Evaluation

The project site is not located on a hazardous materials site and is not within two miles of a public airport, public use airport, or private airstrip.

Conclusion

There is no impact regarding the risk of these hazards.

Mitigation Measures

None are required.

Impact #3.7.4 – Impair or Interfere with Emergency Response/Evacuation Plan [Evaluation Criteria (g)]:

Impact Description and Evaluation

The project will not impair the implementation of or physically interfere with the City of Reedley or the County of Fresno emergency response. The project will not alter emergency response patterns to the facility and neither of the roads adjacent to the facility are major evacuation routes.

Conclusion

There is no impact regarding the risk of interference with an emergency response or evacuation plan.

Mitigation Measures

None are required.

Impact #3.7.5 – Impacts Resulting from Proximity to Powerlines or Storage Tanks [Evaluation Criteria (l), (m)]:

Impact Description and Evaluation

There are no high-voltage power lines within one-quarter mile of the project site. There are no above ground storage tanks associated with this project, and all underground storage tanks will be in compliance with rules and regulations set forth by the State Water Resources Control Board and implemented at the local level by the Fresno County Certified Unified Program Agency (CUPA).

Conclusion

There is no impact regarding the risk of hazards due to close proximity to powerline easements or above or below ground storage tanks.

Mitigation Measures

None are required.

Impact #3.7.6 – Wildland Fires
[Evaluation Criteria (h)]:

Impact Description and Evaluation

The project site is currently surrounded by cultivated agricultural lands and orchards and is bordered on the east by an industrial area for the City of Reedley. The project site is not within a recognized wildland fire hazard area.

Conclusion

There is a less than significant impact from the risk of wildland fires.

Mitigation Measures

None are required.

3.8 Hydrology and Water Quality

Introduction

This section evaluates the impacts of the proposed project on surface and groundwater quality and project area hydrology. It describes existing water quality and hydrology in the project area, identifies any potential project impacts thereon, and proposes any needed mitigation measures which would reduce or mitigate such identified impacts. The project will be required by law to comply with all Federal and State requirements.

Impact Evaluation Criteria

Evaluation criteria for hydrology and water quality impacts are determined by evaluating whether the project will:

a) *Violate any water quality standards or waste discharge requirements*

b) *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)*

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site*

d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site*

e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff*

f) *Otherwise substantially degrade water quality*

g) *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map*

h) *Place within a 100-year flood hazard area structures which would impede or redirect flood flows*

i) *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, inundation by seiche, tsunami, or mudflow*

Regulatory Framework

The State Water Resources Control Board (SWRCB) has authority over all water rights in California under the common law public trust doctrine to protect public trust uses. The Urban Water Management Planning Act requires every public or private water supplier who meets certain operational criteria to prepare, adopt, and submit to the State Department of Water Resources (DWR) an urban water management plan, and to update the plan at least every five years. The Agricultural Water Conservation and Management Act provides that agricultural water suppliers may institute water conservation and management programs. DWR assists agricultural water suppliers in implementing efficient water management practices to improve agricultural water use efficiency. Assembly Bill 225 and AB 3030 authorized local agencies which provide water service to adopt and implement groundwater management plans. Consequently, the County of Fresno and other local agencies have adopted groundwater management plans.

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) are responsible for ensuring implementation and compliance with the provisions of the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. Fresno County is situated within the jurisdiction of the Central Valley Region of the RWQCB (Region 5). The Central Valley

RWQCB (CVRWQCB) has the authority to implement water quality protection standards through the issuance of permits for discharges (Report of Waste Discharge) to waters at locations within its jurisdiction. Water quality objectives for the San Joaquin River and its tributaries are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the State Porter-Cologne Water Quality Control Act.

All discharges to surface water or groundwater within Fresno County are subject to the Basin Plan requirements for the area. The National Pollutant Discharge Elimination System (NPDES) permit system was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants. Nonpoint sources are diffuse and originate over a wide area rather than from a definable point.

In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity affecting five acres or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement Best Management Practices (BMPs) to reduce construction effects on receiving water quality by implementing erosion control measures. Additionally required structural BMPs include engineered features that provide some treatment, such as vegetative drainage ways, detention infiltration ponds, constructed wetlands, or filtration basins and sand filters. A BMP may be drainage area-wide or site-specific. Non-structural BMPs are typically non-engineered management measures such as administrative and education programs focused on pollution prevention and source control. Development projects would be required to incorporate structural BMPs appropriate to the type of development and land uses in the project site, taking into account local and regional drainage and water quality considerations.

Local

The Fresno County General Plan (2000) provides policies to protect and enhance the surface water and groundwater resources in the county. Policies contained in the Open Space and Conservation Element address broad water planning issues, groundwater recharge, the relationship of land use decisions to water issues, and water quality problems. Related policies are included in Flood Hazards, Water Supply and Delivery, Storm Drainage and Flood Control, Wetland and Riparian Areas, and River Influence Areas.

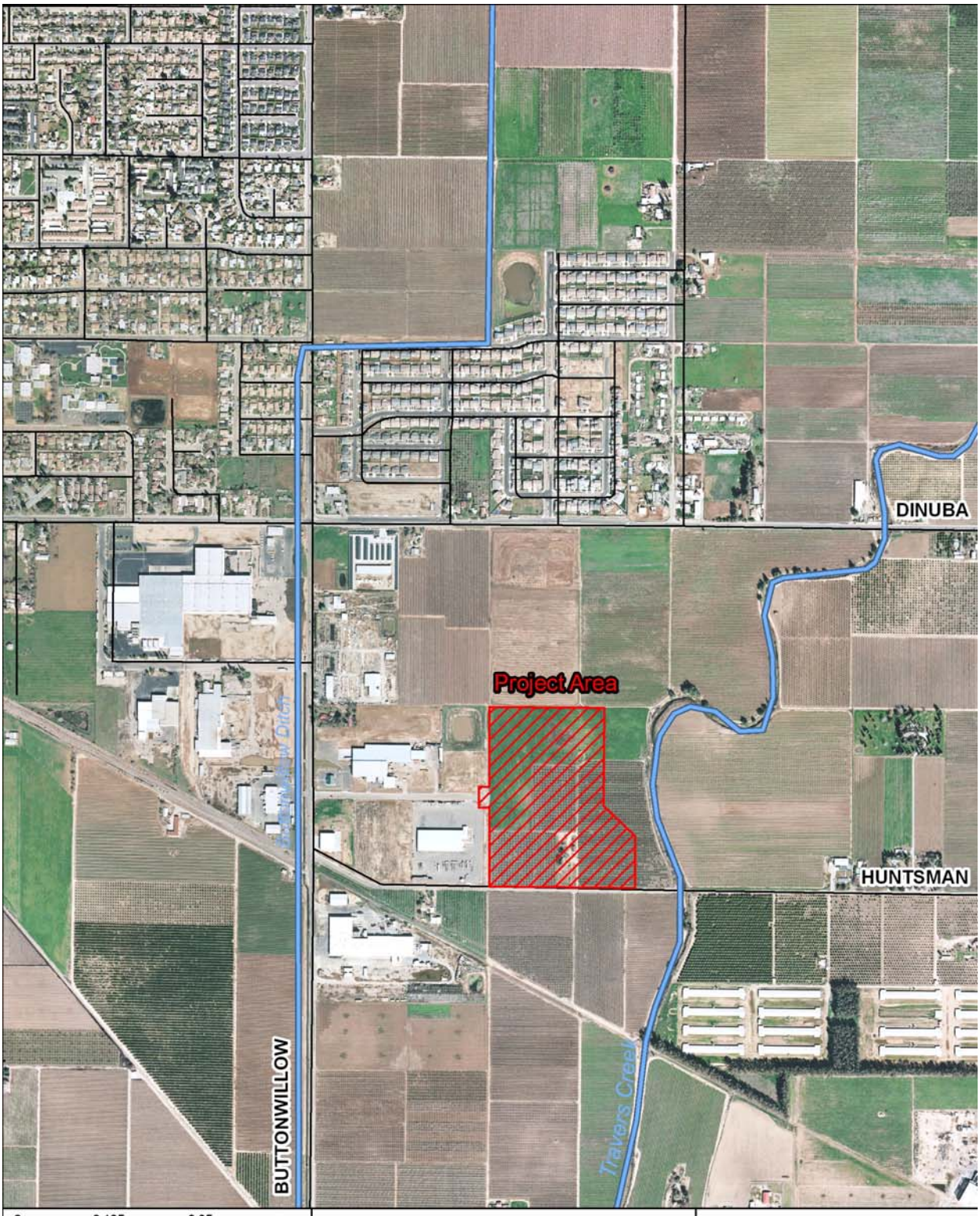
Setting

The topography of the project site is essentially flat, with slopes prior to agricultural land leveling averaging five feet to the mile toward the southwest. Waterways within Fresno County and near the project site are depicted on Figure 3.8-1. The project site is located approximately 200 feet west of the Travers Creek and approximately 1,300 feet east of the Buttonwillow Ditch.

The Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA) indicate that the project site is located outside of the 100-year flood zone, as depicted on Figure 3.8-2. The U.S. Army Corps of Engineers (Corps) is responsible for flood control in the Fresno County area.

The Alta Irrigation District (Alta ID), a California Irrigation District, provides surface water supply from the Kings River to Tulare, Fresno and a small portion of Kings Counties, and the towns of Dinuba and Reedley. Irrigation releases are from Pine Flat Reservoir and Millerton Lake. The District's diversion and storage rights are based upon riparian and appropriative claims, as well as contractual agreements and licenses granted by the State Water Resources Control Board and the U.S. Bureau of Reclamation.

Within the Kings River watershed, snowpack and rainfall provide extremely high quality water with low amounts of dissolved salts, resulting in high yields to occur on heavier soils without drainage issues. Alta ID continually monitors the water quality of surface water discharges within the groundwater basin to ensure water meets or exceeds the water quality regulations set forth by the Regional Water Quality Control Board (RWQCB). Municipal stormwater discharges into District facilities are regulated by permits between the discharger and the District.



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Surface Water Features

Figure 3.8-1

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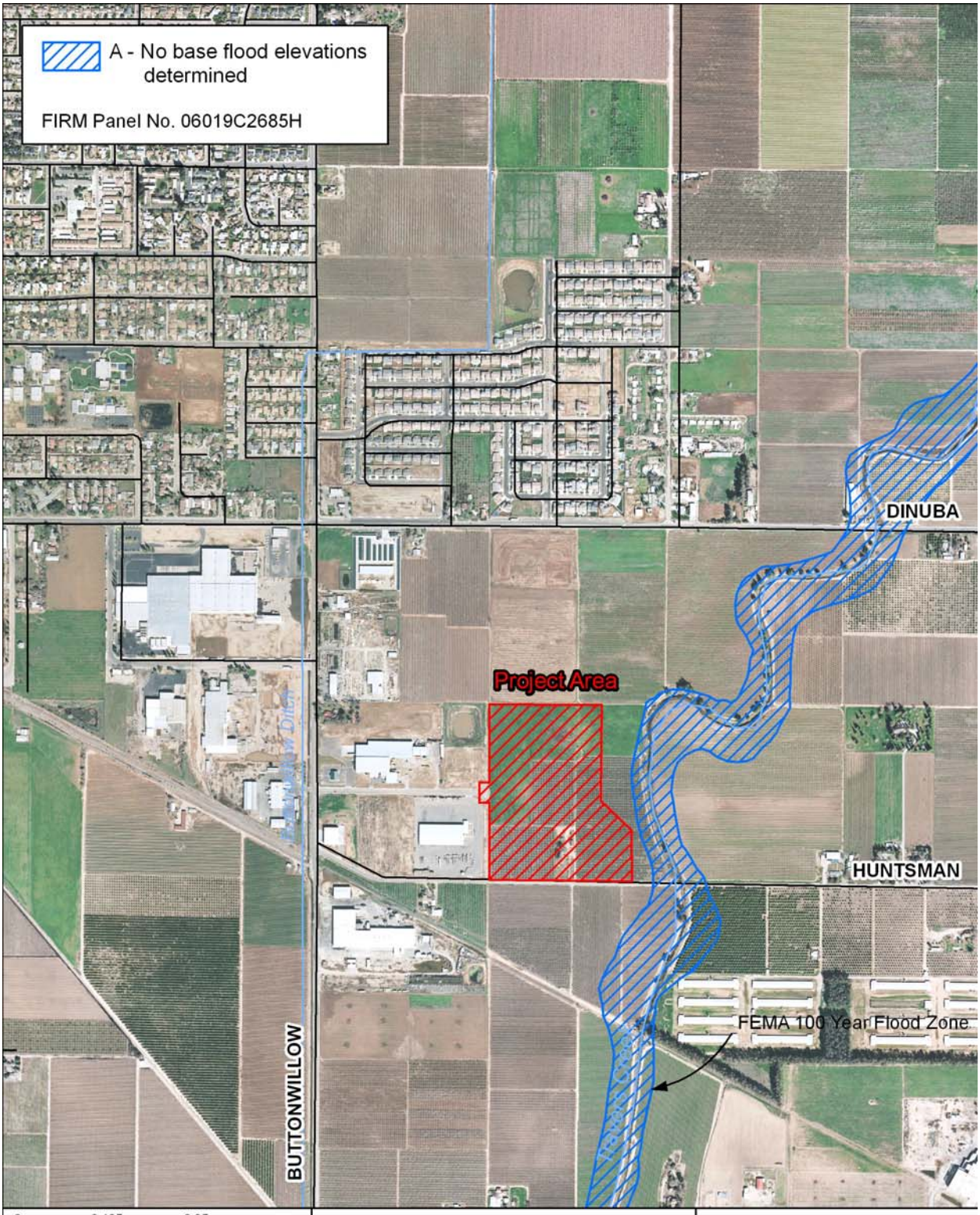

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FEMA Flood Zone

Figure 3.8-2

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Groundwater basin boundaries can be estimated based on subsurface geologic conditions and groundwater flow directions. In addition, groundwater quality can be considered (i.e. areas of unusable groundwater quality could be deleted from basin boundaries). Subsurface geologic conditions are important primarily because of constraints on attainable well yields and on groundwater development. Because of the recharge and pumping source locations, groundwater flow divides are important features. These divides are often related to boundaries of areas that have adequate surface water supplies, from which groundwater normally flows out toward cones of depression in other areas. Cones of depression are normally developed where concentrated pumping is present due to insufficient surface water supplies.

A single groundwater basin can be considered to be present in the San Joaquin Valley, and by extension, in the larger Central Valley. In general, permeable alluvial deposits are present in the Valley, and groundwater in these deposits is hydraulically connected to groundwater in other parts of the basin. The San Joaquin Valley is bounded on the east by the Sierra Nevada Mountains, comprised of hard rock. These mountains are the watershed which provides the source of most of the water that eventually recharges the groundwater in the Valley. This basin is also bound by the Coast Ranges on the west and the Transverse Range on the south.

A more detailed breakdown of the San Joaquin Valley Basin has been made by the California Department of Water Resources (DWR) in considering potentially and existing overdrafted groundwater basins in the State. Smaller basins are more useful in evaluating local groundwater conditions and management opportunities. The Kings Subbasin includes the area where water is distributed from the Kings River and its deltaic branches. The project site is located in the Kings Subbasin (see Figure 3.8-3).

Alta Irrigation District implemented a Groundwater Management Plan (1994) that covers its portion of the Kings River groundwater subbasin. The Groundwater Management Plan addresses both surface and ground water quality and supply, water monitoring policies, well drilling, groundwater banking, and water transfers.

In compliance with the Department of Water Resources monitoring policies, Alta ID has historically monitored groundwater levels within the District's boundaries. Groundwater contour mapping over the years has indicated an overall trend of declining groundwater level within the District, periodically interrupted by a short-term groundwater recovery.

Alta ID's Groundwater Management Plan indicates the quality of the groundwater within the Kings Subbasin is very good due to the recharge waters originating in the Kings River watershed. Sources of recharge to groundwater in the vicinity of the project site include seepage from the waterways (Kings River, Buttonwillow Ditch, and Travers Creek) and sheet-flow flooding and deep percolation of applied irrigation water.

Impacts

Impact #3.8.1 – Violation of Water Quality Standards or Waste Discharge Requirements [Evaluation Criteria (a)]

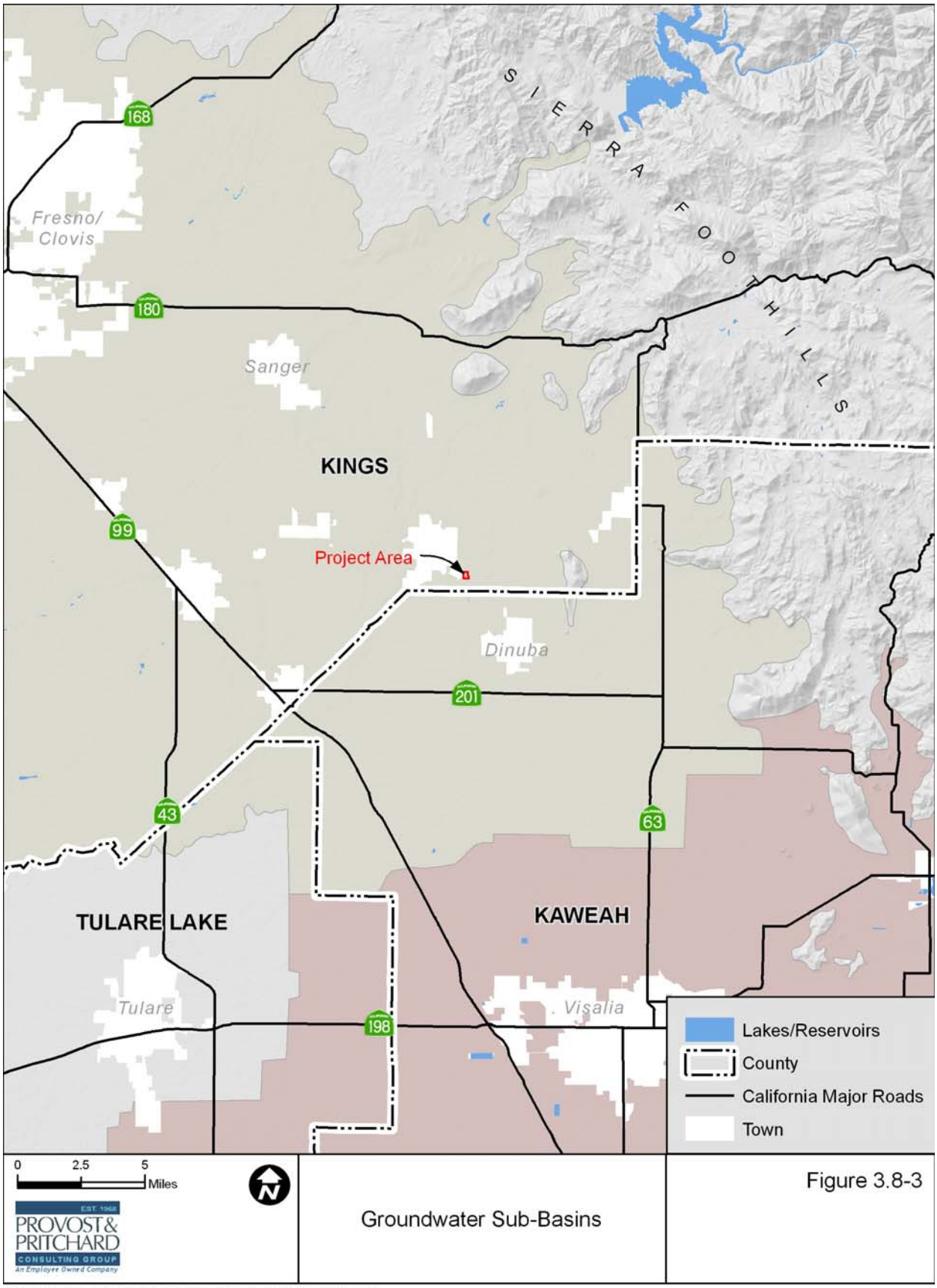
The proposed project would be subject to the regulations established in the statewide National Pollutant Discharge Elimination System (NPDES) general construction activity stormwater permit administered by the Regional Water Quality Control Board (RWQCB). Specific requirements include, at a minimum, best management practices for sediment control, construction materials control, site management, and erosion control. In addition, a SWPPP would be developed for construction materials and waste management as the project would require disturbance of more than one acre of land.

Conclusion

Compliance with federal, state and local waste discharge requirements will ensure that impacts regarding violation of water quality standards are less than significant.

Mitigations

None are required.



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Impact #3.8.2 – Depletion of Groundwater Supplies [Evaluation Criteria (b)]

Currently, the City of Reedley Public Works department and Kings Canyon Unified School District administrative office uses approximately 900,000 gallons per year. As there will be minimal expansion of either facility with the move to the new site, and as water conservation has been a basis of project design, the new facility will actually use less water than what is being used currently. On October 23, 2009, Russ Robertson, the City's Public Works director confirmed that the City has continued capacity to supply the project. The project proposes the use of various water conserving landscaping measures, including utilizing drought-tolerant plants for the majority of the landscaping and minimizing areas of turf grass. Water consumption of air-cleaning trees will be considered in landscaping decisions and native and drought tolerant trees will be incorporated where feasible. Plumbing decisions will consider water efficiency and water conserving technologies, including the use of low-flow and other water-conserving plumbing fixtures. Wastewater technologies, including recycling of wash water at wash station, are proposed for the project. No wells are proposed to be drilled or used as part of the proposed project.

Conclusion

The project will use the domestic water supply provided by the City's existing infrastructure system and will not substantially deplete groundwater levels or interfere substantially with groundwater recharge. The impact is less than significant.

Mitigation Measures

None are required.

Impact #3.8.3 – Drainage Pattern Alteration [Evaluation Criteria (c), (d)]

Impact Description and Evaluation

To reduce runoff and minimize stormwater drainage, the project anticipates the use of pervious concrete at select areas, possibly including tree wells, parking stalls or the perimeter of parking areas. Swales will likely be incorporated at drainage perimeters of paved surfaces. If it is feasible and practical, the project also proposes to incorporate a modular green roof system. The project's stormwater and wastewater discharges will be directed to the City of Reedley's stormwater basin located adjacent to and west of the project site. The basin, located in the City's Redevelopment Area, was developed in anticipation of the transportation project. The storm drainage basin is currently 2.24 acres, with an additional 2.3 acres to be developed to accommodate the transportation facility at full project build-out.

Conclusion

The project will not alter or impact any natural channel in the vicinity as the nearest waterway, Travers Creek, is located at least 200 feet east of the project site and does not border the site's perimeter. The project will be engineered to comply with the County storm drainage and flood control improvement standards to ensure adequate drainage occurs without causing significant siltation or erosion impacts on or off-site. Construction-related activities will be subject to compliance with requirements for demolition and grading permitting under the County Building Ordinance. Discharge requirements of applicable state and federal regulations, such as the State General Construction Activity Stormwater Permit and the National Pollution Discharge Elimination System (NPDES), as well as the use of feasible and practical best management practices (BMPs), will be implemented to reduce potential impacts to a level of less than significant.

Mitigation Measures

None are required.

Impact #3.8.4 – Surface Runoff Increase or Water Quality Degradation [Evaluation Criteria (e), (f)]

Impact Description and Evaluation

The project is subject to compliance with the State General Construction Activity Stormwater Permit to ensure the construction-related impacts, such as clearing, grading and disturbances to the ground, are reduced to acceptable levels to protect stormwater runoff. Compliance with the permit would involve filing a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and preparing a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. To ensure compliance with adopted regulations, construction Best Management Practices (BMPs) would be implemented. BMPs can include a variety of methods to eliminate or reduce non-storm water discharges to receiving waters, by scheduling or limiting activities to certain times of year, prohibitions of practices, maintenance procedures, and/or other management practices to prevent or reduce pollution.

Conclusion

Potential impacts to surface water and polluted runoff on and off-site would be reduced with compliance with state and local wastewater discharge regulations and with county drainage improvement requirements for site development. The impact is less than significant.

Mitigation Measures

None are required.

Impact #3.8.5 – 100-year Flood Hazards [Evaluation Criteria (g), (h)]

The proposed transportation facility is not within a 100-year flood hazard zone (Figure 3.8-2). The project will not place housing within a flood hazard area.

Conclusion

The proposed project will require temporary construction and ground disturbance; however potential flood flows redirected due to the project's development do not affect a 100-year flood hazard area, as the site is located outside the 100-year flood zone. There is no impact.

Mitigation Measures

None are required.

Impact #3.8.6 – Dam Failure, Seiche, Tsunami, Mudflow [Evaluation Criteria (i)]

Impact Description and Evaluation

The Fresno County General Plan (2000) indicates that the proposed project site is located on the edge of the projected inundation area for Pine Flat Dam, located on the Kings River, approximately 25 miles northeast of Reedley. The topography of the area and the abundant rivers and irrigation channels near the proposed project site will direct potential flood flows away from the project.

The proposed project site is not located near a body of water that could generate seiche or tsunami impacts. Site topography, which is essentially level, does not permit mudflow events.

Conclusion

As the project is approximately 25 miles west of the nearest dam and there is no large water body nearby, any impacts resulting from dam failure, mudflow, seiche or tsunami would be less than significant.

Mitigation Measures

None are required.

3.9 Land Use and Planning

Introduction

The purpose of this section is to identify and evaluate potential project-specific impacts to land use and local land use policies that would result from the proposed project and its alternatives.

Impact Evaluation Criteria

Pertinent criteria for evaluation of land use and planning impacts are:

Would the project:

a) *Physically divide an established community?*

b) *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, zoning ordinance) adopted for the purpose of avoiding or mitigating and environmental effect?*

Regulatory Framework

The Fresno County General Plan identifies the site as within the Eastside Valley Area geographic area boundary. The General Plan identifies the project site, as well as the surrounding lands to the north, east and south, for agricultural use. Properties adjacent to and west of the project site are located within the City of Reedley and are designated by the City of Reedley General Plan for industrial uses.

The project site is not located within the Williamson Act Contract Lands boundaries, according to the Williamson Act Contract Lands in Reedley Map (December, 2008). According to the Reedley City Clerk's records, the site was removed from contract by a Resolution to Protest, Document No. 96148774, dated November 5, 1996.

According to the Fresno County Zoning Maps, the site is zoned AE-20 (Exclusive Agricultural – 20 acre minimum) (seen in Figure 3.2-1). The County Zoning Ordinance defines the "AE" District as an exclusive district for agriculture and for those uses which are necessary and an integral part of the agricultural operation. Surrounding sites are zoned MH (Heavy Industrial), ML (Light Industrial), and MP (Planned Industrial) within the City of Reedley limit, and AE-20 within the County.

The Zoning Ordinance specifies governmental facilities are allowed in the AE District with approval as an Unclassified Conditional Use, pursuant to the Fresno County Zoning Ordinance, §853.B.7. Public facilities are allowed pursuant to §853.B.14 for "public utility and public services, structures, uses and buildings".

Setting

The project site is located within Fresno County, east of Buttonwillow Avenue (Road 64) and north of East Huntsman Avenue, situated approximately 500 feet west of the Travers Creek channel.

The project area is generally bounded by Dinuba Avenue to the north, Englehart Avenue to the east, Floral Avenue to the south, and Buttonwillow Avenue to the west.

The project will span 27 acres of a 36.62-acre site located in a predominantly agricultural-based area. Existing land uses in the study area are characterized by a mixture of rural residential, agricultural, and industrial uses. The project site is currently occupied by orchards and row crops. The properties adjacent to and west of the project site, known as Reedley Industrial Park, are comprised of Maxco Packaging, fresh produce packaging company and a produce shipping company. Within a half-mile radius of the project site, there exists an irrigation supply company, a plant nursery, a mini-storage facility, a furniture outlet store, a cold storage facility, a poultry farm facility, a fruit packing company, other farming operations, orchards, approximately 16 rural single-family residences, and a subdivision with approximately 250 single-family residences. The nearest off-site residence is approximately 1,200 feet southwest of the proposed facility location.

Impacts

Impact #3.9.1 – Division of an Established Community [evaluation criteria (a)]

Impact Description and Evaluation

The location of the proposed transportation center is adjacent to the City of Reedley limit and one-quarter mile outside the nearest established community.

Conclusion

The proposed transportation center will not divide an established community. There is no impact.

Mitigation Measures

None are required.

Impact #3.9.2 – Land Use Policy/Zoning Conformance [Evaluation Criteria (b)]

Impact Description and Evaluation

The project site will be renovated and reconfigured to accommodate proposed public and industrial-based facilities (corporate yard with alternative and renewable fueling stations, bus washing facility, administrative offices, educational center, district maintenance service bays, and fleet storage). The existing industrial-based land uses in the project area decrease the potential for land use impacts by the proposed transportation facility. Introducing a new transportation facility to the subject area would not create a substantially different land use that would significantly impact residential development or physically divide an established community, since all of the existing residences within the study area are rural and sparsely located. The project site is also surrounded by existing agricultural uses, which include row crops and orchards. The proposed transportation facility, being a public service facility with an industrial nature, will not be as compatible with existing residential and agricultural uses within the study area, as with those existing in the adjacent industrial park (i.e., packing and shipping facilities), and an Unclassified Conditional Use Permit would be approved by the Fresno County Planning Commission to ensure the project would be compatible with zoning objectives and with the surrounding land uses.

Conclusion

The project is in compliance with the goals, policies and objectives of the County's General Plan, as discussed above. The project is consistent with zoning regulations subject to conditional use permit approval. No significant environmental impact will occur with development of the proposed project that would conflict with implementation of the land use policies.

Mitigation Measures

None are required.

3.10 Noise

Introduction

This section discusses existing noise levels at the project site and adjacent to the site, noise levels resulting from construction and noise levels resulting from operation activities.

Impact Evaluation Criteria

Evaluation criteria for noise impacts are determined by evaluating whether the project will result in:

a) *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinances, or applicable standards of other agencies;*

b) *Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;*

c) *A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;*

d) *A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;*

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels;*

f) *For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels*

Setting

The proposed project site is located on 27 acres in an unincorporated area in Fresno County, just outside the eastern City Limits of Reedley. The project site is surrounded by agricultural and industrial land uses, primarily orchards, row crops and packaging facilities. Sensitive noise receptors located in the vicinity of the proposed transportation center consist of rural farm residences. The nearest off-site residence is approximately 1,200 feet southwest of the proposed facility location.

The Fresno County General Plan (2000) states that *"Noise is subjectively defined as unwanted sound. Sound is technically described in terms of amplitude (loudness) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against frequencies in a manner approximating the sensitivity to the human ear."* Table 3.10-1 demonstrates noise levels acceptable in Fresno County.

Table 3.10-1
Fresno County General Plan – Land Use Compatibility for Community Noise Exposure

Land Use	Normally Acceptable	Conditionally Acceptable	Generally Unacceptable	Land Use Discouraged
Residential, Single-family	50-60	55-70	70-75	75-85
Residential, Multi-family	50-65	60-70	70-75	75-85
Office Buildings, Commercial	50-70	68-78	75-85	
Industrial, Utilities, Agriculture	50-75	70-80	75-85	

Interpretation:

Normally acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Generally unacceptable – New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
Land Use Discouraged – New construction or development should generally not be undertaken.
Source: Fresno County General Plan (2000)

Impacts

Impact #3.10.1 – Short-Term Construction Noise [Evaluation Criteria (a), (d)]

Impact Description and Evaluation

The project operation would generate noise over a long period of time. Short-term project construction would involve temporary noise sources associated with general construction activity. Typical construction equipment would include backhoes, excavators, loaders and miscellaneous equipment (i.e. pneumatic tools, jack hammer, mechanical vibrators). Typical noise levels generated by this type of construction equipment at various distances from the noise source are listed in Table 3.10-2 below:

Table 3.10-2
Typical Construction Noise Levels

Construction Equipment Noise Source	dBA at 50 ft	dBA at 100 ft	dBA at 1.0 mile
Pneumatic tools	85	79	45
Truck (e.g. dump, water)	88	82	48
Concrete mixer (truck)	85	79	45
Backhoe	85	79	45

Source: Borba Farms Dairy EIR, BASELINE Consulting, 1999, Cunniff 1977

Noise levels generated by the equipment would range from 85 to 88 dBA at a distance of 50 feet from the noise source; at 100 feet, the noise levels would range from 79 to 82 dBA.

Conclusion

Construction noise at the nearest residence, 1,200 feet away, would not exceed the Fresno County General Plan (2000) noise standards of 60 dBA. Additionally; any construction noise would be temporary in nature. The impact is less than significant. To further reduce any potential noise impacts, the following mitigation measure is included.

Mitigation Measures

Noise producing equipment used during construction and operation shall be restricted to the timeframe of 7:00 am to 7:00 pm, Monday through Friday, and 7:00 am to 6:00 pm on Saturday, Sunday and holidays. Construction outside of these hours shall require written approval by the County of Fresno.

Effectiveness of Mitigation Measures

Implementation of the above mitigation measure will ensure that the potential impact remains less than significant.

Monitoring and Implementation

Both implementation and monitoring shall be the responsibility of the applicant.

Impact #3.10.2 – Vibration Impacts
[Evaluation Criteria (b)]

Impact Description and Evaluation

The Federal Railway Administration (FRA) and the Federal Transit Administration (FTA) have published guidance relative to vibration impacts. According to the FRA, fragile buildings can be exposed to ground-borne vibration levels of 0.5 peak particle velocity (PPV) without experiencing structural damage (FRA, 1998). The FTA has identified the human annoyance response to vibration levels as 80 root mean square amplitude (RMA) (FTA, 1995).

The project would involve temporary vibration sources associated with general construction activity. Typical vibration levels generated by generic construction equipment a distance of 50 feet from the vibration sources are listed below:

Table 3.10-3
Typical Vibration Levels

Construction Equipment Noise Source	PPV at 50 ft (inches/second)	RMA at 50 ft
Large Bulldozer	0.031	81
Caisson drilling	0.031	81
Loaded trucks	0.027	80

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, April 1995

Vibration from construction activities would not exceed the FTA or FRA threshold for the nearest residence, approximately 1,200 feet away from the project site.

Conclusion

The impact is less than significant.

Mitigation Measures

None are required.

Impact #3.10.3 – Operational and Traffic Noise
[Evaluation Criteria (a), (c)]

Impact Description and Evaluation

The project includes the housing and operation of a transportation facility, which would house and operate 110 buses (both diesel and CNG) and 35 fleet vehicles for the District and 47 trucks and 17 fleet vehicles for the City of Reedley. Associated facilities include a maintenance yard and bus wash. According to Table 3.10-2, noise created by diesel driven trucks (e.g. concrete mixer) registered at 45 dBA at 1 mile. Noise emanating from the maintenance yard and bus wash is expected to be less than that of a diesel driven truck.

Conclusion

The nearest residence is 1,200 feet (¼ mile) from the project site, which would place the level of noise exposure within the conditionally acceptable threshold of 55 to 70 dBA for residential uses. The impact is less than significant.

Mitigation Measures

None are required.

Impact #3.10.4 – Airport Noise
[Evaluation Criteria (e), (f)]

Impact Description and Evaluation

The Reedley Municipal Airport is located near the intersection of Reed Avenue and Central Avenue, approximately six miles north of the project site. It is a relatively small, uncontrolled airport, with approximately 50 planes stored on site. The Kings River Community College Airport is located near the intersection of Reed Avenue and Manning Avenue, approximately 2.25 miles northwest of the project site. It is a small, uncontrolled airport, with only one plane stored on site.

Conclusion

The noise impacts to the facility from nearby airports are expected to be minimal. The impact is less than significant.

Mitigation Measures

None are required.

3.11 Population and Housing

Introduction

This section discusses ways in which the project could directly or indirectly foster economic or population growth, along with the existing population and housing setting, and project-related impacts.

Impact Evaluation Criteria

Evaluation criteria for population and housing impacts are determined by evaluating whether the project would:

a) *Cumulatively exceed official regional or local population projections;*

b) *Substantially change the demographics in the area;*

c) *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);*

d) *Substantially alter the location, distribution, or density of the area's population;*

e) *Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere;*

f) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere;*

g) *Conflict with adopted housing elements?*

Setting

The project site and surrounding lands are established with agricultural and industrial-type uses, zoned AE-20 (Exclusive Agriculture) for those properties located in the Fresno County area and "Light Industrial" for properties within the City of Reedley's boundary. There are approximately 46 off-site rural residences within one mile of the project site, and approximately 212 single family residential subdivision units approximately one-half to one mile north of the site. The project site is currently vacant and surrounded by orchards and seasonal row crops.

The project site will be renovated and reconfigured to accommodate proposed public and industrial-based facilities (transportation center with alternative and renewable fueling stations, bus washing facility, administrative offices, educational center, district maintenance service bays, and fleet storage). The proposed transportation facility will serve the Kings Canyon Unified School District area, covering approximately 600 square miles. The City of Reedley will also house its Public Works Department and associated vehicle maintenance yard at the project site.

The U.S. Census Bureau website indicates that the current population of Fresno County is estimated to be 909,153. The City of Reedley has a population of approximately 26,000 and lies adjacent to and west of the project site.

Impacts

Impact #3.11.1 – Population Impacts [Evaluation Criteria (a), (b), (c), (d)]

Impact Description and Evaluation

The project will create a new transportation facility for joint school district and municipality use, which will include a corporate yard with alternative and renewable fueling stations, a bus washing facility, administrative offices, an educational center, district maintenance bays, fleet storage, and eventual hydro electric and solar electric vehicle charging stations. Both Kings Canyon Unified School District and the City of Reedley will retain their current workforce at the new site and create approximately 30 additional jobs for the new facility.

Since the project would support existing personnel and only approximately 30 new jobs are anticipated, there would be no regional or local population growth-related impacts as it is likely that employees would be drawn from the local workforce, due to the area's high unemployment rate. Construction activities resulting from project implementation would be considered short term and temporary, and the project construction would not substantially affect the employment patterns in the area. Secondary effects of increased demand for housing and for goods and services that would support new and expanding business would not be created, and no substantial growth in the area's population would occur, as a result of the project.

The project would not remove any regulatory or physical obstacles to growth. The proposed transportation facility would be independent and centralized by collectively housing various infrastructure and services in one location. The project would not indirectly induce a substantial growth in the area's population nor would the project substantially alter the location, distribution, or density of the population in the area.

Conclusion

The project will not result in potential impacts that would cumulatively exceed the regional or local population levels projected on a regional or local scale, or substantially change the demographics in the area. Therefore, potential impacts by the project to population and the housing level are considered to be less than significant.

Mitigation Measures

None are required.

Impact #3.11.2 –Housing Impacts
[Evaluation Criteria (e), (f), (g)]

Impact Description and Evaluation

The project will displace one single family residence that currently exists on the site. No other dwellings will be relocated or demolished as a result of the project; consequently there is no conflict with the current housing element

Conclusion

In order to construct the proposed transportation center, there will an impact due to removal of one residence from the project site, which is considered to be less than significant.

Mitigation Measures

None are required.

3.12 Public Services, Utilities and Energy

Introduction

Development of private land can have an impact on needed public services. This section describes the potential impacts that might occur as a result of the proposed transportation center.

Impact Evaluation Criteria

Evaluation criteria for public service impacts are determined by evaluating whether the project will:

a) *Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*
   - Fire protection?
   - Police protection?
   - Schools?
   - Parks?
   - Other public facilities?

b) *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

c) *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

d) *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

e) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

f) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

g) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?*

h) *Comply with federal, state, and local statutes and regulations related to solid waste?*

i) *Exceed the capacity of an Energy supplier to provide the project's energy needs?*

Regulatory Framework

California Building Standards Code

The California Building Standards Code establishes building requirements for construction and renovation. The most recent version of the California Building Standards Code was adopted in 2007 by the California Building Standards Commission and took effect January 1, 2008. It is based on the International Code Council's Building and Fire Codes. Included in the California Building Standards Code are the Electrical Code, Mechanical Code, Plumbing Code, Energy Code, and Fire Code.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill 939, the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent in 1995 and 50 percent in 2000; established a comprehensive

statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The standards were updated in 2005 and set a goal of reducing growth in electricity use by 478 gigawatt-hours per year (GWh/y) and growth in natural gas use by 8.8 million therms per year (therms/y). The savings attributable to new nonresidential buildings are 163.2 GWh/y of electricity savings and 0.5 million therms. For nonresidential buildings, the standards establish minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., HVAC and water heating systems), indoor and outdoor lighting, and illuminated signs.

Setting

Located in the unincorporated area of Fresno County and adjacent to the City of Reedley city limit, fire protection is provided in a dual capacity by the City of Reedley Fire Department and the Fresno County Fire Protection District. The project site is within a 5-mile response perimeter of the County's area fire station located in Kingsburg.

The Fresno County Sheriff's Department patrols the project area from the substation located in Selma, approximately 12 miles west of the project site. The nearest school is the Monte Vista School (high school) within the City limits of Reedley, which is located approximately 1.5 miles west of the project site. The nearest public park in the Reed City Community Center, located approximately 1.25 miles west of the project site. The project will be served by the American Avenue landfill, which is approximately 40 miles to the west.

The Reedley Municipal Water System draws water from the underground water table with eight wells, one of which is used only as a standby. The wells pump directly into the system which includes two elevated 50,000 gallon storage tanks, which 'float' on the system and provide a control function. Between 1980 and 2000, per capita water usage reduced from 294 gal/capita/day to 213 gal/capita/day. The 2000 Urban Water Management Plan has stated that the Reedley Municipal Water System will continue to meet future water demand with a combination of increased pumping capacity and treatment to keep existing wells on line and continued water conservation measures to moderate demand.

The electrical provider for the project is Pacific Gas and Electric and the natural gas provider is Southern California Gas.

Impacts

Impact #3.12.1 – Public Services Impacts [Evaluation Criteria (a)

Impact Description and Evaluation

The project will create a new transportation facility for joint school district and municipality use, which will require fire, police protection, and other emergency services. The proposed project is not expected to result in a net increase in the number of calls for fire protection and emergency response. The Fresno County Fire Protection District and City of Reedley have a joint agreement to serve the outlying area of the City limit [personal communication with Captain Steve Hubbard, Sanger Station 84 Headquarters Facility, June 2009].

The proposed project will likely result in no net increase in the number of calls for police protection and emergency response.

School impacts are likely to be minimal as the potential employees are most likely to be drawn from the existing work force in nearby Reedley and Dinuba. Since the project does not include the construction of new housing, it will not directly add to school crowding.

The proposed project will not result in any net increase in usage of public parks in the area, since the project is likely to draw from existing work force in Reedley and Dinuba.

No other public services will be affected by the project.

Conclusions

Any potential increase of public services is anticipated to be met by existing services. The increased tax revenue and service fees associated with such development would reduce any potential impact to a less than significant level.

Mitigation Measures

None are required.

Impact #3.12.2 – Impacts to Existing Infrastructure Capacity
[Evaluation Criteria (b)(c)(d)(e)(f)(g)(h)]

Impact Description and Evaluation

The City of Reedley will provide water and sewer connections to the project and the Russ Robertson, the City Public Works Director, has confirmed that the City has capacity to do so. Wastewater treatment requirements of the existing wastewater treatment plant will not be exceeded. The project includes expanding the existing stormwater basin, as described in Impact 3.8.3. Water supply availability has been discussed in Impact 3.8.2. No new waste will be generated, and no net increase of water demand or sewage generation is expected, as this project is a relocation of existing facilities.

Conclusions

No new waste will be generated, as this project is a relocation of existing facilities. The project will be in compliance with all federal, state, and local waste discharge requirements and will create a less than significant with regards to existing infrastructure capacity.

Mitigation Measures

None are required.

Impact #3.12.3 – Energy Impacts
[Evaluation Criteria (i)

Impact Description and Evaluation

The project includes relocating the existing District Transportation facility and existing City of Reedley Public Works Department to the project site. Approximately 18% of the proposed project's electrical need will come from the 1.2 megawatt (MW) solar array. Under optimal environmental conditions (temperature and sunlight exposure), the array will produce 1,650 MW annually (or an average of 137.5 MW per month). The new facilities estimated annual usage will be 9,000 MW per year.

Conclusions

The project will not significantly impact local or regional energy supply nor peak and base period demands for electricity as the project will exceed Title 24 requirements, will generate electricity onsite, and will be constructed and operated with energy saving practices. The impact is less than significant.

Mitigation Measures

None are required.

3.13 Recreation

Introduction

The Open Space and Conservation Element of the Fresno County General Plan (2000) establishes a system of public areas and sites for recreation, including natural preserves, local, state and federal parks, playgrounds and other recreation areas. Goals, policies, and implementation measures under Parks and Recreation and Recreational Trails Element address recreational resources while seeking to enhance the recreational opportunities in the county by encouraging future development of public and private recreation lands, and funding thereof. This section evaluates any impacts the project might have on existing or proposed recreational facilities.

Impact Evaluation Criteria

Evaluation criteria for recreation impacts are determined by evaluating the following questions:

a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

Setting

The Sierra Nevada mountain range covers the northeastern half of Fresno County and contains large state and federal recreational areas. On the valley floor, the primary recreational facilities include city and county parks, historic and cultural sites, and sports/recreational centers.

Within the project vicinity, the nearest parkland and recreational facilities include the “Reedley Trail” along the old AT&SF railroad corridor between Reedley and the Tulare County line, the proposed Kings River Access Park south of Reedley along the Kings River, and the Kings River Greenbelt Park, located northeast of Reedley.

Impacts

Impact #3.13.1 – Impacts to Recreational Facilities [Evaluation Criteria (a), (b)]

Impact Description and Evaluation

The project will create a new transportation facility for joint school district and municipality use, which will include a corporate yard with alternative and renewable fueling stations, a bus washing facility, administrative offices, an educational center, district maintenance bays, fleet storage, and future hydro electric and solar electric vehicle charging stations. The project will not increase the use of current recreational facilities as any new employment opportunities would be filled by the local work force. The project does not include the construction of new, or expansion of, recreational facilities.

Conclusions

The project will not create any impact to recreational facilities in the area.

Mitigation Measures

None are required.

3.14 Transportation and Traffic

Introduction

This section of the Draft EIR will describe the traffic-related operations of the proposed transportation center and evaluate its transportation and traffic impacts. A traffic impact study was conducted by TPG consulting analyzing any potential impacts to transportation and traffic in the project area (Appendix F).

Impact Evaluation Criteria

Evaluation criteria for transportation and traffic impacts are determined by evaluating whether the project would:

a) *Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);*

b) *Exceed, either individually or cumulatively, a level of service standard established by the County Circulation Element;*

c) *Result in a change in air, traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;*

d) *Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses, hazards, or barriers for vehicles, pedestrians, or bicyclists;*

e) *Result in inadequate emergency access;*

f) *Result in inadequate parking capacity;*

g) *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks);*

In addition to general CEQA requirements, projects involving school site acquisition to be funded under the state School Facilities Program must also satisfy several specific requirements established in the California Education Code and California Code of Regulations as seen below:

h) *Pose a safety hazard due to the placement of a proposed school site adjacent to or near a major arterial roadway or freeway?*

i) *Result in inadequate vehicular access due to less than minimum peripheral visibility at school driveways*

j) *Place a proposed school site within 1,500 feet of a railroad track easement?*

Setting

The project site is located within Fresno County, just outside the eastern City Limits of Reedley. The project site is located approximately one-quarter of a mile east of Buttonwillow Avenue (Road 64) and is bounded on the south by East Huntsman Avenue. Primary access to the project site is proposed to be on Olson Avenue, a local road extending eastward from Buttonwillow Avenue, an arterial road, to the project site. Secondary access will be by a project driveway extending north from Huntsman Avenue, a local road.

The nearest major intersection, Buttonwillow Avenue and Dinuba Avenue, an arterial-to-arterial intersection planned in the near future to be upgraded with the installation of a one-lane roundabout to meet the level of service standard adopted by the City of Reedley, is located approximately one-half mile northwest of the project site,. The nearest highway, State Highway 99, is located approximately eight miles southwest of the City of Reedley.

Currently, there is a Class I bike lane on Dinuba Avenue, east of Buttonwillow Avenue. According to the Reedley Bicycle Transportation Plan (2005), a Class III bike route is planned along Buttonwillow Avenue, east of Dinuba Avenue. A Class II bike lane is planned along Buttonwillow Avenue north and south of

Dinuba Avenue. A Class II bike lane provides a striped lane for one-way bicycle travel along a street or highway, while a Class III bike route calls for a shared lane with automobiles traveling in the same direction.

Policy TR-A-2 of the Fresno County General Plan (2000) states that the County shall plan and design its roadway system in a manner that strives to meet LOS D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county. The City of Reedley has adopted LOS C as their standard.

The Traffic Impact Study (Appendix F) analyzed the following intersections:

- Buttonwillow Avenue at Dinuba Avenue
- Buttonwillow Avenue at Olson Avenue
- Buttonwillow Avenue at Huntsman Avenue
- Project Driveway at Huntsman Avenue

Impacts

Impact #3.14.1 – Traffic Increase vs. Road Capacity Exceedance of LOS Standard [Evaluation Criteria (a), (b)]

Impact Description and Evaluation

All operations for the proposed facility will be relocated from several existing sites within the City of Reedley. The proposed project will combine the current daily operations of the Kings Canyon Unified School District and the City of Reedley Public Works Department. Additional entities will also use the facilities to fuel and/or store and maintain their fleets. The project trip generation information was developed from operational statements from the District and the City. All operations for the proposed facility will be moved from several existing sites within the City of Reedley. Table 3.14-1 shows the projected number of daily, AM and PM peak hour trips that would be generated by the various project components. Since the project is anticipating providing fueling and other services to additional entities, some growth is assumed for Project operations by 2030. Since the exact nature and timing of additional trips is unknown, a 20% growth factor was applied to the "Existing" trip generation to develop the proposed 2030 project trip generation.

Table 3.14-1 Project Trip Generation Data

Uses	Daily (trips)	AM Enter (trips)*	AM Exit (trips)*	PM Enter (trips)*	PM Exit (trips)*
KCUSD Busses	310	31	20	34	34
KCUSD Motor-Pool	12	2	2	1	1
KCUSD Service Vehicles	120	6	3	3	6
KCUSD Office Personnel	56	0	0	0	0
City of Reedley DPW Staff	144	32	0	0	32
Garbage Trucks	16	0	0	0	0
Dial-a-Ride	50	0	0	0	0
Police Department	Unknown	2	2	2	2
H&S Trucking	50	2	2	2	2
Total 'Existing' Project Trips	790	77	29	42	77
Total 2030 Project Trips	948	92	34	50	92

KCUSD = Kings Canyon Unified School District

DPW= Department of Public Work

*Many of the project components operate on schedules outside the typical weekday schedule. For example, the City of Reedley garbage trucks operate between 4:30 AM and 12:00 PM. Therefore certain components may not typically generate trips during the AM and PM peak hours.

The intersections were analyzed for the existing plus project levels of service and can be seen in Table 3.14-2.

Table 3.14-2 2030 Project Conditions Analysis

Intersection	AM Peak LOS	AM Delay per Vehicle (secs)	PM Peak LOS	PM Delay per Vehicle (secs)
Buttonwillow at Dinuba Avenue	A	8.9	A	9.6
Buttonwillow Avenue at Olson Avenue				
• NB Left-through	A	0.0	A	0.2
• SB Left-Through-Right	A	3.4	A	1.7
• EB Approach	C	15.6	C	17.4
• WB Approach	B	11.2	B	14.0
Buttonwillow Avenue at Huntsman Avenue				
• SB Left-Through	A	0.4	A	0.4
• WB Approach	A	9.5	B	10.6
Project Driveway at Huntsman Avenue				
• EB Left-Through	A	1.8	A	1.1
• SB Approach	A	8.4	A	8.6

Secs=seconds NB= northbound SB=southbound
EB=eastbound WB=westbound

Conclusion

All of the study intersections are currently operating and are projected to continue to operate at or above the City of Reedley and Fresno County's adopted level of service standard. The impact is less than significant.

Mitigation Measures

None are required.

Impact #3.14.2 – Change in Air Traffic Patterns [Evaluation Criteria (c)]

Impact Description and Evaluation

The project will not involve any changes in air traffic patterns.

Conclusion

There is no impact.

Mitigation Measures

None are required.

Impact #3.14.3 – Safety Hazards [Evaluation Criteria (d), (h), (i), (j)]

Impact Description and Evaluation

There is a potential for increased risk of accidents involving bus and truck traffic turning into or exiting the project site from or to Buttonwillow Avenue, a 45 mile per hour arterial roadway, at both the Olson Avenue intersection and at the Huntsman Avenue alignment.

The project site is 2,762 feet northeast of the nearest railroad track easement.

Conclusion

There are no sight distance impediments at the Buttonwillow Avenue/Olson Avenue, the Buttonwillow Avenue/Huntsman Avenue or the Project Driveway/Huntsman Avenue intersections. The proposed project-generated traffic will not create traffic volumes warranting new traffic signals on Buttonwillow Avenue. The impact is less than significant.

Mitigation Measures

None are required.

Impact #3.14.4 – Emergency Access Adequacy, Parking Capacity Adequacy, Road Deterioration, Alternative Transportation Policies [Evaluation Criteria (e), (f), (g)]

Impact Description and Evaluation

There is no discernible or possible project effect on emergency access or alternative transportation formats. Adequate onsite parking is provided in the project design.

Conclusion

There is no impact.

Mitigation Measures

None are required.

Chapter Four

PROJECT ALTERNATIVES

CHAPTER FOUR – EVALUATION OF ALTERNATIVES

Introduction

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen one or more of the significant effects of the project, and evaluate the comparative merits of the alternatives (14 CCR 15126.6). The range of alternatives to be considered is governed by a rule of reason and the lead agency is responsible for identifying a range of reasonable, potentially feasible alternatives for consideration in the EIR.

It is the objective of the project to construct and operate a solar-powered Central Valley Regional Transportation Center from which the Kings Canyon Unified School District and City of Reedley Public Works Department would operate from. The project would combine the current daily operations of the District transportation facilities and the City Public Works Department into one facility in compliance with applicable laws and regulations, utilizing the available land resource, and mitigating any environmental impacts to the extent feasible and as required by CEQA.

Among the factors that may be taken into account in addressing the feasibility of alternatives are site suitability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, and jurisdictional boundaries. Another is whether the proponent owns, or can reasonably acquire, control or otherwise have access to an alternative site. [14 CCR 15126.6(f)(1)].

Several possible alternatives were eliminated from further consideration in this EIR as infeasible. Alternative sites outside the San Joaquin Valley were eliminated, despite the fact that such siting might theoretically lessen the incremental effects of air emissions and potential air quality cumulative effects; such sites are outside the jurisdiction of the City and of Valley agencies which have responsible-agency jurisdiction over the project, and are too far from the transit center area of coverage. In addition, many alternative sites in the Valley are, in general, not feasible because they are outside the ownership control of the project proponent or not available for purchase and development by the proponent. Further, as explained below, the alternative site examined in this EIR shows the impacts of locating the project at an alternative site, outside the Reedley area, relative to the impacts of the project at the proposed site within the City's Sphere of Influence. This alternative is typical of the type of alternative sites that would be available for development of the project elsewhere in City of Reedley. This EIR analyzes the following alternatives: the "No Project," an "Alternate Site," and a "Reduced Project." After analysis, the environmentally superior alternative is identified.

4.1 No Project Alternative

According to Section 15126.6(e) of the CEQA Guidelines, discussion of the No-Project Alternative must include a description of existing conditions and reasonably-foreseeable future conditions that would exist if the project were not approved. Under the No Project Alternative, the Kings Canyon Unified School District would not implement construction of the transit facility identified under the proposed project and would continue to operate out of their current site

Ability to Meet Project Objectives

Implementation of the No Project Alternative would not provide the benefits of a shared transit facility for the school district and City of Reedley, and would not meet any of the stated project objectives nor address the jurisdictions' desire to operate out of a shared facility. Given the location and zoning of the property, the land would remain in agricultural use, at least for the time being, given the fact the site is in a *possible* annexation area adjacent to the Southeast Industrial Area Specific Plan.

Impact Analysis

Under the No Project Alternative, the land would remain in agricultural use and the identified impacts associated with constructing and operating the proposed project would be avoided. Short-term construction impacts to air quality and noise would be avoided and potentially-significant long-term project impacts to biological resources, air and water quality, and traffic also would be avoided.

4.2 Alternate Site

The purpose of reviewing alternative sites is to provide the decision-maker with an analysis of other sites where the environmental effects that are expected from the subject project may be reduced.

The CEQA Guidelines state [Sections 15126.6(f)(2)(A) and (B)]: *"The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need to considered for inclusion in the EIR…If the lead agency concludes that no feasible locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR."*

A number of sites were evaluated for use as an alternate site. The utilization of some of these sites might involve impacts not present on the project site – incompatible land uses or significant transportation/traffic effects, for example. Because of the status of the air quality in the San Joaquin Valley Air Basin, there is no evidence that there are any other sites in Fresno County which would not have comparable air quality impacts.

To allow a thorough analysis, a similar site owned by the applicant has been selected for comparative alternative analysis. The alternate site selected for evaluation is located approximately 500 feet west of the southwest corner of E. Parlier Avenue and S. Alta Avenue (see Figure 4.1). The 24.7 acre site is two miles east of the Reedley City limits, zoned and designated for agricultural use and contains the Alta Elementary School. Surrounding land uses include agricultural plantings and fallow land in all directions. The Kings Canyon Unified School District had originally selected this lot as the prime site for the proposed transit center, but chose not to proceed due to the limited size the site would impose on its operations.

In a brief analysis of the impacts of a transit center on this site at this alternate location, the following is a comparison of the impacts for the project:

- **Aesthetics:** Less than significant; same as project.

The alternative site contains an elementary school and is zoned for agriculture, as are all surrounding properties. The lands immediately to the north and south are planted in orchards, while the properties to the east and west are vacant/fallow. The addition of the transit center would aesthetically fit with the current surrounding land usage, due to its one-story buildings and low profile. The impact is less than significant.

- **Agricultural Resources:** Less than significant; same as project.

The alternate site is approximately two miles east of the city limits, zoned for agriculture and currently utilized by the school district for an elementary school. If the district used the site for their transit center, in combination with the elementary school, the additional agricultural land needed for the operation, would be minimal. The County General Plan EIR (dated October 2004) previously identified impacts and mitigation for losses of important farmland within the County, and a Statement of Overriding Considerations was adopted for project-level and cumulative impacts associated with loss/conversion of agricultural land. The amount of land acreage in agricultural production which would be converted to urban use if this site were chosen for the transit center would be considered a minimal loss and would result in a less-than-significant impact to agricultural resources. The impact is less than significant.

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Alternative Location

Figure 4.1

V:\Clients\KingsCanyonUSD-1965\1965009\1-EIR\GIS\Map\For EIR\AlternativeSite.mxd

- **Air Quality:** Less than significant impact; same as project.

With a project of the same capacity, incremental air quality impacts will be the same as those of the project.

- **Biological Resources:** Less than significant impact; same as project.

The alternate site is approximately 2,000 feet east of Traver Creek and is not identified as a riparian habitat, does not contain any federally protected wetlands, and will not interfere with the movement of any native resident or migratory fish or wildlife species.

- **Cultural Resources:** Less than significant impact; same as project.

The alternate site, like the proposed project site, has been disturbed from its native state (used for agriculture and as a school site) for many years and does not contain any archaeological, cultural, or historic resources.

- **Geology & Soils:** No significant impact; same as project.

The alternate site, like the proposed project site, could be subject to moderate levels of ground shaking, which could damage weak structures and endanger public safety onsite. Implementation of mitigation measures, including a geo-technical report and soil erosion control plan, would reduce impacts to geology and soils to less than significant.

- **Hazards & Hazardous Materials:** No significant impact; same as project.

Potential impacts to public health by accidental hazardous materials release from the alternative site would not result in more significant impacts than the proposed project. It is no closer to occupied property, and with the same implementation of existing federal, state, and local regulations governing the use, storage, and transportation of hazardous materials, the impacts would be no different.

- **Hydrology & Water Quality:** No significant impact; same as project.

The alternative site would be subject to compliance with the State General Construction Activity Stormwater Permit to ensure the construction-related impacts, such as clearing, grading and disturbances to the ground, are reduced to acceptable levels to protect stormwater runoff. In addition, implementation of mitigation measures, including submittal of a storm water prevention pollution plan and grading plan to the Regional Water Quality Control Board, and the implementation of Best Management Practices to reduce non-storm water discharges to receiving waters will reduce impacts to hydrology and water quality to less than significant.

- **Land Use & Planning:** No significant impact; same as project.

The alternative site is located two miles east of the city limits of Reedley, in an agriculturally dominant area, but on a site that contains a school. According to the Fresno County Zoning Maps, the 24.7-acre site is zoned AE-20 (Exclusive Agricultural – 20 acre minimum). Development of the site would comply with the Fresno County Zoning Ordinance, which specifies that governmental facilities are allowed in the AE District with approval as an Unclassified Conditional Use, pursuant to the Fresno County Zoning Ordinance, Section 853.B.7. Public facilities are allowed pursuant to Section 853.B.14 for “public utility and public services, structures, uses and buildings”.

- **Mineral Resources:** No significant impact; same as project.

The alternative project site is not delineated on a local land use plan as a locally important mineral resource recovery site; therefore, the existence of the project would not result in the loss of availability of any mineral resources.

- **Noise:** No significant impact; same as project.

Noise from the project, at either location, would occur during the construction phase and from the bus and employee traffic to and from the facility. Implementation of mitigation measures during the construction phase would reduce noise impacts to less than significant.

- **Population & Housing:** No significant impact; same as project.

The alternative project does not involve construction of any new houses, road extensions or new infrastructure, or displacement of people.

- **Public Services:** No significant impact; same as project.

Any increase of public services would be dealt with by the existing services. The increased tax revenue and service fees associated with such development would reduce any potential impact to a less than significant level.

- **Recreation:** No significant impact; same as project.

The project in either location would not increase the demand for recreational facilities nor put a strain on the existing recreational facilities.

- **Transportation/Traffic:** Potentially significant impact; same as project.

Project-level impacts associated with traffic and transportation impacts would be the same as the project; project-specific mitigation measures could be incorporated into the alternate project. This is potentially significant and can be mitigated.

- **Utilities:** No significant impacts; same as project.

4.3 Reduced Project

Under the reduced project alternative, the project would not include the City of Reedley as a joint participant, thus reducing the number of vehicles, parking spaces, and amount of traffic involved in the operations. Impacts associated with a reduced operation are as follows:

- **Air Quality:** Less than Significant impact; reduced.

The reduced project size alternative would reduce air emissions and overall project emissions would continue to be less than any established significance thresholds; however, the reduced project alternative would not increase efficiencies or fuel options for the City of Reedley's fleet.

- **Hazards & Hazardous Materials:** Less than significant impact; reduced.

While the reduced project size would lessen potential impacts to public health by accidental hazardous materials release from the transportation center facilities, the reduced project size would include storage, use, and transportation of items identified as hazardous. Like the proposed project, impacts associated with hazards can be minimized to a level of less than significant with implementation of and compliance with existing federal, state, and local regulations governing the use, storage, and transportation of hazardous materials, as discussed in Section 3.7. In compliance with OSHA, the KCUSD would also implement workers' health and safety measures.

- **Hydrology & Water Quality:** Less than significant impact; reduced.

The reduced operation would entail a lesser amount of clearing, grading and disturbances to the ground, thereby reducing storm water runoff by. Like the proposed project, implementation of mitigation measures, including submittal of a storm water prevention pollution plan and grading plan to the Regional Water Quality Control Board, and the implementation of Best Management Practices to reduce non-storm water discharges to receiving waters will reduce impacts to hydrology and water quality to less than significant.

- **Noise:** Less than significant impact; reduced.

The number of vehicles entering and exiting the site will be reduced, thus lessening the noise emanating from the site. The impact would not be significant.

- **Transportation/Traffic:** Less than significant impact; reduced.

With a reduced project operation, the Level of Service would be maintained at a LOS A or B, with approximately 290 fewer vehicle trips (out of a possible 790 trips) and decreased congestion at nearby intersections. The impact would be less than significant.

4.4 Environmentally Superior Alternative

CEQA and NEPA require that in addition to the analysis of individual alternatives, the alternatives must be ranked according to which alternatives have the lesser environmental effects. The no project alternative is environmentally superior, but does not meet the need or objectives of the project. The reduced project size alternative has fewer impacts than the proposed alternative, but does not meet the need or objectives of the project in that it does not offer an opportunity to combine the resources of the two agencies.

Chapter Five

CUMULATIVE IMPACTS

CHAPTER FIVE – CUMULATIVE IMPACTS

5.1 Summary

The *CEQA Guidelines* require that all EIRs contain an analysis of cumulative impacts for the project. An EIR must discuss the "cumulative impacts" of a project when its incremental effect will be cumulatively considerable. Section 15355 defines cumulative impacts as *"two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."* A cumulative impact *"consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts"* [§15130(a)(1)]. The discussions of cumulative impacts *"shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone"* [§ 15130(b)].

In brief, the following is a summary of the results of the cumulative impacts analysis of the project:

The Guidelines provide further direction regarding cumulative impacts analysis. They state that *"Lead agencies shall define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used"* [§15130(b)(3)]. The cumulative impact analysis *"shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects"* [§15130(b)(5)]. With some projects, *"the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis"* [§15130(c)]. For purposes of this EIR, the geographic scope of the area analyzed for cumulative effects is the area of the proposed project and the area described in the General Plan.

CEQA Guidelines §15130(b)(1) permits a lead agency to rely on either: "*(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."*

This section contains an evaluation of the impacts generated from the implementation of the proposed project when considered in conjunction with the development of other approved, pending, or reasonably foreseeable projects.

The properties adjacent to and west of the project site, known as the Reedley Industrial Park, are comprised of a fresh produce packaging company and a produce shipping company. Within a ½-mile radius of the project site, there exists an irrigation supply company, a plant nursery, a mini-storage facility, a furniture outlet store, a cold storage facility, a poultry farm facility, a fruit packing company, other farming operations, orchards, approximately 16 rural single-family residences, and a subdivision with approximately 250 single-family residences.

The uses that could be proposed in the expanded industrial sector include, but are not limited to, uses similar to those mentioned above, and more specifically, farm equipment and RV sales and service, service stations, vehicle repair, day care centers, restaurants, bottling plants, breweries, freight terminals, manufacturing facilities, warehousing, recycling facilities, home improvement stores, nurseries, public schools, service commercial businesses, and veterinarians.

5.2 Related Projects

According to the City of Reedley and Fresno County, the only other project in the vicinity of the proposed transit center is the Reedley Sports Park, located northeast of the subject property. Phase I of that project is currently under construction and consists of five acres in the northwest corner of the site just south of Dinuba Avenue; the project when completed will consist of a 40-acre facility and will be developed incrementally as funding becomes available. Entry into that site will be solely from Dinuba Avenue.

The following environmental effects have been determined not to require extensive cumulative impacts discussion due to the project's location and lack of proximity to sensitive receptors, to a lack of other projects within the appropriate cumulative impacts evaluation area, or the absence of project-level impact:

5.3 Impacts

Aesthetics

The site is located in an established agricultural and industrial area characterized by produce packing and shipping facilities, agricultural operations, and small commercial businesses. The proposed transportation center will be consistent in its structural design in both architectural quality and height, and compatible with the area's existing buildings. There are no scenic vistas in the immediate area or historic buildings within a state scenic highway. Since the site is surrounded by orchards, row crops and a shipping company and a packing company, the visual character of adjacent area will not be degraded by the project and the vehicle lighting will not affect nighttime views in the area. There is no cumulative impact.

Agricultural Resources

The site consists mainly of Prime Farmland. The Fresno County General Plan EIR (2000) has identified impacts and mitigation for losses of important farmland within the County, and a Statement of Overriding Considerations was adopted for project-level and cumulative impacts associated with loss/conversion of agricultural land. The amount of land acreage in agricultural production to be converted to urban use with development of the project, relative to the context of the overall agricultural lands within the County, is considered a minimal loss and would result in a less-than-significant impact to agricultural resources. The any cumulative impacts have been previously analyzed and have been determined to be less than significant.

Air Quality

The GAMAQI under CEQA defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The GAMAQI also states that "*any proposed project that would individually have a significant air quality impact... would also be considered to have a significant cumulative air quality impact. Impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards".* Based on the analysis conducted for this project, it is individually *less than significant*; however, impacts of the proposed project in conjunction with the impacts of other projects previously proposed in the area were also considered. The following cumulative impacts were considered:

- Cumulative Localized Air Quality Impacts
- Cumulative Regional Air Quality Impacts
- Cumulative Hazardous Air Pollutants (HAPs)
- Cumulative Carbon Monoxide (CO) – Mobile Sources

The cumulative analysis is based on a quantitative cumulative analysis of projects located within a one-mile radius of the proposed project. The one-mile radius analysis quantifies cumulative operational and area impacts from the proposed project in conjunction with impacts from sources planned within the analysis area. These emissions are then compared to the proposed growth and anticipated emissions increases included in the various regional growth forecasts to determine 1) if they were included in the forecast; 2) if their inclusion can be considered consistent with the attainment plan for air emissions within the air basin; and 3) if these emissions are in conformance with the State Implementation Plan emission budget or baseline emissions for ROG, NOx, CO and PM_{10}. A one-mile limit is recommended by the SJVAPCD for HAPs pollutants as such emissions primarily impact individuals that reside or work within the immediate vicinity (one-mile) of the emissions source. For this reason it is believed that the most significant impacts attributable to any project are likely to be within this one-mile area. As such, evaluation of the potentially cumulative impacts from planned and future projects within this area were used to evaluate the cumulative impacts associated with the proposed project.

Cumulative Localized Air Quality Impacts

A review of the City of Reedley and the Fresno County Planning Departments' files indicates that there are sixteen (16) Tentative Tracts or other planned developments within the City of Reedley.

The listing provided in Table 5.3-1 is only a geographical reference to demonstrate the construction activity in the project vicinity. The number or size of these projects is of no particular significance since no "cumulative" emissions thresholds have been established by the SJVAPCD or the Fresno County Planning Department. In accordance with SJVAPCD guidance, fireplaces were not considered since they are seasonal in nature and because residential developments are prohibited from installing wood burning fireplaces.

Table 5.3-1 – Cumulative Long-Term Emissions*

Scheduled Developments**	Pollutant (tons/year)					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
This Project***	0.34	6.16	4.38	0.01	0.21	0.19
Sonora Development – 168 lots	6.25	5.81	40.77	0.05	5.57	2.03
Tract 4490 – River Glen Partners – 9 lots	0.33	0.31	2.19	0.00	0.30	0.11
Tract 4763 – River Glen Partners – 7 lots	0.22	0.18	1.54	0.00	0.19	0.06
Tract 5013 – Generation Homes – 17 lots	0.62	0.58	4.13	0.00	0.57	0.20
Tract 5149 – AKS Enterprises – 30 lots	1.13	1.03	7.28	0.00	1.00	0.36
Tract 5263 – Sharon Shamoon – 16 lots	0.58	0.55	3.88	0.00	0.53	0.20
Tract 5353 – Cambridge Homes – 103 lots	3.83	3.56	25.00	0.03	3.42	1.24
Tract 5373 – Quiring Properties – 4 lots	0.15	0.14	0.97	0.00	0.13	0.05
Tract 5399 – Sean Welch – 46 lots	1.71	1.60	11.16	0.02	1.53	0.56
Tract 5417 – Workman Bro.'s Dev. Co. – 165 lots	6.14	5.71	40.05	0.05	5.47	2.00
Tract 5452 – Quiring Properties – 209 lots	7.78	7.23	50.72	0.06	6.94	2.52
Tract 5475 – Quiring Properties – 12 lots	0.45	0.42	2.91	0.00	0.39	0.14
Tract 5535 – Victor Santos – 19 lots	0.70	0.66	4.61	0.00	0.63	0.23
Tract 5767 – Barsoom Bro.'s Co. Inc. – 196 lots	7.28	6.78	47.58	0.06	6.50	2.36
Tract 5882 – M-D Ventures – 11 lots	0.41	0.39	2.67	0.00	0.37	0.13
Tract 5905 – Carmen Escobar – 20 lots	0.73	0.70	4.86	0.00	0.66	0.24

NOTES:

* The SJVAPCD has not established significance thresholds for cumulative emissions.

** These emissions (other than the proposed project) are overestimated, as they are discretionary projects that are subject to various mitigation measures that have not yet been determined nor their impacts reduced herein.

*** Emissions presented are "mitigated" emissions for the proposed project only.

As details regarding the proposed emissions from the various projects listed above were not readily available through the Fresno County Planning Department, the emissions estimates presented were modeled using the URBEMIS computer model to predict cumulative impacts (see Attachment E of Appendix C for output results). Emissions for the operational phase of each project were based on total number of lots or square footage for maximum project buildout as noted in the information provided by the City of Reedley Planning Division. No mitigation measures were applied to any of the projects as it is not known which, if any, would be required by Fresno County or which may be voluntarily proposed by each developer or required by code or regulation. Additionally, no cumulative significance thresholds are shown since no cumulative thresholds have been established by the SJVAPCD, CARB or other regulatory authority. These projects represent all known and reasonably foreseeable projects in the area. As these projects are either currently under construction or, at a minimum, approved by the Fresno County Planning Division for consistency with applicable regulation, for the purposes of this analysis, it is assumed that they are in conformance with the regional Air Quality Attainment Plan.

The most recent, certified San Joaquin Valley Air Basin Emission Inventory data available from the California Air Resources Board (CARB) is based on data gathered for the 2008 annual inventory. This

data will be used to assist the SJVAPCD in demonstrating attainment of Federal 1-hour Ozone Standards and contained 220,642 tons/year VOC (ROG) and 210,495 tons/year NOx from all sources. On a regional basis, the proposed project represents approximately 0.0002% (two ten-thousandths of 1%) of the ROG and 0.003% (three thousandths of 1%) of the NOx emissions in the air basin. The incremental increase posed by the project upon the air basin appears to be less than significant since basin emissions would be essentially the same regardless of whether or not the project is built.

Cumulative Regional Air Quality Impacts

A review of the City of Reedley and the Fresno County Planning Departments' files indicates that there are sixteen (16) Tentative Tracts or other planned developments within the respective city and county limits. Projects that are planned but have not been submitted for review or approved by the city and/or county are not included in this analysis as there is no way to know or ascertain what they might consist of. The SJVAPCD requires use of a one-mile radius to identify HAP emissions as well as for most odor sources.

The most recent, certified San Joaquin Valley Air Basin Emission Inventory data available from the California Air Resources Board (CARB) is based on data gathered for the 2008 annual inventory. This data will be used to assist the SJVAPCD in demonstrating attainment of Federal 1-hour Ozone Standards. Table 5.3-2 provides a comparative look at the impacts proposed by the subject project to the San Joaquin Valley Air Basin Emissions Inventory.

Table 5.3-2 – Comparative Analysis Based on SJV Air Basin 2008 Inventory

	Pollutant (tons/year)				
Emissions Inventory Source	ROG	NOx	CO	SOx	PM_{10}
Fresno County - 2008[1]	53,801	41,208	133,553	3,285	29,966
San Joaquin Valley Air Basin - 2008[1]	220,642	210,495	620,390	9,599	122,238
Proposed Project (total direct and indirect source emissions)	0.34	6.16	4.38	0.01	0.21
Proposed Project's % of Fresno	0.0006	0.015	0.003	0.0003	0.0007
Proposed Project's % of SJVAB	0.0002	0.003	0.001	0.0001	0.0002
NOTES: [1] This is the latest inventory available as of October 2009					

As shown in Table 5.1, the incremental increase posed by the project upon the air basin appears to be insignificant since basin emissions would be essentially the same regardless of whether or not the project is approved.

Tables 5.3-3 through 5.3-5 provide California Air Resources Board (CARB) Emissions Inventory projections for the year 2020 for both the San Joaquin Valley Air Basin (SJVAB) and the Fresno County portion of the air basin. Looking at the SJVAB Emissions predicted by the CARB year 2020 emissions inventory, the Fresno County portion of the air basin is a moderate source of the emissions. The proposed project appears to pose an extremely minute source of the total emissions in both Fresno County and the entire SJVAB.

Table 5.3-3 – Emission Inventory SJVAB 2020 Projection – Tons per Year

	ROG	NO_X	PM_{10}
Total Emissions	211,663	119,063	125,888
Percent Stationary Sources	15.00%	22.93%	8.09%
Percent Area-Wide Sources	29.44%	5.24%	77.07%
Percent Mobile Sources	15.00%	68.58%	4.67%
Percent Natural Sources	40.56%	3.25%	10.21%
Total Stationary Source Emissions	31,755	27,302	10,183
Total Area-Wide Source Emissions	62,305	6,241	97,017
Total Mobile Source Emissions	31,755	81,650	5,876
Total Natural Source Emissions	85,848	3,869	12,848
Source: California Air Resources Board (www.arb.ca.gov/app/emsinv/emssumcat.php) Note: Total may not add due to rounding.			

Table 5.3-4 - Emission Inventory Fresno County 2020 Estimate Projection – Tons per Year

	ROG	NO_X	PM_{10}
Total Emissions	51,866	22,812	30,331
Percent Stationary Sources	13.65%	24.64%	5.65%
Percent Area-Wide Sources	27.45%	10.56%	89.05%
Percent Mobile Sources	13.93%	64.16%	3.49%
Percent Natural Sources	44.97%	0.80%	1.80%
Total Stationary Source Emissions	7,081	5,621	1,715
Total Area-Wide Source Emissions	14,235	2,409	27,010
Total Mobile Source Emissions	7,227	14,636	1,058
Total Natural Source Emissions	23,323	182	547
Source: California Air Resources Board (www.arb.ca.gov/app/emsinv/emssumcat.php) Note: Total may not add due to rounding.			

Table 5.3-5 - 2020 Emissions Projections – Proposed Project, Fresno County, and San Joaquin Valley Air Basin

	ROG	NO_X	PM_{10}
Proposed Project	**0.34**	**6.16**	**0.21**
Fresno County	51,866	22,812	30,331
San Joaquin Valley Air Basin	211,663	119,063	125,888
Proposed Project Percent of Fresno County	0.0007	0.0270	0.0007
Proposed Project Percent of SJVAB	0.0002	0.0052	0.0002
Fresno County Percent of SJVAB	24.50%	19.16%	24.09%
Source: California Air Resources Board (www.arb.ca.gov/app/emsinv/emssumcat.php) Notes: The emission estimates for Fresno County and the SJVAB are based on 2020 projections. The Proposed Project emission estimates are for the proposed incremental emissions increase that is not already included in the San Joaquin Valley Air Basin Emissions Inventory. Project emissions are based on 2012 emissions estimates to present the most conservative comparison. The Project's emissions are expected to decline as cleaner, less polluting vehicles replace vehicles with higher emissions.			

As shown above, the proposed project will pose an extremely minute impact on regional ozone and PM_{10} formation. When mitigation measures and compliance with applicable rules, such as SJVAPCD's Rule 9510 (Indirect Source Rule) is considered, the regional contribution to these cumulative impacts will be almost negligible. It is reasonable to conclude that the project is not cumulatively significant with regard to regional impacts.

Cumulative Hazardous Air Pollutants (HAPs)

The GAMAQI also states that when evaluating potential impacts related to HAPs, "impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards." Based on the results of a health risk assessment and the project traffic analysis, the proposed project would pose a less than significant cumulative CO or HAPs impact.

Cumulative Carbon Monoxide (CO) - Mobile Sources

The SJVAPCD's GAMAQI has identified CO impacts from impacted traffic intersections and roadway segments as being potentially cumulatively considerable. Traffic increases and added congestion caused by a project can combine to cause a violation of the SJVAPCD's CO standard also known as a "Hotspot". There are two criteria established by the GAMAQI by which CO "Hot Spot" modeling is required:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

The Traffic Impact Study (Appendix F) prepared for this project indicated that potentially impacted intersections and roadway segments would operate at a level of service (LOS) that is within the GAMAQI significance criteria. Therefore, CO "Hotspot" Modeling was not conducted for this project and no concentrated excessive CO emissions are expected to be caused by the completed project. The impact is less than significant.

Greenhouse Gases/Climate Change

Global Climate Change Regulatory Issues

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change established an agreement with the goal of controlling greenhouse gas emissions, including methane. As a result, the Climate Change Action Plan was developed to address the reduction of greenhouse gases in the United States. The plan consists of more than 50 voluntary programs. Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere (chlorofluorocarbons [CFCs], halons, carbon tetrachloride, and methyl chloroform) were to be phased out by 2000 (methyl chloroform was to be phased out by 2005).

On September 27, 2006, Assembly Bill 32 (AB32), the California Global Warming Solutions Act of 2006 (the Act) was enacted by the State of California. The legislature stated, "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California". The Act caps California's greenhouse gas (GHG) emissions at 1990 levels by 2020. The Act defines greenhouse gas emissions as all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexaflouride. This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB32 lays out a program to inventory and reduce greenhouse gas emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB32 charges CARB with responsibility to monitor and regulate sources of greenhouse gas emissions in order to reduce those emissions. By July 1, 2007, CARB adopted a list of discrete early action measures to be adopted and implemented before January 1, 2010 to reduce greenhouse gas emissions. CARB staff recommended an amount of 427 million metric tons of carbon dioxide equivalent (MMTCO2e) as the total statewide greenhouse gas 1990 emissions level and 2020 emissions limit. The Board approved the 2020 limit on December 6, 2007. This limit is an aggregated statewide limit, rather than sector- or facility-specific. CARB is then to conduct rulemaking, culminating in rule adoption by January 1, 2011, for reducing greenhouse gas emissions to achieve the emissions cap by 2020. The rules must take effect no

later than 2012. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

At this time, the Environmental Protection Agency (EPA) does not regulate greenhouse gas emissions, however in *Massachusetts et al. v. EPA*, the U.S Supreme Court determined that EPA does have the authority to regulate greenhouse gases under the Clean Air Act. The Court also instructed EPA to review its policies toward regulation of vehicle emissions under the Clean Air Act. It is now anticipated that regulations will eventually be promulgated by EPA to further control greenhouse gas emissions from vehicles as well as other sources.

Global warming and climate change have received substantial public attention for more than 15 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision-making. Even so, the analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in greenhouse gas emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

Accordingly, there is currently no local or statewide significance threshold developed to evaluate the impacts of the proposed Project, or any project, on global climate change in California.

The Earth's atmosphere naturally includes a number of gases, including carbon dioxide (CO_2), methane, and nitrous oxides (N_2O) that are referred to as "greenhouse gases." These gases trap some amount of solar radiation and the Earth's own radiation, preventing it from passing through Earth's atmosphere and into space. Greenhouse gases are vital to life on Earth; without them Earth would be an icy planet. CO_2 is also a trace element that is essential to the cycle of life. It is essential to plant growth and studies have shown that vegetation growth has increased in North America commensurate with the increase in CO_2 over the past decades. However, increasing greenhouse gas concentrations tend to warm the planet. A warming trend of about 0.7°F to 1.5°F occurred during the 20th century, and a number of scientific analyses indicate that rising levels of greenhouse gases in the atmosphere may be contributing to climate change.

As the average temperature of the Earth increases, weather may be affected, including changes in precipitation patterns, accumulation of snow pack, and intensity and duration of spring snowmelt. There may be rises in sea level, resulting in coastal erosion and inundation of coastal areas. Emissions of air pollutants and ambient levels of pollutants also may be affected in areas. Climate zones may change, affecting the ecology and biological resources of a region. There may be changes in fire hazards due to the changes in precipitation and climate zones.

While scientists have established a connection between increasing CO_2 concentrations and increasing average temperatures, important scientific questions remain about how much warming will occur, how fast it will occur, and how the warming will affect the rest of the climate system. At this point, scientific efforts are unable to quantify the degree to which human activity impacts climate change. The phenomenon is worldwide, yet it is expected that there will be substantial regional and local variability in climate changes. It is not possible with today's science to determine the affect of global climate change in a specific locale, or whether the effect of one aspect of climate change may be counteracted by another aspect of climate change, or exacerbated by it.

Human activities generate greenhouse gases. Since pre-industrial times, there has been a build-up of levels of gases like carbon dioxide (CO_2) in the atmosphere. The human contribution to the increase in atmospheric CO_2 concentrations largely has resulted from the burning of fossil fuels. Fossil fuel combustion accounts for approximately 98% of carbon dioxide emissions from human activity.

The United States has the highest emissions of greenhouse gases of any nation on Earth, though CO_2 emissions in California are less than the national average, both in per capita emissions and in emissions per gross state product. Transportation is the largest source of CO_2 emissions in California, accounting

for approximately 41 percent of total emissions. Electricity generation accounts for approximately 22 percent of CO_2 emissions in California, and the industrial sector accounts for approximately 20.5 percent.

Global Climate Change Impacts from the Proposed Project

There are a number of factors available for estimating the GHG from mobile sources. Not all GHG exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in carbon dioxide equivalencies (CO_2e). The CO_2e portion of GHG from the proposed project were estimated using the URBEMIS program and the California Climate Action Registry (CCAR) General Reporting Protocol and is shown in Table 5.3-6 and can be found in Attachment E of Appendix C.

Table 5.3-6 – Estimated Annual Greenhouse Gas Emissions (Tons/Year)

Source	CO_2e
Construction Emissions (2009)*	42
Construction Emissions (2010)*	166
Operational Emissions***	1,010
Area Emissions*	41
Electricity Generation Total Emissions	26
Electricity Generation Emissions**	176
1.2 MW Solar Collection and Charging System	-150
Notes: *Calculated using URBEMIS2007 v9.2.4 **Calculated using CCAR Protocol ***Calculated using EMFAC2007	

The Project will not result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF_6), the other gases identified as GHG in AB32. However, the impacts on global warming and climate change are indirect, not direct, and the emissions cannot be correlated with specific impacts based on currently available science. While climate change may be presumed to have global impacts, local government lacks the expertise, and/or regulatory authority to develop the scientific tools and policies needed to select a CEQA significance threshold for climate change or greenhouse gas emissions. The proposed project will be subject to any regulations developed under AB32 as determined by CARB. As there are no thresholds or other tools available to assess the impacts this analysis cannot determine whether the subject project will have a significant impact on global warming or climate change.

Mitigation Measure #5.3.1

CEQA requires that all feasible and reasonable mitigation be applied to the project to reduce the impacts from construction and operations on air quality. The SJVAPCD's "Non-Residential On-Site Mitigation Checklist" was utilized in preparing the mitigation measures and evaluating the projects features. These measures include using controls that limit the exhaust from construction equipment and using alternatives to diesel when possible. Additional reductions will be achieved through the regulatory process of the air district and CARB as required changes to diesel engines are implemented which will affect the product delivery trucks and limits on idling.

While it is not possible to determine whether the project individually will have a significant impact on global warming or climate change, the project will potentially contribute to cumulative greenhouse gas emissions in California as well as related health effects. The project emissions will be only a small fraction of the statewide greenhouse gas emissions. However, without the necessary science and analytical tools, it is not possible to assess, with certainty, whether the project's contribution will be cumulatively considerable, within the meaning of CEQA Guidelines Sections 15065(a)(3) and 15130. CEQA, however, does note that the more severe environmental problems the lower the thresholds for treating a project's contribution to cumulative impacts as significant. Given the position of the legislature in AB32 which states that global warming poses serious detrimental effects, and the requirements of CEQA for the lead agency to determine that a project not have a cumulatively considerable contribution, the effect of the project's CO_2 contribution may be considered cumulatively considerable. This

determination is based on the lack of clear scientific evidence or other criteria for determining the significance of the project's contribution of GHG to the air quality in the San Joaquin Valley Air Basin.

AB32 requires that a list of emission reduction strategies be published to achieve the goals set forth in the law. Until CARB publishes those reduction strategies, emission reduction strategies to meet the Governor's Executive Order S-3-05 should be considered.

The strategies that CARB is to implement within the next two years that may help in reducing the project's GHG emissions are summarized in the Table 5.3-7.

Table 5.3-7 – Select CARB Greenhouse Gas Emission Reduction Strategies

Statewide Strategies	Description of Strategy
Vehicle Climate Change Standards	AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by CARB in Sept. 2004.
Diesel Anti-Idling	In July 2004, CARB adopted a measure to limit diesel-fueled retail motor vehicle idling.
Other Light-Duty Vehicle Technology	New standards would be adopted to phase in beginning in the 2017 model year.
Alternative Fuels: Biodiesel Blends	CARB would develop regulations to require the use of 1% to 4% Biodiesel displacement of California diesel fuel.
Alternative Fuels: Ethanol	Increased use of ethanol fuel.
Heavy-Duty Vehicle Emission Reduction Measures	Increased efficiency in the design of heavy-duty vehicles and an educational program for the heavy-duty vehicle sector.

While it will not be practicable for the project to implement all of these suggested strategies, legislatively driven changes in the future will further reduce the project's GHG footprint. Currently, the project proposes to install and operate a 1.2 MW Solar Collection and Charging System which is anticipated to reduce the electrically generated GHG emissions by 85%. Additionally, the KCUSD has already converted 25 of their busses from diesel to CNG and will continue to replace diesel vehicles with CNG whenever feasible.

CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis. Global climate change is this type of issue. The causes and effects may not be just regional or statewide, they may be worldwide. Given the uncertainties in identifying, let alone quantifying the impact of any single project on global warming and climate change, and the efforts made to reduce emissions of greenhouse gases from the project through design, in accordance with CEQA Section 15130, any further feasible mitigation will be accomplished through CARB regulations adopted pursuant to AB32. The cumulative impacts of the project to global climate change are not known with certainty. On December 5, 2008 the South Coast Air Quality Management District (SCAQMD) adopted an Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. This "tiered" approach set forth a significance level of 10,000 Metric Tons of CO2 Equivalent emissions. In lieu of a significance threshold being established by CARB or the SJVAPCD, if this threshold is considered for this project, the project's impacts to global climate change will remain below a level of significance.

Biological Resources

The area that would contain the proposed transportation center and the larger surrounding industrial area is not identified as a riparian habitat, although Travers Creek is approximately 170 feet from the nearest edge of the project site boundary. During reconnaissance field surveys, no endangered, threatened or otherwise sensitive species were found on the site, nor does the property contain any federally protected wetlands. In addition, the project will not interfere with the movement of any native resident or migratory fish or wildlife species, nor will the project or future projects in the industrial area conflict with any ordinances protecting biological resources or provisions of any conservation plans. Mitigation measures, as discussed in Section 3.4 are proposed to minimize any potential impacts to less than significant. There is no cumulative impact.

Cultural Resources

There are no known historical structures or monuments, archaeological resources, or formal cemeteries on the project site or surrounding area. There is no cumulative impact.

Geology & Soils

The site could be subject to moderate levels of ground shaking, which could damage weak structures and endanger public safety onsite. Implementation of mitigation measures, including a geo-technical report and soil erosion control plan, as discussed in Section 3.6 will reduce impacts to geology and soils to less than significant. There is no cumulative impact.

Hazards & Hazardous Materials

The project will construct and operate a transportation facility specialized in providing alternative and renewable fuels. Potential impacts to public health by accidental hazardous materials release from the transportation center facilities can be minimized to a level of less than significant with implementation of and compliance with existing federal, state, and local regulations governing the use, storage, and transportation of hazardous materials, as discussed in Section 3.7. In compliance with OSHA, the District will also implement workers' health and safety measures. There is no cumulative impact.

Hydrology & Water Quality

The project is subject to compliance with the State General Construction Activity Stormwater Permit to ensure the construction-related impacts, such as clearing, grading and disturbances to the ground, are reduced to acceptable levels to protect stormwater runoff. As discussed in Section 3.8, implementation of mitigation measures, including submittal of a storm water prevention pollution plan and grading plan to the Regional Water Quality Control Board, and the implementation of Best Management Practices to reduce non-storm water discharges to receiving waters will reduce impacts to hydrology and water quality to less than significant. As discussed in Section 3.8, the water supply will be sufficient to serve the project, and to serve the City as a whole. There is no cumulative impact.

Land Use & Planning

The project is in compliance with applicable Fresno County General Plan designations and zoning regulations, and the City of Reedley's Southeast Industrial Area Specific Plan which is planned for expansion to include the project area. There is no cumulative impact.

Mineral Resources

The project site is flat and is identified as a poor resource for gravel excavation. As a result, the project will not result in the loss of the availability of a known mineral resource locally or of value to the region or state. There is no cumulative impact.

Noise

Additional noise from the project will occur during the construction phase and from the bus, city vehicle, and employee traffic to and from the facility. Implementation of mitigation measures as discussed in Section 3.10 will reduce noise impacts to less than significant. There is no cumulative impact.

Population & Housing

The project does not involve construction of any new houses, road extensions or new infrastructure, or displacement of people. In addition, the project will not result in potential impacts that would cumulatively exceed the regional or local population levels projected on a regional or local scale, or substantially change the demographics in the area. Therefore, potential impacts by the project to population and the housing level are considered to be less than significant. There is no cumulative impact.

Public Services

Any increase of public services required by the transit facility (fire protection, police protection, schools, parks) will be dealt with by the existing services. Fire protection is provided in a dual capacity by the City of Reedley Fire Department and the Fresno County Fire Protection District. The Fresno County Sheriff's Department patrols the project area from the Area 3 Substation located in Selma, approximately 12 miles

west of the project site. The nearest school (Monte Vista School) to the project site is located approximately 1.5 miles from the project site and the nearest public park (CF Mueller Park) is located 1¼ miles away. The increased tax revenue and service fees associated with such development would reduce any potential impact to public services to a less than significant level. There is no cumulative impact.

Recreation

Parks and recreational facilities in the area include the "Reedley Trail" along the old AT&SF railroad corridor between Reedley and the Tulare County line, the Kings River Access Park proposed south of Reedley along the Kings River, and the Kings River Greenbelt Park, located northeast of Reedley. In addition, the Reedley Sports Park is currently being constructed immediately northeast of the project site. The project will not create any impacts to these recreational facilities or require new construction or expansion of these facilities and there is no cumulative impact.

Transportation/Traffic

According to the traffic report and future growth estimates, the total number of project trips will be 790 per day up to a maximum of 948+ daily trips projected to 2030. The Level of Service will change from LOS "A" to LOS "C" for the eastbound approach on Buttonwillow Avenue at Olsen Avenue, which is considered "stable," and is not considered to be a significant impact. The project-induced increase in traffic is not substantial with respect to increase in vehicle trips, volume-to-capacity ratio, emergency access adequacy, or congestion at intersections. It is unlikely that the proposed project, together with related projects (Reedley Sports Park), would contribute enough vehicles to affect LOS on roadways in the project vicinity to a significant level. Entry into the sports park will be off Dinuba Avenue, whereas vehicles to the transit center will enter and exit from Olson Avenue and Huntsman Avenue. In addition, if necessary, related projects would incorporate project-specific mitigation measures to reduce their respective impacts related to construction traffic, including the preparation and implementation of traffic control plans. There is no cumulative impact.

Utilities and Energy

The City of Reedley will provide water and sewer connections to the project and the Public Works Director has confirmed that the City has capacity to do so. Wastewater treatment requirements of the existing wastewater treatment plant will not be exceeded. The project includes expanding the existing stormwater basin, as described in Impact 3.8.3. Water supply availability has been discussed in Impact 3.8.2. No new waste will be generated, and no net increase of water demand or sewage generation is expected, as this project is a relocation of existing facilities. The project will not significantly impact local or regional energy supply nor peak and base period demands for electricity as the project will exceed Title 24 requirements, will generate electricity onsite, and will be constructed and operated with energy saving practices. The impact is less than significant.

Summary of Cumulative Impacts

The proposed project, in conjunction the other planned projects in the area's contribution to potential cumulative impacts on Aesthetics, Air Quality, Biological Resources, Agricultural Resources, Biological Resources, Cultural Resources, Geology & Soils, Hazards and Hazardous Materials, Hydrology & Water Quality, Land Use, Mineral Resources, Noise, Population & Housing, Public Services, Recreation, Transportation/Traffic, and Utilities are considered to be less than significant.

Chapter Six

OTHER MANDATORY CEQA AND NEPA SECTIONS

CHAPTER SIX - OTHER MANDATORY CEQA AND NEPA SECTIONS

6.1 Growth Inducement

Section 15126.2(d) of the CEQA Guidelines requires that EIRs provide a discussion of the "growth inducing impacts of the proposed project." Growth inducing impacts could be caused by projects that foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducing impacts can also be caused by removing obstacles to population growth, such as an expansion of a wastewater treatment plant. Growth inducement impacts can result from population increases that require the construction of new community services facilities.

The proposed Kings Canyon Unified School District (KCUSD) transportation center consists of the construction of a bus/transit yard for joint school district and City of Reedley use that will include solar covered parking, fueling station, vehicle wash facility, service bays, learning center, regeneration center, shops, and an office. The facility's location is adjacent to an industrial park, and row crops and orchards in an area zoned and designated for industrial and agricultural uses. The project does not involve the construction of new housing and would not substantially expand or establish new employment opportunities that, in turn, would indirectly generate housing development. All employees that currently operate out of the existing transit or municipal center will transfer to the new facility.

The project would not remove any regulatory or physical obstacles to growth, and the facility would be independent and centralized by integrating various infrastructure and services in one location. Since the facility also is compatible with adjacent uses, it will not significantly impact residential development or physically divide an established community, since all of the existing residences within the surrounding area are rural and sparsely located, except for a residential subdivision 3/10 of a mile to the north. As a result, the project would not indirectly induce a substantial growth in the area's population, nor substantially alter the location, distribution, or density of the population in the area. Neither will it encourage or facilitate other activities that could significantly affect the environment. In conclusion, the proposed project is not considered growth inducing, but rather growth dependent as the need for an improved facility is a result of the school district's and City's growth.

6.2 Environmental Justice and Socioeconomics

Executive Order 12898, dated February 11, 1994, requires Federal agencies to ensure that their actions do not disproportionately impact minority and disadvantaged populations. The communities surrounding the project area are significantly populated by people of Hispanic origin from Mexico and Central America, as well as low-income families of various ethnic backgrounds. The proposed project site is located within an area planned as an industrial park, and does not include dislocation of any residents. The project, as a transportation center, would result in potential vocations in tune with the skill sets of many local workers. The education center would help to train workers in various solar and natural fuel technologies, and may lead to additional employment opportunities beyond what has been traditionally available to these groups.

Neither the location nor the activities resulting from the proposed project result in a disproportionate impact to one segment of the community over another. The proposed project would not cause dislocation, changes in employment, or increase adverse health or environmental effects specific to low-income, minority, or tribal populations. The proposed project would not disproportionately impact economically disadvantaged or minority populations. This proposed project is intended to increase the viability of transportation in a rural community and increase the training opportunities in sustainable technology.

6.3 Significant Environmental Effects That Cannot Be Avoided

"Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Section 15126.2(b) of the State CEQA Guidelines requires that the EIR describe any significant impacts, including those that can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

The proposed project will not have any significant impacts after mitigation measures have been applied. The proposed mitigation measures will reduce the project impacts to less than significant.

Chapter Seven

MITIGATION REPORTING / MONITORING PROGRAM

CHAPTER SEVEN – MITIGATION REPORTING / MONITORING PROGRAM

Introduction

State and local agencies are required by Section 21081.6 of the California Public Resources Code to establish a monitoring and reporting program for all projects which are approved and which require CEQA processing.

Local agencies are given broad latitude in developing programs to meet the requirements of Public Resources Code Section 21081.6. The mitigation monitoring program (Program) outlined in this document is based upon guidance issued by the Governor's Office of Planning and Research.

The mitigation monitoring and reporting program for the proposed project corresponds to mitigation measures outlined in the project EIR. The Program summarizes the environmental issues identified in the EIR, the mitigation measures required to reduce each potentially significant impact to less than significant, the person or agency responsible for implementing the measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

The Program

The mitigation measures contained herein shall be included as conditions of approval for each of these permits, to the extent permitted by law. Fresno County shall ensure that all construction plans and project operations conform with the conditions of the mitigated project. Table 7.1-1 shall be attached to all permits as a condition of approval.

Table 7.1
Mitigation Monitoring Program

Impact	Mitigation Measures	Implementation	Monitoring	Time Span
AIR QUALITY AND ODORS				
Impact #3.3.1 – Short Term Emissions	**Mitigation Measure #3.3.1a:** As the project shall be completed in compliance with SJVAPCD Regulation VIII, the following dust control measures shall be taken to ensure compliance specifically during grading and construction phases: Water previously exposed surfaces (soil) whenever visible dust is capable of drifting from the site or approaches 20% opacity. Water all unpaved haul roads a minimum of three-times/day or whenever visible dust from such roads is capable of drifting from the site or approaches 20% opacity. Reduce speed on unpaved roads to less than 15 miles per hour. Install and maintain a track out control device that meets the specifications of SJVAPCD Rule 8041 if the site exceeds 150 vehicle trips per day or more than 20 vehicle trips per day by vehicles with three or more axles. Stabilize all disturbed areas, including storage piles, which are not being actively utilized for production purposes using water, chemical stabilizers or by covering with a tarp or other suitable cover. Control fugitive dust emissions during land clearing, grubbing, scraping, excavation, leveling, grading, or cut and fill operations with application of water or by presoaking. When transporting materials offsite, maintain a freeboard limit of at least 6 inches and cover or effectively wet to limit visible dust emissions. Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and use of blowers is expressly forbidden). Stabilize the surface of storage piles following the addition	The mitigation measures shall be implemented by the construction contractor.	Monitoring shall be the responsibility of the San Joaquin Valley Air Pollution Control District.	During construction.

Impact	Mitigation Measures	Implementation	Monitoring	Time Span
	or removal of materials using water or chemical stabilizer/suppressants.			
	Remove visible track-out from the site at the end of each workday.			
	Cease grading or other activities that cause excessive (greater than 20% opacity) dust formation during periods of high winds (greater than 20 mph over a one-hour period).			
	Mitigation Measure #3.3.1b:			
	The GAMAQI guidance document lists the following measures as approved and recommended for construction activities. These measures shall be required to ensure that the proposed project emissions do not exceed District thresholds:			
	Maintain all construction equipment as recommended by manufacturer manuals.			
	Shut down equipment when not in use for extended periods.			
	Construction equipment shall operate no longer than eight (8) cumulative hours per day.			
	Use electric equipment for construction whenever possible in lieu of diesel or gasoline powered equipment.			
	Curtail use of high-emitting construction equipment during periods of high or excessive ambient pollutant concentrations.			
	All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions.			
	On-Road and Off-Road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.			
	On-Road and Off-Road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.			
	All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.			
	All construction activities within the project area shall be discontinued during the first stage smog alerts.			
	Construction and grading activities shall not be allowed			

Impact	Mitigation Measures	Implementation	Monitoring	Time Span
	during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).			
Impact #3.3.1 –Long Term Emissions	**Mitigation Measure:** The following mitigation measures are recommended to further reduce the potential for long-term project emissions. These measures shall be required to ensure that the proposed project emissions are not exceeded: Installation of a 1.2 MW Solar Collection and Charging System. Replacing older diesel vehicles with CNG vehicles. The project design shall comply with standards set forth in Title 24 of the Uniform Building Code to minimize total consumption of energy. Applicants shall be required to comply with applicable mitigation measures in the Air Quality Attainment Plan, District Rules, Traffic Control Measures, Regulation VIII and Indirect Source Rules for the SJVAPCD. The developer shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient. The applicant shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of: Rapid cure cutback asphalt; Medium cure cutback asphalt; Slow cure cutback asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.3); or Emulsified asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.4). The developer shall comply with applicable provisions of SJVAPCD Rule 9510 (Indirect Source Review).	The mitigation measures shall be implemented by the application	Monitoring shall be the responsibility of the San Joaquin Valley Air Pollution Control District.	During operation.

Impact	Mitigation Measures	Implementation	Monitoring	Time Span
BIOLOGICAL RESOURCES				
Impact #3.4.1: Substantial Adverse Effect on Candidate, Special-Status or Sensitive Species	**Mitigation Measure:** Construction, storage, travel and other types of disturbance should be restricted to the 27-acre project site and not take place in the offsite land adjacent to the riparian corridor of Travers Creeks. Trucks and equipment vehicles should approach from Huntsman or the western access road rather than the dirt road along the riparian/orchard interface. If this restriction is not possible, then a more extensive biological survey of the riparian corridor would be necessary to determine if the impacts will require further mitigation. Maintaining the current cable and lock system in place at the southern access to the corridor from Huntsman will continue to discourage traffic along the offsite riparian corridor. Adding signage in English along the west-to-east dirt access road to the riparian corridor will further discourage project traffic from within the parcel. Vehicles should use slow speeds (less than 15 miles per hour), especially at night, when driving through or around the project site to minimize potential for striking or disturbing animals. San Joaquin kit fox and other animals are vulnerable to collisions with autos. Pipes and culverts should be inspected before being moved or altered to prevent wildlife from being injured or trapped. If special status species are encountered during an inspection, they should be left alone to passively exit the area unless otherwise authorized by the California Department of Fish and Game or the U.S. Fish and Wildlife Service. Removal of trees should occur outside of bird nesting season to minimize impact to nest activity. Any migratory birds and their nests should be not be disturbed as outlined in the Migratory Bird Treaty Act of 1918 (MBTA). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations	The mitigation measure shall be the responsibility of the applicant and applicant's contractor.	Monitoring will be the responsibility of the Fresno County Public Works and Planning Department.	Prior to and during construction.

Impact	Mitigation Measures	Implementation	Monitoring	Time Span
	Part 10, including feathers or other parts, nests, eggs or products, except as slowed by implementing regulations (50 CFR 21).			
CULTURAL RESOURCES				
Impact #3.5.1: Disturbance of Cultural, Historic Resources, or Skeletal Remains	**Mitigation Measure::** If, in the course of project operation, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within 50 feet of the find area shall cease. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the County's Environmental Assessment Officer, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the project. In the event human remains are encountered during construction or operation activities, all work within the vicinity of the remains would halt in accordance with Health and Safety Code §7050.5, Public Resources Code §5097.98, and §15064.5 of the CEQA Guidelines. In addition to compliance with Public Resources Code §5097.98, in the event that any skeletal remains are discovered, a qualified archaeologist, the County Environmental Assessment Officer, County Coroner and local Native American organization shall be consulted, and appropriate measures shall be required that may include avoidance of the burial site or reburial of the remains.	The mitigation measure shall be incorporated in the conditions of approval for the Special Use Permit and shall be the responsibility of the applicant and applicant's contractor.	Monitoring will be the responsibility of the County of Fresno	During construction
NOISE				
Impact #3.10.1: Short Term Construction Noise & Vibration	**Mitigation Measure :** Noise producing equipment used during construction and operation shall be restricted to the timeframe of 7:00 am to 7:00 pm, Monday through Friday, and 7:00 am to 6:00 pm on Saturday, Sunday and holidays. Construction outside of these hours shall require written approval by the County of Fresno.	The mitigation measure shall be incorporated in the conditions of approval for the Special Use Permit and shall be the responsibility of the applicant and applicant's contractor.	Monitoring will be the responsibility of the applicant	During construction

Impact	Mitigation Measures	Implementation	Monitoring	Time Span
CUMULATIVE AIR QUALITY, WATER QUALITY AND BIOLOGICAL IMPACTS				
Air Quality Degradation	**Mitigation Measure :** The applicant shall comply with all feasible pertinent requirements of the SJVAPCD, including BACTs and CMPs.	The mitigation measure shall be incorporated in the conditions of approval for the Special Use Permit and shall be the responsibility of the applicant.	Monitoring will be the responsibility of the San Joaquin Valley Air Pollution Control District.	Continued monitoring during operation.

PERSONS PREPARING THIS EIR AND QUALIFICATIONS

PERSONS PREPARING THIS EIR/EIS AND QUALIFICATIONS

PERSONS PREPARING THIS EIR

Kings Canyon Unified School District
Mark Garza, Site Director
Ron Hudson, Deputy Superintendent

CONSULTANTS:

Provost & Pritchard Consulting Group, Inc.
Donald T. Ikemiya, RCE, RAE
Principal in Charge
Emily Magill Bowen, LEED AP
Barbara Brandl, REA II
Julie Phillips, ACIP

RSO Consulting	Rebecca Orfila, M.A, RPA
Insight Environmental	Ron Hunter
TPG Consulting	Wally Hutchison

QUALIFICATIONS – Provost & Pritchard Engineering Group, Inc.

Donald T. Ikemiya, RCE (56,630) and RAE (490)

Mr. Ikemiya has eighteen years of experience in water resources and agricultural engineering throughout California. Mr. Ikemiya has a thorough understanding of irrigation system design, operation, and irrigation water management techniques from working for Provost & Pritchard, Inc. as well as having been employed as a field and area engineer for the USDA Natural Resources Conservation Service (formally Soil Conservation Service) from 1986 to 1994. He is experienced in agricultural energy analysis, irrigation system design and operation, water conveyance structure design, and erosion control. He is experienced in numerous wastewater reclamation studies and projects and has worked with municipal treatment plants, food processing plants, irrigation districts, and dairies. Born and raised on a farm, he is extremely comfortable communicating and relating to agricultural clients.

His current responsibilities include: project planning and management, diary and food processing permitting and compliance.

Professional Employment

1994 – present Division Director of Natural Resources, and Staff Engineer at Provost & Pritchard Engineering Group, Inc.

1986 – 1994 Area Engineer for United States Department of Agriculture – Natural Resources Conservation Service (formerly Soil Conservation Service)

Qualifications and Affiliations

B.S. Agricultural Engineering, California Polytechnic State University, San Luis Obispo, CA 1986

Registered Civil Engineer, California, #56630

Registered Agricultural Engineer, California, #490

American Society of Agricultural Engineers

California Water Environment Association

Emily Magill Bowen, LEED AP, CGBP

Ms. Bowen is an associate environmental planner with experience providing CEQA-related work to agencies in Kings, Tulare, Fresno, Merced and Stanislaus Counties. As an associate environmental planner, she assists the planning department with multiple environmental planning projects such as preparing various environmental documents including Air Quality Impact Analyses and AB 32 compliance documents. She also has extensive experience in monitoring various wildlife populations including invertebrates, birds, small mammals, reptiles, and native vegetation. Ms. Bowen has also worked with Payap University in monitoring the regrowth of coral reef ecosystems in Satun, Thailand.

Professional Employment

2008– present	Associate Environmental Planner for Provost & Pritchard Consulting Group
2006 – 2008	Associate Environmental Planner for Quad Knopf
2002 – 2006	Field Biologist for California State University, Stanislaus Endangered Species Recovery Program

Qualifications and Affiliations

M.S. (in progress) Green Building, San Francisco Institute of Architecture

Certificate (in progress) in Sustainable Design, UC Davis

B.S. Biology, California State University, Fresno, 2004

LEED Accredited Professional, 2006

Certified Green Building Professional, 2009

Air Quality Management Certificate, San Joaquin Valley Air Pollution Control District, 2006

U.S. Green Building Council, Tulare Kings County Branch, Vice Chair

Association of Environmental Professionals, Member

American Planning Association, Member

Society for Ecological Restoration, California, Member

Wildlife Fund, Thailand

Recent Relevant Projects

Initial Study/Mitigated Negative Declaration Plum Basin, Tulare, California

Environmental Impact Report, Lemon Cove Granite, Tulare County, California

Environmental Impact Report, Hughson Wastewater Treatment Plant Master Plan, Hughson, California

Environmental Impact Report, Beef Harvesting and Processing Plant, Tulare, California

Environmental Impact Report, Friant Community Plan Update and Friant Ranch Specific Plan, Fresno, California

Initial Study/Mitigated Negative Declaration Water Intertie System, City of Fresno, California

CIEDB East Water System Loan Application, Porterville, California

Air Impact Assessment and Indirect Source Review Application, Granville Homes, Fresno, California

Barbara Brandl, REA II

With over thirty years of engineering consulting experience, Ms. Brandl's responsibilities include project management of all aspects of projects related to environmental site investigations, cleanups and groundwater monitoring for industrial and commercial facilities, schools, dairies, and public sectors projects. Ms. Brandl has experience preparing and managing over 250 environmental projects relating to Phase I, II, and II environmental site assessments, preliminary endangerment assessments, groundwater monitoring programs, risk assessments, and regulatory compliance documents.

Professional Employment

2004 – present Resource Group Leader, Dairy Consultant, and Registered Environmental Assessor for Provost & Pritchard Engineering Group, Inc.

1990 – 2004 Environmental Project Manager for Kleinfelder, Inc.

Qualifications and Affiliations

B.A. Geology, California State University, Fresno

Registered Environmental Assessor-II, California, #20257

Recent Relevant Projects

Groundwater Monitoring - Rick Jones Dairy, Stevinson, CA

Groundwater Monitoring - Galhandro Dairy, Hanford, CA

Phase I, II, & III Environmental Site Assessment, Laval Farms, Kern County, CA

Phase I & II Environmental Site Assessments, Producers Cotton Oil – Fresno, Madera, Merced, Tulare, Kings, and Kern Counties, CA

Phase I & II Environmental Site Assessment, Con Agra Plant, Turlock, CA

Regulatory Compliance - Spill Prevention Control and Countermeasure Plan-Blair Air, Lemoore, CA

Air Quality Survey-Butterball Hatchery Plant, Fresno, CA

Groundwater Investigation- Upright Facility, Selma, CA

Underground Storage Tank Assessment- Rural Residential Property, Raisin City, CA

Underground Storage Tank Assessment - Lithia Automotive Group, Medford, CA

Julie Phillips, ACIP

Julie Phillips has over seven years of experience in the planning field. She is an excellent communicator and an experienced project manager, working effectively to move projects forward while involving large groups of diverse interest. Ms. Phillips has prepared and processed many documents of varying complexity including ordinance preparation, permit processing, and environmental documents compliant with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As a lifelong resident of the San Joaquin Valley, she is familiar with the natural resources specific to this area, and as a planner with experience at the state and local agency level, she is aware and knowledgeable of the many laws and regulations that govern those resources.

Professional Employment

2006 – present	Planning Department Manager, Provost & Pritchard Consulting Group
2005 – 2006	Senior Planner, City of Porterville, Community Development Department
2004 – 2005	Associate Environmental Planner, Quad Knopf, Inc., Planning Services Division
2000 – 2004	Environmental Planner, California Department of Transportation, Environmental Division

Qualifications and Affiliations

B.S. Technical Geography, California State University, Fresno

American Institute of Certified Planners (AICP), Certified

American Planners Association (APA), Section Membership Director

Association of Environmental Professionals (AEP), Member

Recent Relevant Projects

Ongoing Planning Support, City of Visalia, California

On-call Planning Services, City of Porterville, California

Friant-Kern Canal/Cross Valley Canal Intertie Project, Bakersfield, California

Friant-Kern Canal Turnout, South San Joaquin Municipal Utilities District, Kern County, California

Fairways Tract Annexation, Fairways Water Company, Porterville, California

Boundary Reorganization, North Kern-South Tulare Hospital District, Delano, California

Well No. 1, 2A & 3A Arsenic Treatment, Pixley Public Utilities District, Tulare County, California

Safe Drinking Water Project, Armona Community Services District, Kings County, California

2nd Street Pedestrian Path, City of Mendota, California

Bass Avenue/State Route 33 & Belmont Avenue/State Route 33 Intersection Improvements Project, Mendota, California

Iriart Storage Tank Project, Golden Hills Community Services District, Tehachapi, California

Environmental Assessment of Bernd Thewalt-Arvin Tracts, Arvin, California

Avenue 416 & Road 56 Intersection Improvements, Tulare County, California

Facility Expansion, Cargill Beef Packers, Fresno, California

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APPENDICES TO THE DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT

CENTRAL VALLEY TRANSPORTATION CENTER PROJECT

SCH # 2009091097

December 2009

Prepared for:

Kings Canyon Unified School District, Lead Agency
675 W. Manning
Reedley, CA 93654
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Prepared by:

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#1965-09V1

Appendices

A	Notice of Preparation and Comments
B	Land Evaluation and Site Assessment Model
C	Air Quality Impact Analysis
D	Reconnaissance Level Biological Survey Report
E	Cultural Resources Records and Sacred Land File Search
F	Traffic Impact Study

Appendix A

NOP and Comments

Notice Of Preparation/
Notice of Intent

September 23, 2009

TO: Reviewing Agencies, Organizations, and Interested Parties

SUBJECT: Notice of Preparation of a joint Draft Environmental Impact Report and Environmental Impact Statement.

PROJECT TITLE: Central Valley Transportation Center Project

PROJECT APPLICANT: Kings Canyon Unified School District

PROJECT LOCATION AND DESCRIPTION: The 27-acre Central Valley Transportation Center project site (project site) is located on APN 370-240-13 and is bound by Huntsman Avenue to the south with project access located on Olsen Avenue, east of the City of Reedley (See Figure 1). Traver Creek is to the east and Maxco Supply Inc., an industrial packaging manufacturer, is to the west. The site is currently in orchard production with a single residence. The new facility would consist of a state-of-the art transportation center from which Kings Canyon Unified School District (District) would maintain and operate a fleet of up to 110 buses and 35 fleet vehicles. The land used by the current District transportation center would be absorbed by the adjacent Reedley High School and be converted to additional sports fields. The proposed Central Valley Transportation Center project (proposed project) would provide the District with new transportation administration and vehicle maintenance facilities including a 10,900 sf education center. These facilities would include a primary administration building with 23 bays for vehicle maintenance, repair, inspection, and wash racks, as well as office, storage, shop and staff support uses. The proposed project would also incorporate compressed natural gas (CNG) fueling facilities and solar collection and charging facilities. In addition, there would be auxiliary facilities, fuel storage and associated dispensers (ethanol, biodiesel, ultra-low sulfur diesel and unleaded regular gasoline). Fuel storage at the project site would consist of the following:

- 2- 10,000 gallon diesel underground storage tanks
- 1- 10,000 gallon unleaded regular gasoline underground storage tank
- 1- 10,000 gallon ethanol underground storage tank
- 1- 10,000 biodiesel underground storage tank

To supplement the District facilities, the City of Reedley (City) would also relocate its Public Works Department and associated vehicle maintenance yard to the project site. The proposed project would combine the current daily operations of the District transportation facilities and the City Public Works Department into one facility.

The District currently maintains 21 CNG powered busses and 39 traditionally powered busses and the District and City combined maintain approximately 209 service and maintenance vehicles. There would be no increase in fleet size with the relocation. The proposed project would generate approximately 800 trips per day.

POTENTIAL ENVIRONMENTAL ISSUES: Because of the variety of environmental issues, proposed land use changes and regulatory conditions that may be associated with the proposed project, the EIR will fully develop the baseline conditions, evaluate potential impacts, and provide site specific or resource specific mitigation measures. The key issues to be evaluated in the EIR include: Agriculture, Air Quality, Biological Resources, Cultural Resources, Geology, Hydrology and Water Quality, Hazards and Public Safety, Land Use, Noise, and Transportation and Traffic.

LEAD AGENCY AND PUBLIC REVIEW: Pursuant to Section 15082(a) of the California Environmental Quality Act (CEQA) Guidelines, the Kings Canyon Unified School District will be the lead agency and will prepare a joint environmental impact report (EIR)/environmental impact statement (EIS) for the project described above. The federal lead agency will be the Department of Energy.

Pursuant to Section 54956 of the California Government Code (the "Brown Act"), this notice also serves to notify the public that the City Council of the City of Reedley has been invited to this meeting. The City of Reedley is a partner in the proposed project and this will serve as a Special Meeting of the Council. No action by either the Board or the Council will be taken at this scoping meeting. This Notice of Preparation (NOP) of the Central Valley Transportation Center project EIR has been prepared to solicit comments from agencies, organizations, and other interested parties on the proposed project. Your agency may need to use the EIR prepared by our agency when considering your permit or other approvals for this project.

Pursuant to Section 15103 of the State CEQA Guidelines, your response must be sent at the earliest date but received by our agency no later than thirty (30) days after receipt of this notice. Should you have any questions regarding the project or NOP, please call Ron Hudson, Deputy Superintendent, at (559) 305-7024. Please mail your written response, including any comments you may have on this project to:

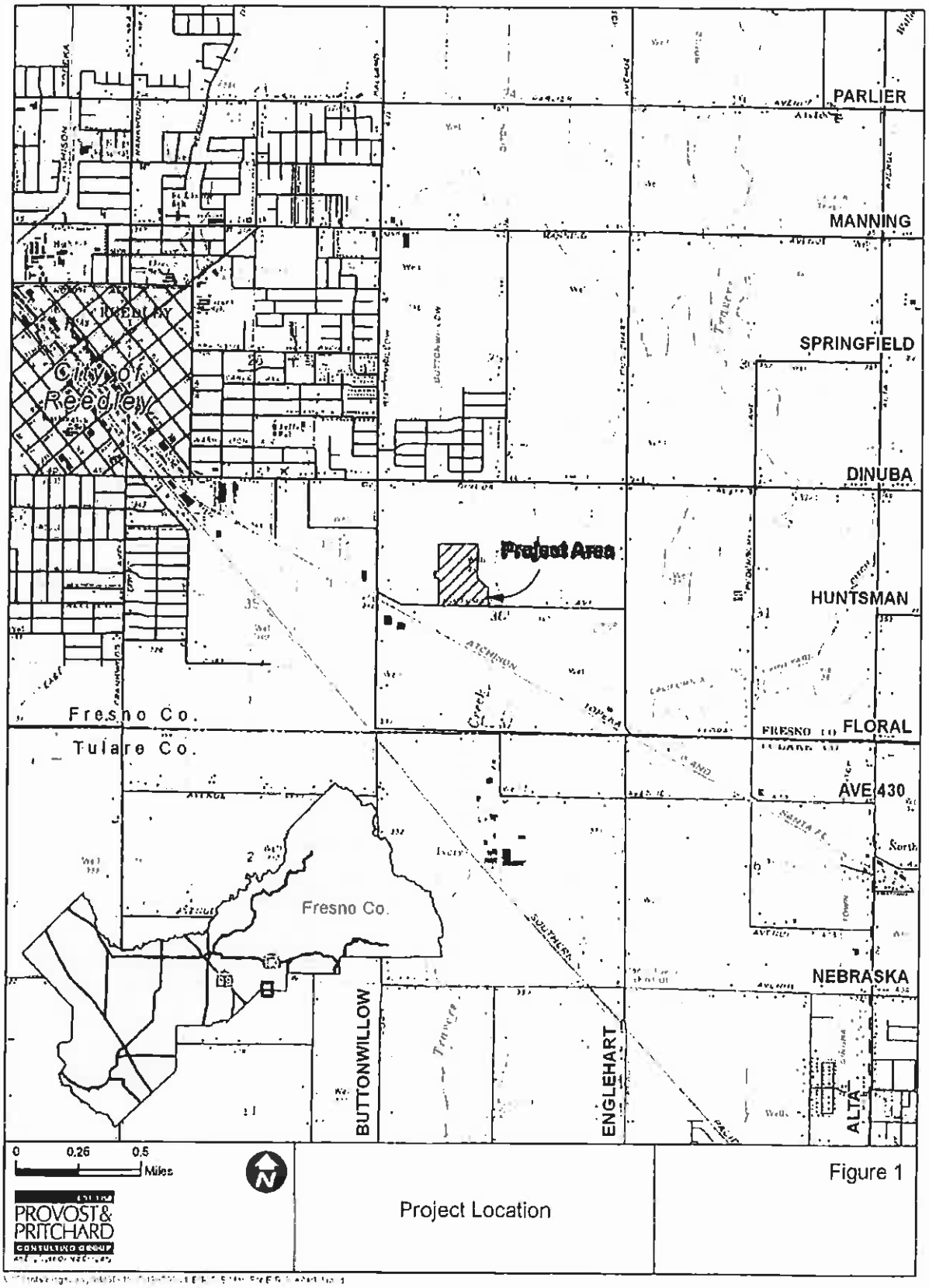
Mr. Ron Hudson, Deputy Superintendent
Kings Canyon Unified School District
675 W. Manning
Reedley, CA 93654

All parties that have submitted their names and mailing addresses will be notified of any significant changes in the proposed project. If you wish to be placed on the mailing list, please submit your name and mailing address to the contact person listed above.

PUBLIC SCOPING MEETING: KCUSD will hold a Public Scoping Meeting to describe the proposed project and the environmental review process and to obtain your verbal input on the EIR analysis for the proposed project. The EIR public scoping meeting is scheduled for 7:30 PM on October 13, 2009. The meeting will be held at the KCUSD Office, 675 W. Manning Avenue, Reedley. You are encouraged to attend and provide input on the scope of the EIR so that all relevant environmental issues are addressed.

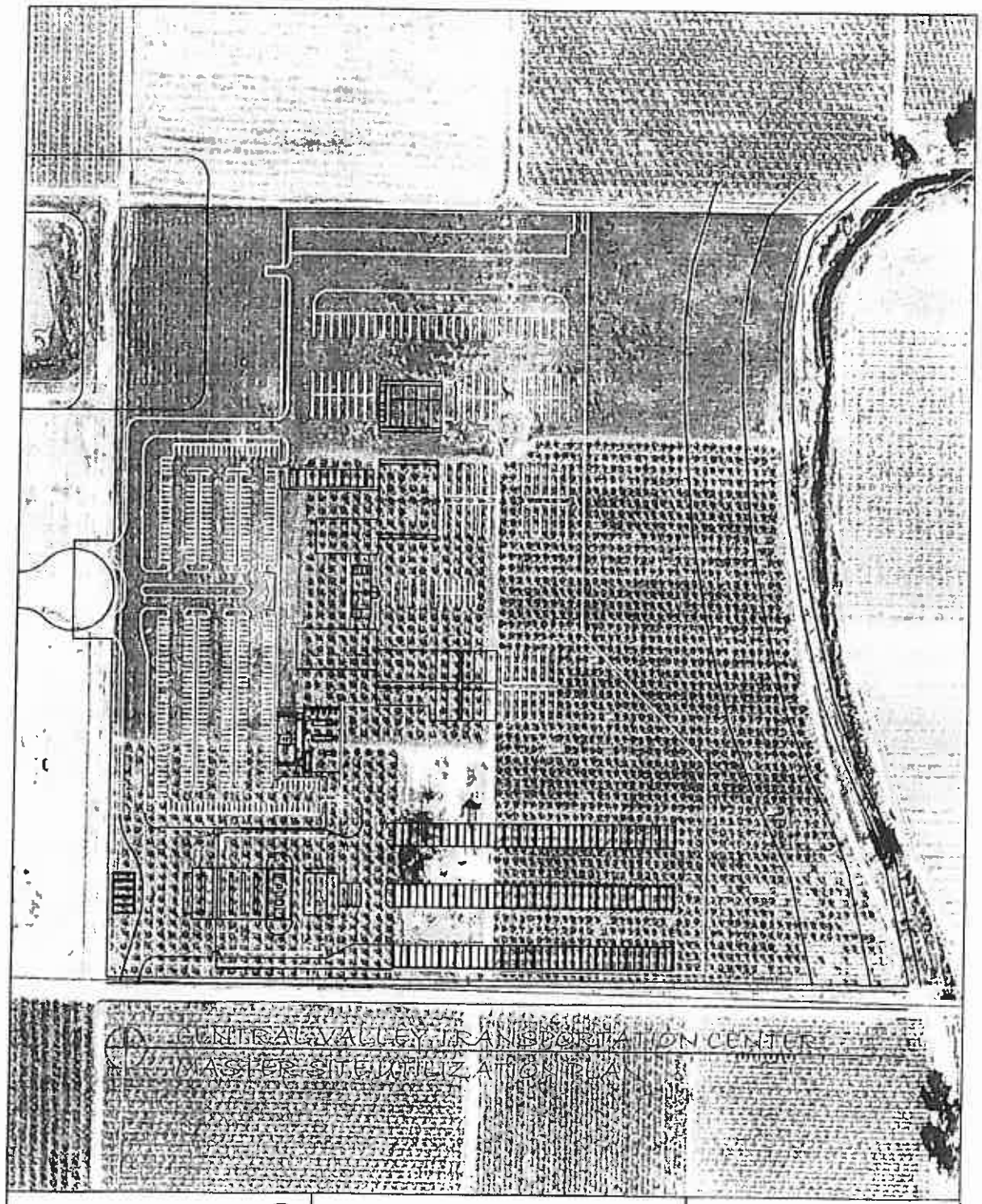
Ron Hudson, Deputy Superintendent

9-23-09
Date



Project Location

Figure 1



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Site Plan with Aerial

Figure 2

DEPARTMENT OF TRANSPORTATION
1352 WEST OLIVE AVENUE
P.O. BOX 12616
FRESNO, CA 93778-2616
PHONE (559) 445-5868
FAX (559) 488-4088
TTY (559) 488-4066

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October 6, 2009

2131-IGR/CEQA
6-FRE-99-9.164+/-
NOP/DEIR
CENTRAL VALLEY
TRANSPORATION CENTER PROJECT
SCH 2009091097

Mr. Ron Hudson
Kings Canyon Unified School District
674 W. Manning Avenue
Reedley, CA 93654

Dear Mr. Hudson:

We have completed our review of the Notice of Preparation of a Draft Environmental Impact Report (DEIR) to allow a transportation center to serve the Kings Canyon Unified School District. The facility would maintain and operate a fleet of 110 buses and 35 fleet vehicles. Caltrans has the following comments:

Caltrans request the opportunity to review the DEIR once available. The document should include the district's boundaries so it can be determined where trips from the facility will be going. The traffic portion of the document should include trip generation and trip distribution estimates to State facilities.

If you have any questions, please call me at (559) 445-5868.

Sincerely,

MICHAEL NAVARRO
Office of Transportation Planning
District 06

C: SCH

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

October 1, 2009

Ron Hudson
Kings Canyon Unified School District
675 W. Manning
Reedley, CA 93654

Subject: Comments on Proposed Project

Project: NOP for the Central Valley Transportation Center Project

District Reference No: 20090573

Dear Mr. Hudson:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the Notice of Preparation (NOP) for the Central Valley Transportation Center Project. The proposed project would consist of a state-of-the art transportation center from which Kings Canyon Unified School District would maintain and operate a fleet of up to 110 buses and 35 fleet vehicles. The District offers the following comments:

District Comments

1) The District recommends that any preliminary and final environmental review of the project's potential impact on air quality include the following:

   1a) A description of the regulatory environment and existing air quality conditions impacting the area. Information on the District's attainment status can be found on the District's web page at http://valleyair.org/aqinfo/attainment.htm.

   1b) A description of the project, including a discussion of existing and post-project emissions.

i) The discussion should include emissions from short-term activities such as construction, and emissions from long-term activities, such as operational, and area wide emission sources. Emissions from permitted (stationary sources) and non-permitted (mobile sources) sources should be analyzed separately. The project should be considered to have a significant adverse impact on air quality if emissions from either source exceed the following amounts: 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), or 15 tons per year particulate matter of 10 microns or less in size (PM10).

ii) A discussion of whether the project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment.

iii) At this time there are no established significance thresholds for greenhouse gas emissions, however, it is suggested that the EIR include a discussion of greenhouse gas emissions generated by the project and the effect they will have, if any, on global climate change.

2) If the project is located near residential/sensitive receptors, the proposed project should be evaluated to determine the health impact of TACs (Toxic Air Contaminants) to the near-by receptors.

2a) Prior to conducting a Health Risk Assessment (HRA), an applicant may perform a prioritization on all sources of emissions to determine if it is necessary to conduct an HRA. A prioritization is a screening tool used to identify projects that may have significant health impacts. If the project has a prioritization score of 10 or more, the project has the potential to exceed the District's significance threshold for health impacts of 10 in a million. Information on conducting a prioritization can be obtained from the District by contacting Mr. Leland Villalvazo, Supervising Air Quality Specialist, at hramodeler@valleyair.org.

2b) If the prioritization score indicates that toxic air contaminants (TACs) are a concern, the District recommends that a Health Risk Assessment (HRA) be performed. If an HRA is to be performed, it is recommended that the project proponent contact the District to review the proposed modeling approach. Please contact Mr. Leland Villalvazo, Supervising Air Quality Specialist, at hramodeler@valleyair.org. Additional information on TACs can be found on the District's Air Quality Modeling page:

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

3) A discussion of whether the project would create nuisance odors.

4) A discussion of the methodology, model assumptions, inputs and results used in characterizing the project's impact on air quality.

5) A discussion of all existing District regulations that apply to the project.

6) A discussion of all feasible measures that will reduce air quality impacts.

7) The proposed project would be subject to District Rule 9510 (Indirect Source Review) if upon full build-out the project would include or exceed any one of the following:

   - 50 dwelling units
   - 2,000 square feet of commercial space;
   - 25,000 square feet of light industrial space;
   - 100,000 square feet of heavy industrial space;
   - 20,000 square feet of medical office space;
   - 39,000 square feet of general office space; or
   - 9,000 square feet of educational space; or
   - 10,000 square feet of government space; or
   - 20,000 square feet of recreational space; or
   - 9,000 square feet of space not identified above.

   District Rule 9510 is intended to mitigate a project's impact on air quality through project design elements or by payment of applicable off-site mitigation fees. Any applicant subject to District Rule 9510 is required to submit an Air Impact Assessment (AIA) application to the District no later than seeking final discretionary approval, and to pay any applicable off-site mitigation fees before issuance of the first building permit.

   The District recommends that demonstration of compliance with District Rule 9510, including payment of all applicable fees, be made a condition of project approval. Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

8) This project may require District permits. Prior to construction, the project proponent should submit to the District an application for an Authority to Construct (ATC). For further information or assistance, the project proponent may contact the District's Small Business Assistance Office at (559) 230-5888.

District staff is available to meet with you and/or the applicant to further discuss the regulatory requirements that are associated with this project. If you have any questions or require further information, please call David McDonough at (559) 230-5920 and provide the reference number at the top of this letter.

Sincerely,

David Warner
Director of Permit Services

David McDonough for,

Arnaud Marjollet
Permit Services Manager

DW:dm

cc: File

Appendix B

Land Evaluation and Site Assessment Model

NOTES

Calculation of the Land Evaluation (LE) Score

Part 1. Land Capability Classification (LCC) Score:

(1) Determine the total acreage of the project.
(2) Determine the soil types within the project area and enter them in **Column A** of the **Land Evaluation Worksheet** provided on page 2-A.
(3) Calculate the total acres of each soil type and enter the amounts in **Column B**.
(4) Divide the acres of each soil type (**Column B**) by the total acreage to determine the proportion of each soil type present. Enter the proportion of each soil type in **Column C**.
(5) Determine the LCC for each soil type from the applicable Soil Survey and enter it in **Column D**.
(6) From the LCC Scoring Table below, determine the point rating corresponding to the LCC for each soil type and enter it in **Column E**.

LCC Scoring Table

LCC Class	I	IIe	IIs,w	IIIe	IIIs,w	IVe	IVs,w	V	VIe,s,w	VIIe,s,w	VIII
Points	100	90	80	70	60	50	40	30	20	10	0

(7) Multiply the proportion of each soil type (**Column C**) by the point score (**Column E**) and enter the resulting scores in **Column F**.
(8) Sum the LCC scores in **Column F**.
(9) Enter the LCC score in box <1> of the **Final LESA Score Sheet** on page 10-A.

Part 2. Storie Index Score:

(1) Determine the Storie Index rating for each soil type and enter it in **Column G**.
(2) Multiply the proportion of each soil type (**Column C**) by the Storie Index rating (**Column G**) and enter the scores in **Column H**.
(3) Sum the Storie Index scores in **Column H** to gain the Storie Index Score.
(4) Enter the Storie Index Score in box <2> of the **Final LESA Score Sheet** on page 10-A.

Land Evaluation Worksheet

Land Capability Classification (LCC) and Storie Index Scores

A	B	C	D	E	F	G	H
Soil Map Unit	Project Acres	Proportion of Project Area	LCC	LCC Rating	LCC Score	Storie Index	Storie Index Score
[illegible]	[illegible]	[illegible]	3s	60	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	2s	80	[illegible]	80	[illegible]
[illegible]	[illegible]		1	[illegible]	[illegible]	77	[illegible]
[illegible]	[illegible]	[illegible]	1	100	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]		4s	40	[illegible]	76	[illegible]
Totals	[illegible]	(Must Sum to 1.0)		*LCC Total Score*	[illegible]	*Storie Index Total Score*	[illegible]

Site Assessment Worksheet 1.

Project Size Score

	I	J	K
	LCC Class I - II	LCC Class III	LCC Class IV - VIII
		[illegible]	
	[illegible]		
	[illegible]		
	[illegible]		
			[illegible]
Total Acres	[illegible]	[illegible]	[illegible]
Project Size Scores	50	0	0

Highest Project Size Score [illegible]

NOTES

Calculation of the Site Assessment (SA) Score

Part 1. Project Size Score:.

(1) Using **Site Assessment Worksheet 1** provided on page 2-A, enter the acreage of each soil type from **Column B** in the **Column - I, J or K** - that corresponds to the LCC for that soil. (Note: While the Project Size Score is a component of the Site Assessment calculations, the score sheet is an extension of data collected in the Land Evaluation Worksheet, and is therefore displayed beside it).
(2) Sum **Column I** to determine the total amount of class I and II soils on the project site.
(3) Sum **Column J** to determine the total amount of class III soils on the project site.
(4) Sum **Column K** to determine the total amount of class IV and lower soils on the project site.
(5) Compare the total score for each LCC group in the Project Size Scoring Table below and determine which group receives the highest score.

Project Size Scoring Table

Class I or II		Class III		Class IV or Lower	
Acreage	Points	Acreage	Points	Acreage	Points
>80	100	>160	100	>320	100
60-79	90	120-159	90	240-319	80
40-59	80	80-119	80	160-239	60
20-39	50	60-79	70	100-159	40
10-19	30	40-59	60	40-99	20
10<	0	20-39	30	40<	0
		10-19	10		
		10<	0		

(6) Enter the **Project Size Score** (the highest score from the three LCC categories) in box <3> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Part 2. Water Resource Availability Score:

(1) Determine the type(s) of irrigation present on the project site, including a determination of whether there is dryland agricultural activity as well.

(2) Divide the site into portions according to the type or types of irrigation or dryland cropping that is available in each portion. Enter this information in **Column B** of **Site Assessment Worksheet 2. - Water Resources Availability**.

(3) Determine the proportion of the total site represented for each portion identified, and enter this information in **Column C**.

(4) Using the Water Resources Availability Scoring Table, identify the option that is most applicable for each portion, based upon the feasibility of irrigation in drought and non-drought years, and whether physical or economic restrictions are likely to exist. Enter the applicable Water Resource Availability Score into **Column D**.

(5) Multiply the Water Resource Availability Score for each portion by the proportion of the project area it represents to determine the weighted score for each portion in **Column E**.

(6) Sum the scores for all portions to determine the project's total Water Resources Availability Score

(7) Enter the Water Resource Availability Score in box <4> of the **Final LESA Score Sheet** on page 10-A.

Site Assessment Worksheet 2. - Water Resources Availability

A	B	C	D	E
Project Portion	Water Source	Proportion of Project Area	Water Availability Score	Weighted Availability Score (C x D)
1	Irrigation District GW	[illegible]	100	94
2	Non-irrigated	0.02	0	0
3				
4				
5				
6				
		(Must Sum to 1.0)	*Total Water Resource Score*	94

Water Resource Availability Scoring Table

Option	Non-Drought Years			Drought Years			WATER RESOURCE SCORE
	RESTRICTIONS			RESTRICTIONS			
	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	Irrigated Production Feasible?	Physical Restrictions ?	Economic Restrictions ?	
1	YES	NO	NO	YES	NO	NO	100
2	YES	NO	NO	YES	NO	YES	95
3	YES	NO	YES	YES	NO	YES	90
4	YES	NO	NO	YES	YES	NO	85
5	YES	NO	NO	YES	YES	YES	80
6	YES	YES	NO	YES	YES	NO	75
7	YES	YES	YES	YES	YES	YES	65
8	YES	NO	NO	NO	– –	– –	50
9	YES	NO	YES	NO	– –	– –	45
10	YES	YES	NO	NO	– –	– –	35
11	YES	YES	YES	NO	– –	– –	30
12	Irrigated production not feasible, but rainfall adequate for dryland production in both drought and non-drought years						25
13	Irrigated production not feasible, but rainfall adequate for dryland production in non-drought years (but not in drought years)						20
14	Neither irrigated nor dryland production feasible						0

NOTES

Part 3. Surrounding Agricultural Land Use Score:

(1) Calculate the project's Zone of Influence (ZOI) as follows:

(a) a rectangle is drawn around the project such that the rectangle is the smallest that can completely encompass the project area.

(b) a second rectangle is then drawn which extends one quarter mile on all sides beyond the first rectangle.

(c) The ZOI includes all parcels that are contained within or are intersected by the second rectangle, less the area of the project itself.

(2) Sum the area of all parcels to determine the total acreage of the ZOI.

(3) Determine which parcels are in agricultural use and sum the areas of these parcels

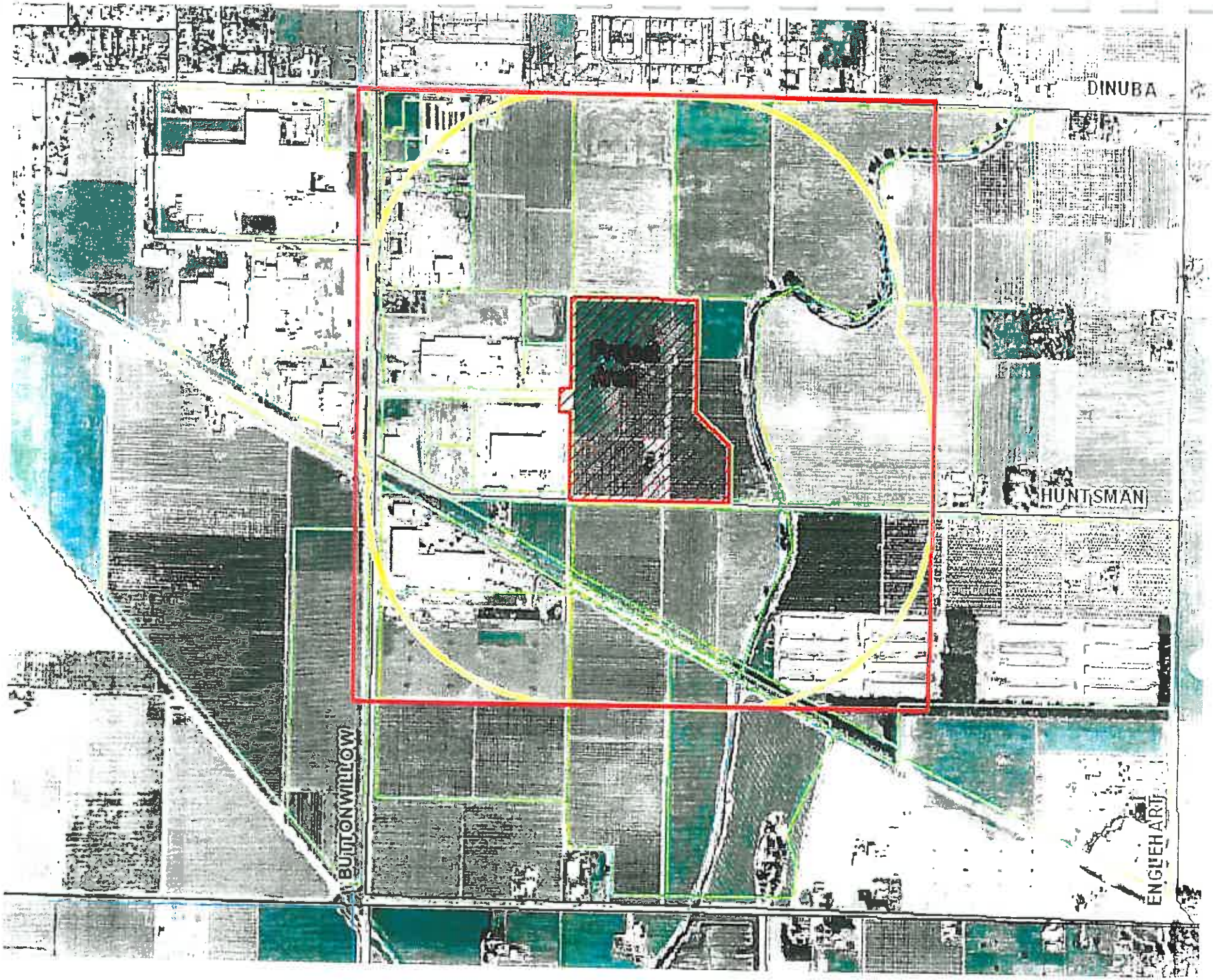
(4) Divide the area in agriculture found in step (3) by the total area of the ZOI found in step (2) to determine the percent of the ZOI that is in agricultural use.

(5) Determine the Surrounding Agricultural Land Score utilizing the Surrounding Agricultural Land Scoring Table below.

Surrounding Agricultural Land Scoring Table

Percent of ZOI in Agriculture	Surrounding Agricultural Land Score
90-100	100
80-89	95
70-79	90
65-69	85
60-64	80
55-59	70
50-54	60
45-49	50
40-44	40
35-39	30
30-34	20
20-29	10
<19	0

(5) Enter the Surrounding Agricultural Land Score in box <5> of the **Final LESA Score Sheet** on page 10-A.


DINUBA
HUNTSMAN
BUTTONWILLOW
ENGLEHART

Site Assessment Worksheet 3.

Surrounding Agricultural Land and Surrounding Protected Resource Land

A	B	C	D	E	F	G
Zone of Influence						
Total Acres	Acres in Agriculture	Acres of Protected Resource Land	Percent in Agriculture (A/B)	Percent Protected Resource Land (A/C)	Surrounding Agricultural Land Score (From Table)	Surrounding Protected Resource Land Score (From Table)
[illegible]		[illegible]	78%	15%	90	[illegible]

NOTES

Part 4. Protected Resource Lands Score:

The Protected Resource Lands scoring relies upon the same Zone of Influence information gathered in Part 3, and figures are entered in Site Assessment Worksheet 3, which combines the surrounding agricultural and protected lands calculations.

(1) Use the total area of the ZOI calculated in Part 3. for the Surrounding Agricultural Land Use score.
(2) Sum the area of those parcels within the ZOI that are protected resource lands, as defined in the California Agricultural LESA Guidelines.
(3) Divide the area that is determined to be protected in Step (2) by the total acreage of the ZOI to determine the percentage of the surrounding area that is under resource protection.
(4) Determine the Surrounding Protected Resource Land Score utilizing the Surrounding Protected Resource Land Scoring Table below.

Surrounding Protected Resource Land Scoring Table

Percent of ZOI Protected	Protected Resource Land Score
90-100	100
80-89	95
70-79	90
65-69	85
60-64	80
55-59	70
50-54	60
45-49	50
40-44	40
35-39	30
30-34	20
20-29	10
<20	0

(5) Enter the Protected Resource Land score in box <6> of the **Final LESA Score Sheet** on page 10-A.

NOTES

Final LESA Score Sheet

Calculation of the Final LESA Score:

(1) Multiply each factor score by the factor weight to determine the weighted score and enter in Weighted Factor Scores column.
(2) Sum the weighted factor scores for the LE factors to determine the total LE score for the project.
(3) Sum the weighted factor scores for the SA factors to determine the total SA score for the project.
(4) Sum the total LE and SA scores to determine the Final LESA Score for the project.

	Factor Scores	Factor Weight	Weighted Factor Scores
LE Factors			
Land Capability Classification	<1> 85.74	0.25	21.435
Storie Index	<2> 71.0[illegible]	0.25	17.7[illegible]
LE Subtotal		***0.50***	39.2[illegible]
SA Factors			
Project Size	<3> 50	0.15	[illegible]
Water Resource Availability	<4> 94	0.15	[illegible]
Surrounding Agricultural Land	<5> 90	0.15	[illegible]
Protected Resource Land	<6> 50	0.05	[illegible]
SA Subtotal		***0.50***	[illegible]
		Final LESA Score	[illegible]

For further information on the scoring thresholds under the California Agricultural LESA Model, consult Section 4 of the Instruction Manual.

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Eastern Fresno Area, California

Central Valley Transportation Center

August 19, 2009

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://soils.usda.gov/sqi/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://soils.usda.gov/contact/state_offices/).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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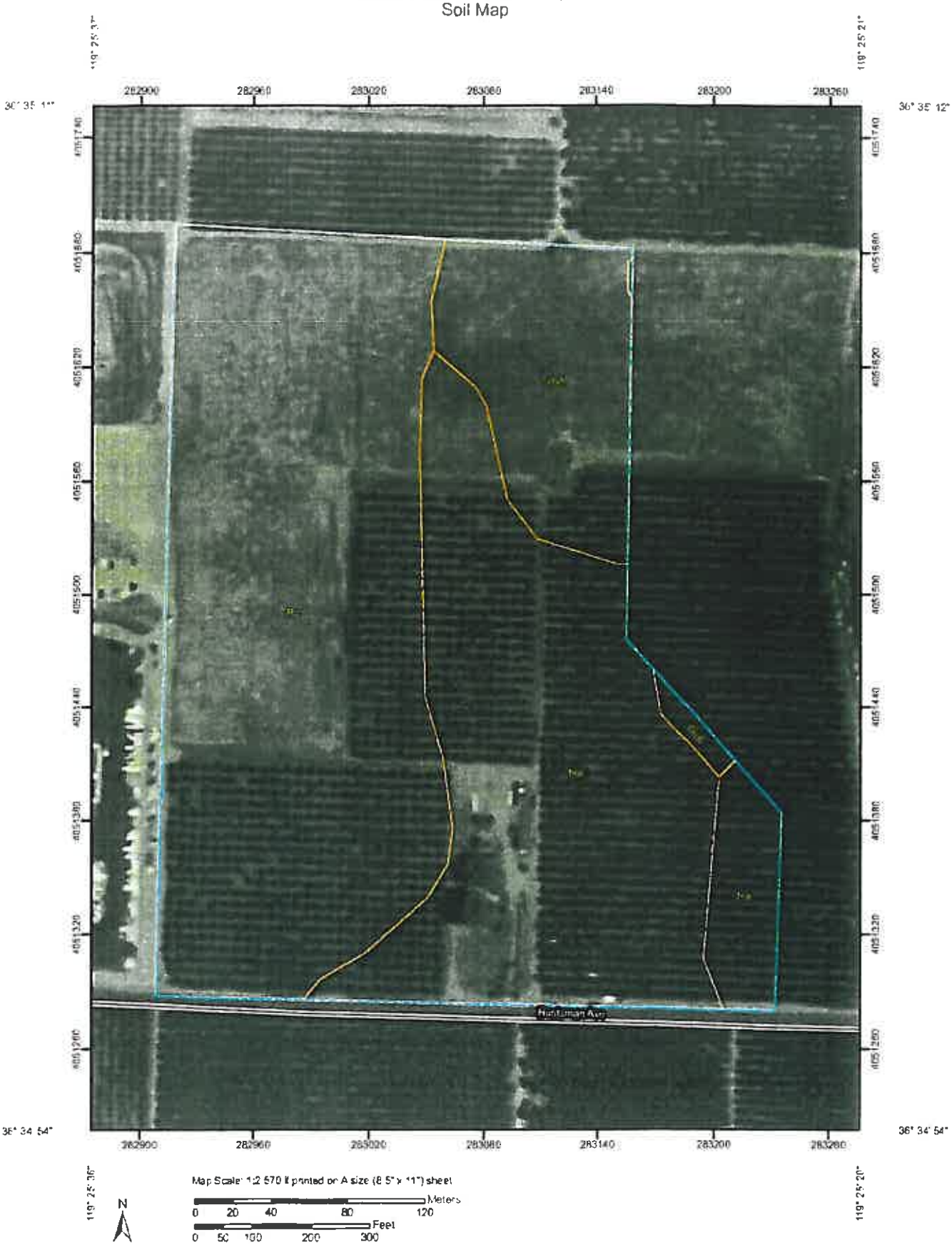
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Units

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features

- Gully
- Short Steep Slope
- Other

Political Features

- Cities

Water Features

- Oceans
- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

MAP INFORMATION

Map Scale: 1:2,570 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1 24,000

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Fresno Area, California
Survey Area Data: Version 5, Sep 26, 2008

Date(s) aerial images were photographed 7/1/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Eastern Fresno Area, California (CA654)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GuA	Greenfield sandy loam, moderately deep, 0 to 3 percent slopes	0.2	0.6%
Hs	Hanford coarse sandy loam	9.2	33.8%
Rs	Ramona sandy loam	1.0	3.8%
Rc	Ramona loam	13.5	49.7%
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	3.3	12.1%
Totals for Area of Interest		**27.1**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that

have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Eastern Fresno Area, California

GuA—Greenfield sandy loam, moderately deep, 0 to 3 percent slopes

Map Unit Setting

Elevation: 250 to 2,000 feet
Mean annual precipitation: 9 to 17 inches
Mean annual air temperature: 60 to 63 degrees F
Frost-free period: 200 to 275 days

Map Unit Composition

Greenfield and similar soils: 85 percent
Minor components: 15 percent

Description of Greenfield

Setting

Landform: Alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Granitic alluvium

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 24 to 48 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low (0.01 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability (nonirrigated): 4s

Typical profile

0 to 16 inches: Sandy loam
16 to 38 inches: Sandy loam
38 to 48 inches: Cemented

Minor Components

Unnamed, compact subsoil

Percent of map unit: 5 percent
Landform: Alluvial fans

Unnamed, moderately sloping

Percent of map unit: 5 percent
Landform: Alluvial fans

Hanford

Percent of map unit: 5 percent
Landform: Alluvial fans

Ha—Hanford coarse sandy loam

Map Unit Setting

Elevation: 200 to 500 feet
Mean annual precipitation: 8 to 15 inches
Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 250 to 275 days

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent

Description of Hanford

Setting

Landform: Alluvial fans, flood plains
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, rise
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Granitic alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability (nonirrigated): 4s

Typical profile

0 to 16 inches: Coarse sandy loam
16 to 72 inches: Coarse sandy loam

Minor Components

Unnamed

Percent of map unit: 15 percent
Landform: Alluvial fans, flood plains
Down-slope shape: Linear
Across-slope shape: Linear

Ra—Ramona sandy loam

Map Unit Setting

Elevation: 250 to 500 feet
Mean annual precipitation: 9 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 225 to 275 days

Map Unit Composition

Ramona and similar soils: 85 percent
Minor components: 15 percent

Description of Ramona

Setting

Landform: Alluvial fans, stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Granitic alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability (nonirrigated): 4c

Typical profile

0 to 12 inches: Sandy loam
12 to 24 inches: Sandy loam
24 to 38 inches: Sandy clay loam
38 to 60 inches: Coarse sandy loam

Minor Components

Unnamed, coarse sandy loam

Percent of map unit: 10 percent
Landform: Stream terraces, alluvial fans

Unnamed, fine sandy loam

Percent of map unit: 5 percent

Landform: Stream terraces, alluvial fans

Rc—Ramona loam

Map Unit Setting

Elevation: 250 to 500 feet
Mean annual precipitation: 9 to 15 inches
Mean annual air temperature: 60 to 62 degrees F
Frost-free period: 225 to 275 days

Map Unit Composition

Ramona and similar soils: 80 percent
Minor components: 20 percent

Description of Ramona

Setting

Landform: Stream terraces, alluvial fans
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Granitic alluvium

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): 1
Land capability (nonirrigated): 4c

Typical profile

0 to 12 inches: Loam
12 to 24 inches: Loam
24 to 38 inches: Clay loam
38 to 60 inches: Coarse sandy loam

Minor Components

Unnamed, fine sandy loam

Percent of map unit: 10 percent
Landform: Alluvial fans, stream terraces

Unnamed, clay loam
Percent of map unit: 5 percent
Landform: Alluvial fans, stream terraces

Unnamed, gently sloping
Percent of map unit: 5 percent
Landform: Alluvial fans, stream terraces

TzbA—Tujunga loamy sand, 0 to 3 percent slopes

Map Unit Setting
Elevation: 180 to 400 feet
Mean annual precipitation: 8 to 12 inches
Mean annual air temperature: 62 to 64 degrees F
Frost-free period: 225 to 275 days

Map Unit Composition
Tujunga and similar soils: 85 percent
Minor components: 15 percent

Description of Tujunga

Setting
Landform: Flood plains, alluvial fans
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Granitic alluvium

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water capacity: Low (about 4.2 inches)

Interpretive groups
Land capability classification (irrigated): 4s
Land capability (nonirrigated): 4s

Typical profile
0 to 4 inches: Loamy sand
4 to 60 inches: Stratified sand to loamy sand

Minor Components

Unnamed, loamy coarse sand
Percent of map unit: 12 percent
Landform: Alluvial fans, flood plains

Unnamed, compact substratum
Percent of map unit: 2 percent
Landform: Alluvial fans, flood plains

Unnamed, flooded
Percent of map unit: 1 percent
Landform: Flood plains

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

California Revised Storie Index (CA) (Central Valley Transportation Center)

The Storie Index is a soil rating based on soil properties that govern a soil's potential for cultivated agriculture in California.

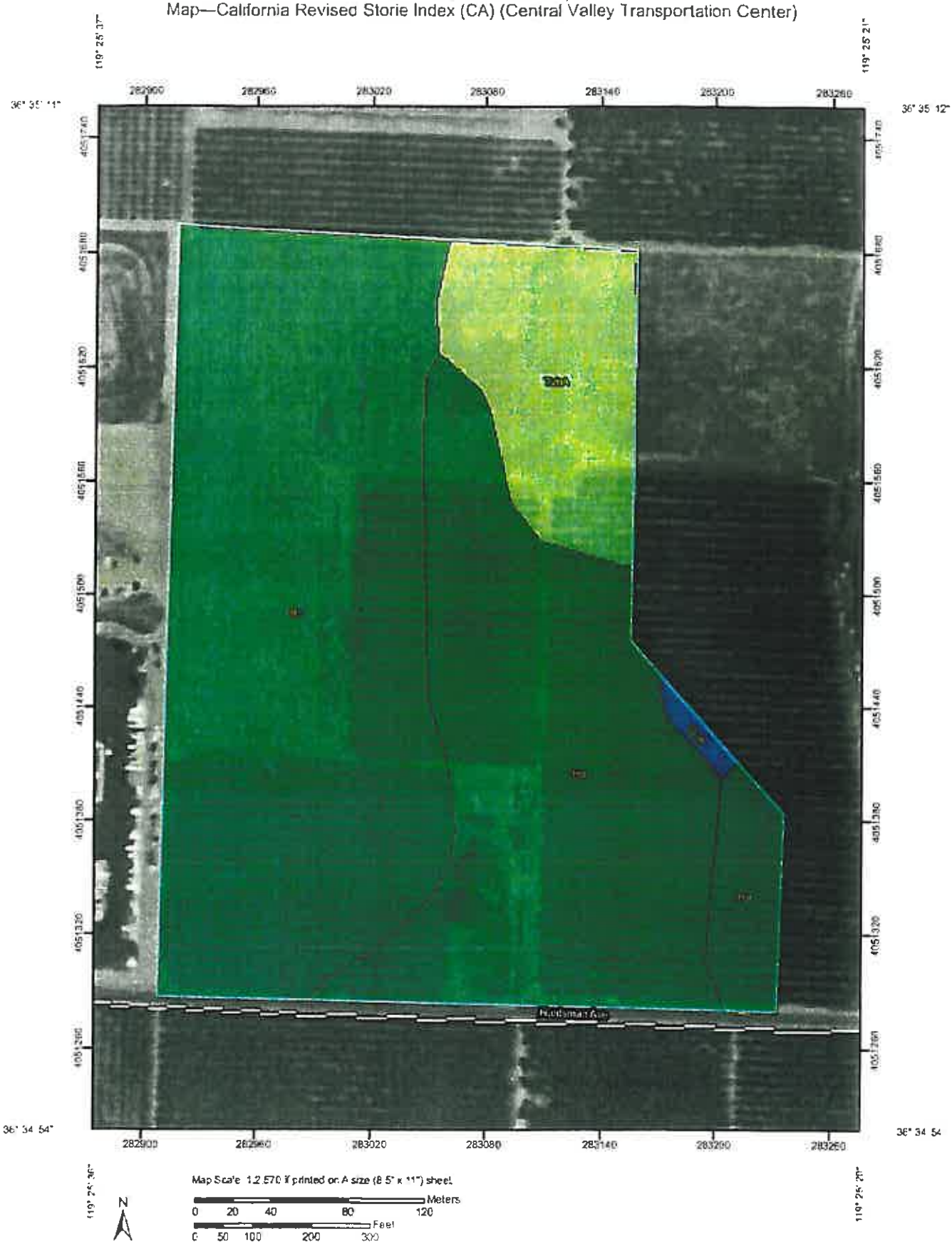
The Storie Index assesses the productivity of a soil from the following four characteristics: Factor A, degree of soil profile development; factor B, texture of the surface layer; factor C, slope; and factor X, manageable features, including drainage, microrelief, fertility, acidity, erosion, and salt content. A score ranging from 0 to 100 percent is determined for each factor, and the scores are then multiplied together to derive an index rating.

For simplification, Storie Index ratings have been combined into six grade classes as follows: Grade 1 (excellent), 100 to 80; grade 2 (good), 79 to 60; grade 3 (fair), 59 to 40; grade 4 (poor), 39 to 20; grade 5 (very poor), 19 to 10; and grade 6 (nonagricultural), less than 10.

The components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as the one shown for the map unit. The percent composition of each component in a particular map unit is given to help the user better understand the extent to which the rating applies to the map unit.

Other components with different ratings may occur in each map unit. The ratings for all components, regardless the aggregated rating of the map unit, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Custom Soil Resource Report
Map—California Revised Storie Index (CA) (Central Valley Transportation Center)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Soil Ratings

Grade One - Excellent

Grade Two - Good

Grade Three - Fair

Grade Four - Poor

Grade Five - Very Poor

Grade Six - Nonagricultural

Not rated

not rated or not available

Political Features

Cities

Water Features

Oceans

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:2,570 if printed on A size (8.5" × 11") sheet

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Eastern Fresno Area, California
Survey Area Data: Version 5, Sep 26, 2008

Date(s) aerial images were photographed: 7/1/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—California Revised Storie Index (CA) (Central Valley Transportation Center)

California Revised Storie Index (CA)— Summary by Map Unit — Eastern Fresno Area, California					
Map unit symbol	Map unit name	Rating	Component name (percent)	Acres in AOI	Percent of AOI
GuA	Greenfield sandy loam, moderately deep, 0 to 3 percent slopes	Grade Three - Fair	Greenfield (85%)	0.2	0.6%
Ha	Hanford coarse sandy loam	Grade One - Excellent	Hanford (85%)	9.2	33.8%
Ra	Ramona sandy loam	Grade One - Excellent	Ramona (85%)	1.0	3.8%
Rc	Ramona loam	Grade One - Excellent	Ramona (80%)	13.5	49.7%
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	Grade Two - Good	Tujunga (85%)	3.3	12.1%
Totals for Area of Interest				**27.1**	**100.0%**

California Revised Storie Index (CA)— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Grade One - Excellent	23.7	87.3%
Grade Two - Good	3.3	12.1%
Grade Three - Fair	0.2	0.6%
Totals for Area of Interest	**27.1**	**100.0%**

Rating Options—California Revised Storie Index (CA) (Central Valley Transportation Center)

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Irrigated Capability Class (Central Valley Transportation Center)

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations that show suitability and limitations of groups of soils for rangeland, for woodland, or for engineering purposes.

In the capability system, soils are generally grouped at three levels-capability class, subclass, and unit. Only class and subclass are included in this data set.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have few limitations that restrict their use.

Class 2 soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both.

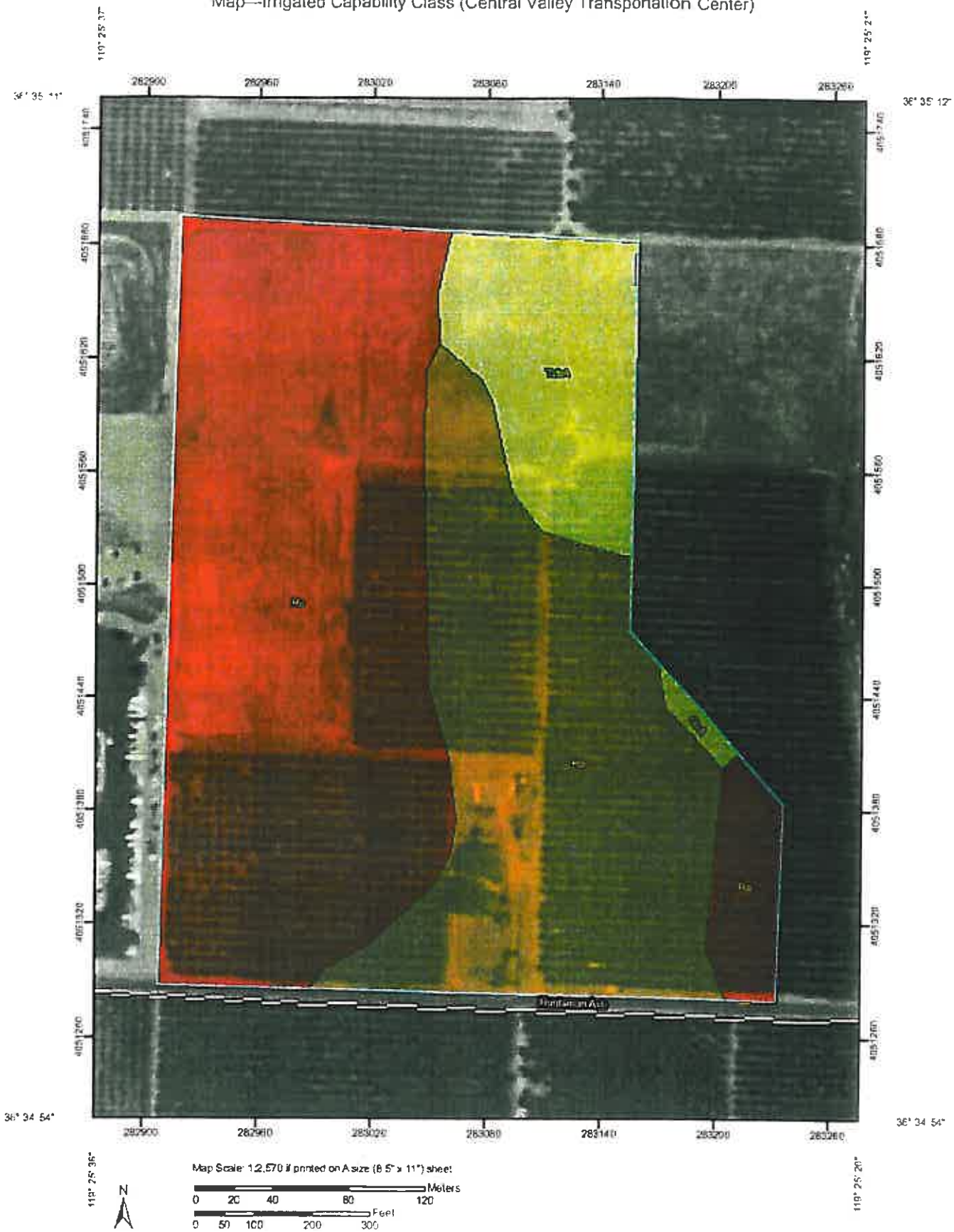
Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Custom Soil Resource Report
Map—Irrigated Capability Class (Central Valley Transportation Center)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Soil Ratings

Capability Class - I

Capability Class - II

Capability Class - III

Capability Class - IV

Capability Class - V

Capability Class - VI

Capability Class - VII

Capability Class - VIII

Not rated or not available

Political Features

Cities

Water Features

Oceans

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:2,570 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

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Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 11N NAD83

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Soil Survey Area: Eastern Fresno Area, California
Survey Area Data: Version 5, Sep 26, 2008

Date(s) aerial images were photographed: 7/1/2005

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Table—Irrigated Capability Class (Central Valley Transportation Center)

Irrigated Capability Class— Summary by Map Unit — Eastern Fresno Area, California				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GuA	Greenfield sandy loam, moderately deep, 0 to 3 percent slopes	3	0.2	0.6%
Ha	Hanford coarse sandy loam	2	9.2	33.8%
Ra	Ramona sandy loam	1	1.0	3.8%
Rc	Ramona loam	1	13.5	49.7%
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	4	3.3	12.1%
Totals for Area of Interest			**27.1**	**100.0%**

Rating Options—Irrigated Capability Class (Central Valley Transportation Center)

Aggregation Method: Dominant Condition

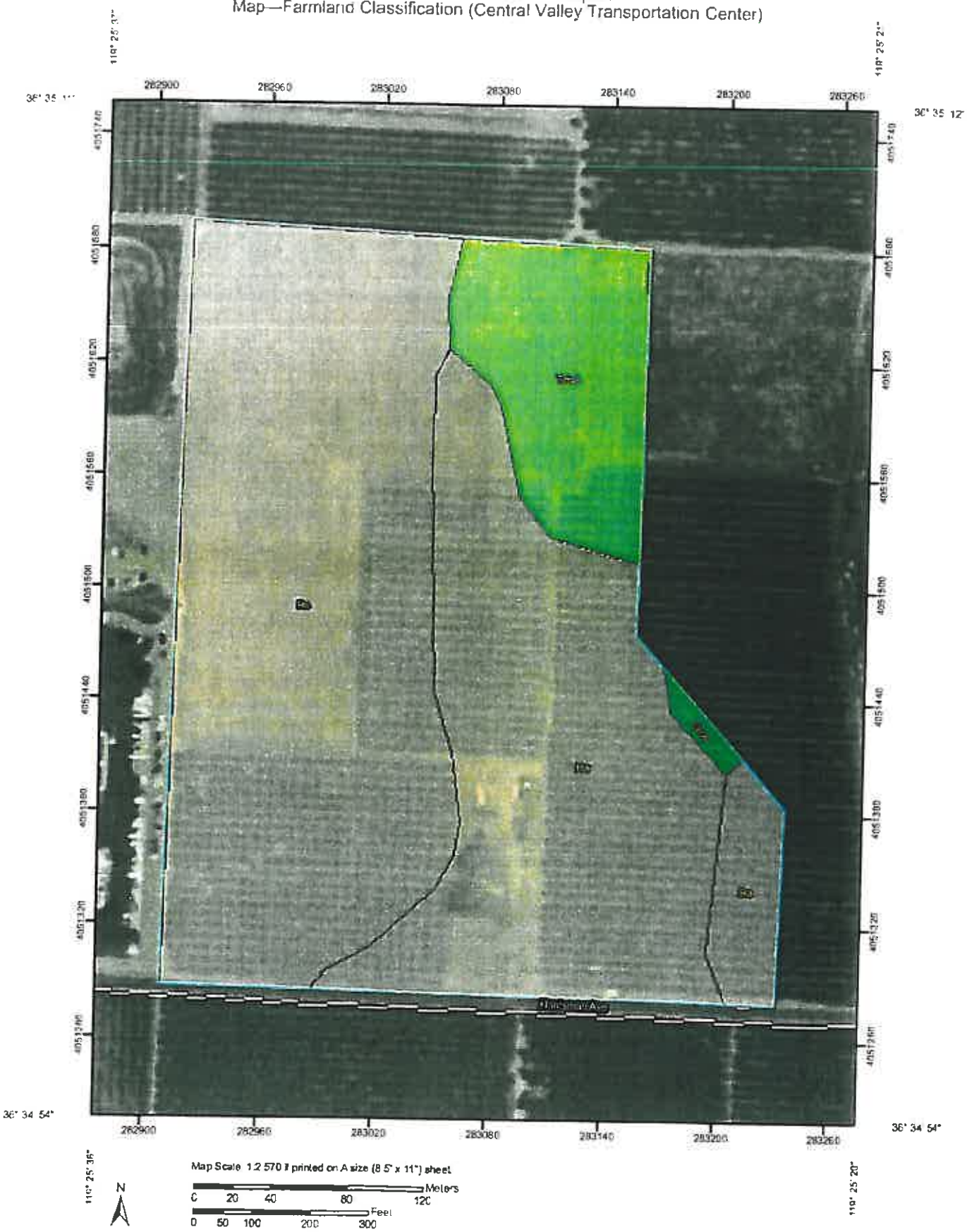
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Farmland Classification (Central Valley Transportation Center)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification (Central Valley Transportation Center)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Soil Ratings

Not prime farmland

All areas are prime farmland

Prime farmland if drained

Prime farmland if protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated

Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Prime farmland if irrigated and drained

Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Prime farmland if subsoiled, completely removing the root inhibiting soil layer

Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

Prime farmland if irrigated and reclaimed of excess salts and sodium

Farmland of statewide importance

Farmland of local importance

Farmland of unique importance

Not rated or not available

Political Features

Cities

Water Features

Oceans

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

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The soil surveys that comprise your AOI were mapped at 1:24,000.

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Table—Farmland Classification (Central Valley Transportation Center)

Farmland Classification— Summary by Map Unit — Eastern Fresno Area, California				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
GuA	Greenfield sandy loam, moderately deep, 0 to 3 percent slopes	Farmland of statewide importance	0.2	0.6%
Ha	Hanford coarse sandy loam	Prime farmland if irrigated	9.2	33.8%
Ra	Ramona sandy loam	Prime farmland if irrigated	1.0	3.8%
Rc	Ramona loam	Prime farmland if irrigated	13.5	49.7%
TzbA	Tujunga loamy sand, 0 to 3 percent slopes	Farmland of statewide importance	3.3	12.1%
Totals for Area of Interest			**27.1**	**100.0%**

Rating Options—Farmland Classification (Central Valley Transportation Center)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

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Appendix C

Air Quality Impact Analysis

Air Quality Impact Analysis

Central Valley Transportation Center

(A collaborative effort between the City of Reedley and Kings Canyon Unified School District)

Submitted to:

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October 2009

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EXECUTIVE SUMMARY

Insight Environmental Consultants has completed an Air Quality Impact Analysis (AQIA) for the construction and operation of transportation operations and maintenance facilities to support the City of Reedley and the Kings Canyon Unified School District's operational, maintenance, transit and bus fleets. The facility will also provide a fueling station and will feature a 1.2 MW Solar Collection and Charging System.

This AQIA was prepared pursuant to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI), *January 10, 2002 Revision* and the California Environmental Quality Act (CEQA). Based on our evaluation, the proposed project *does not pose a significant impact* to the San Joaquin Valley Air Basin.

TOTAL PROJECT EMISSIONS (MITIGATED)

Emissions Source	Pollutant (tons/year)					
	ROG	NOx	CO*	SOx*	PM_{10}	$PM_{2.5}$*
Baseline						
Direct Exhaust Emissions	0.06	0.41	0.31	0.00	0.02	0.02
Indirect Exhaust Emissions	0.71	14.96	6.34	0.02	0.50	0.46
Area Source Emission[1]	0.00	0.00	0.00	0.00	0.00	0.00
Baseline Total	**0.77**	**15.37**	**6.65**	**0.02**	**0.52**	**0.48**
Project Emissions						
Direct Exhaust Emissions	0.08	0.56	0.43	0.00	0.03	0.03
Indirect Exhaust Emissions	0.98	20.95	10.28	0.03	0.69	0.64
Area Source Emission	0.05	0.03	0.31	0.00	0.00	0.00
Project Total	**1.11**	**21.53**	**11.03**	**0.03**	**0.73**	**0.67**
Total Mitigated Incremental Increase Long-Term Emissions[2]	**0.34**	**6.16**	**4.38**	**0.01**	**0.21**	**0.19**
SJVAPCD Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	**No**	**No**	-	-	**No**	-

NOTES:
[1] Since current facilities will not be demolished and continue to be used in some capacity the baseline area emissions will be zero
[2] Numbers may not add due to rounding by the URBEMIS for Windows 9.2.4 Model
* The SJVAPCD has not established significance thresholds for CO, SOx or $PM_{2.5}$

LEVEL OF SIGNIFICANCE

The proposed project will have <u>short-term air quality impacts</u> due to fugitive dust during grading and facility construction as well as vehicular emissions associated with the equipment used in the construction activities. Both of these impacts will be mitigated to the greatest extent possible and will *remain below a level of significance*.

The proposed project will result in <u>long-term air quality impacts</u> due to operational and related mobile source emissions. These impacts will be reduced to the extent feasible and will *remain below a level of significance*.

The proposed project in conjunction with other past, present and foreseeable future projects will result in cumulative long-term impacts to air quality. The SJVAB's cumulative air quality impacts would remain significant without this project since the air basin is currently considered to be in non-attainment for certain criteria pollutants. The proposed project's incremental contribution to these impacts will be mitigated to the extent feasible and may be considered to pose *an insignificant contribution to the cumulative impacts to air quality in the San Joaquin Valley Air Basin.*

The proposed project in conjunction with other past, present and foreseeable future projects will result in cumulative long-term impacts to global climate change. The cumulative impacts of the project to global climate change are not known with certainty and levels of significance have not been established. Therefore, based on the predicted impacts of the project to air quality, it appears that the project's impacts to global climate change will *remain below a level of significance.*

1.0 INTRODUCTION

The proposed project consists of a development on 27 acres for transportation, operations and maintenance facilities to support the City of Reedley and the Kings Canyon Unified School District's operational, maintenance, transit and bus fleets. The facility will also provide a fueling station and will feature a 1.2 MW Solar Collection and Charging System. The project site is located within the unincorporated portion of Fresno County, California. The project contemplated by this study will be a single phase development project. This assessment examines the impacts to air quality posed by this project to the San Joaquin Valley Air Basin.

2.0 GENERAL PROJECT DESCRIPTION

The proposed project will be located southeast of the City of Reedley. The parcel is located on East Huntsman Avenue east of South Buttonwillow Avenue in an unincorporated potion of Fresno County. **Figure 2-1** provides the general location of the proposed project.

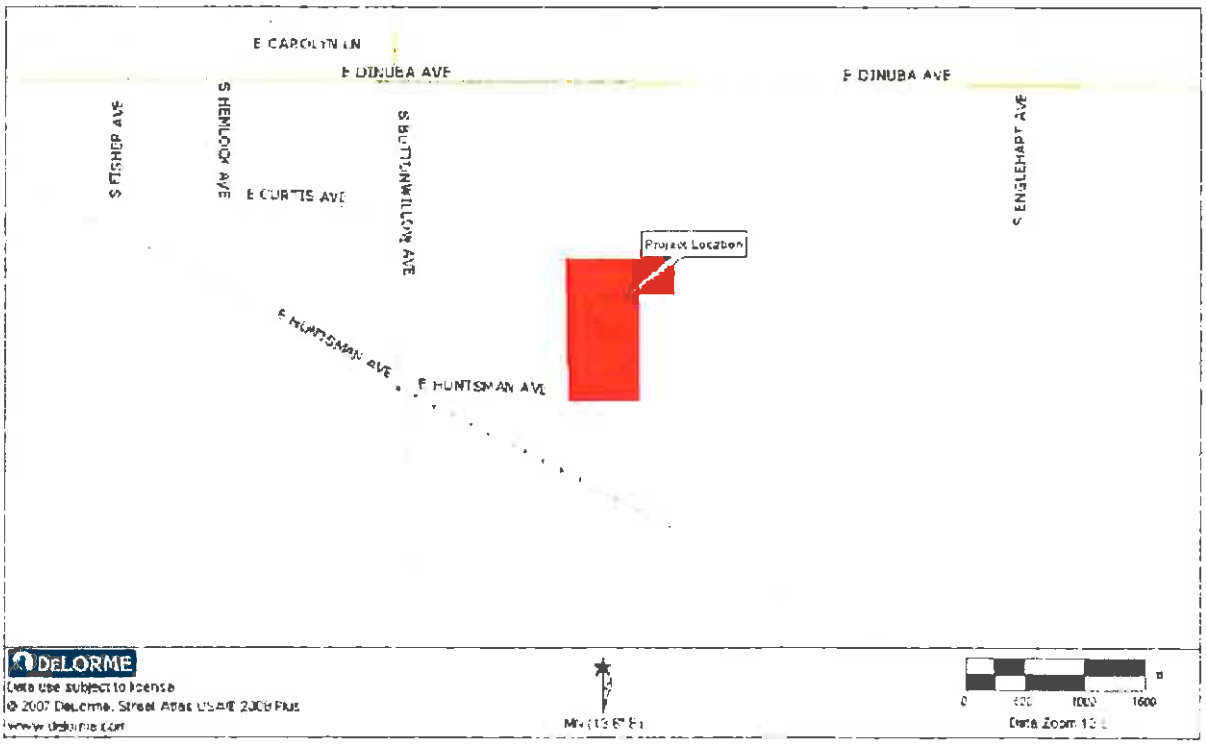

Figure 2-1 Project Location

The proposed project will be located approximately 1.5 miles southeast of Reedley's City Center, east of the intersection of South Buttonwillow Avenue and East Huntsman Avenue in an unincorporated part of Fresno County, California.

As a result of this project, the City of Reedley and Kings Canyon Unified School District will permanently relocate maintenance, fueling and storage of most, if not all, of their motor vehicle fleets (i.e. cars, trucks, busses, etc.). This will result in the discontinued use of existing facilities currently used by both entities for similar operations. Fueling operations,

repair and maintenance will be conducted at the new facility for these vehicles while also providing compressed natural gas (CNG) fueling options for the public. As the new facility will effectively replace older existing facilities, existing mobile emissions sources will be moved to the new facility.

3.0 BACKGROUND OF AIR QUALITY STANDARDS

Protection of the public health is maintained through the attainment and maintenance of standards for ambient concentrations of various compounds in the atmosphere and the enforcement of emissions limits for individual stationary sources. The Federal Clean Air Act requires that the U.S. Environmental Protection Agency (EPA) establish National Ambient Air Quality Standards (NAAQS) to protect the health, safety, and welfare of the public. NAAQS have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), suspended particulate matter (PM_{10}), and lead (Pb). California has also adopted ambient air quality standards (CAAQS) for these "criteria" air pollutants that are more stringent than the corresponding NAAQS along with standards for hydrogen sulfide (H_2S), vinyl chloride (chloroethene) and visibility reducing particles. The Clean Air Act Amendments of 1977 required states to identify areas that were in non-attainment of the NAAQS and to develop State Implementation Plans (SIP's) containing strategies to bring these non-attainment areas into compliance. Current ambient air quality standards and the current designation/classification for both Federal and State standards are presented in **Section 4.0** below with additional details provided in **Attachments A, B, C** and **D**.

Responsibility for regulation of air quality in California lies with the California Air Resources Board (CARB), the multi-county Air Quality Management Districts, and single-county Air Pollution Control Districts, with oversight responsibility held by the EPA. The CARB is responsible for regulation of mobile source emissions, establishment of state ambient air quality standards, research and development, and oversight and coordination of the activities of the regional and local air quality agencies. The regional and local air quality agencies are primarily responsible for regulating stationary source emissions and for monitoring ambient pollutant concentrations. The CARB also classifies air basins, or portions thereof, as "unclassified", "attainment" or "non-attainment" with respect to the Federal standards based on air quality monitoring data

4.0 EXISTING SETTING

The project area is located in the San Joaquin Valley Air Basin (Basin) and Fresno County which is included among the eight counties that comprise the San Joaquin Valley Air Pollution Control District (SJVAPCD). The SJVAPCD acts as the regulatory agency for air pollution control in the Basin and is the local agency empowered to regulate air pollutant emissions for the plan area. **Figure 4-1** depicts the project location, and a one-mile radius.

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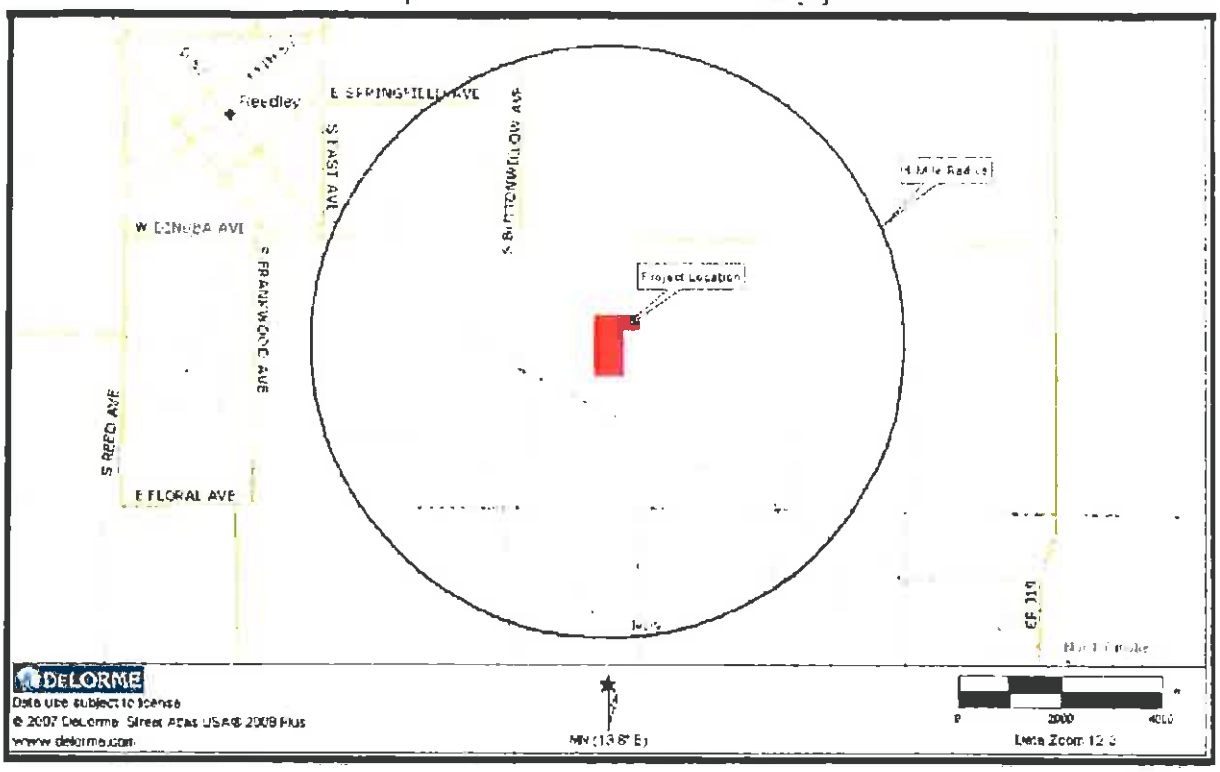

Figure 4-1 Project Vicinity / Six-Mile Radius

[This area left blank intentionally.]

Figure 4-2 below depicts the project site's topography based on United States Geological Survey maps.

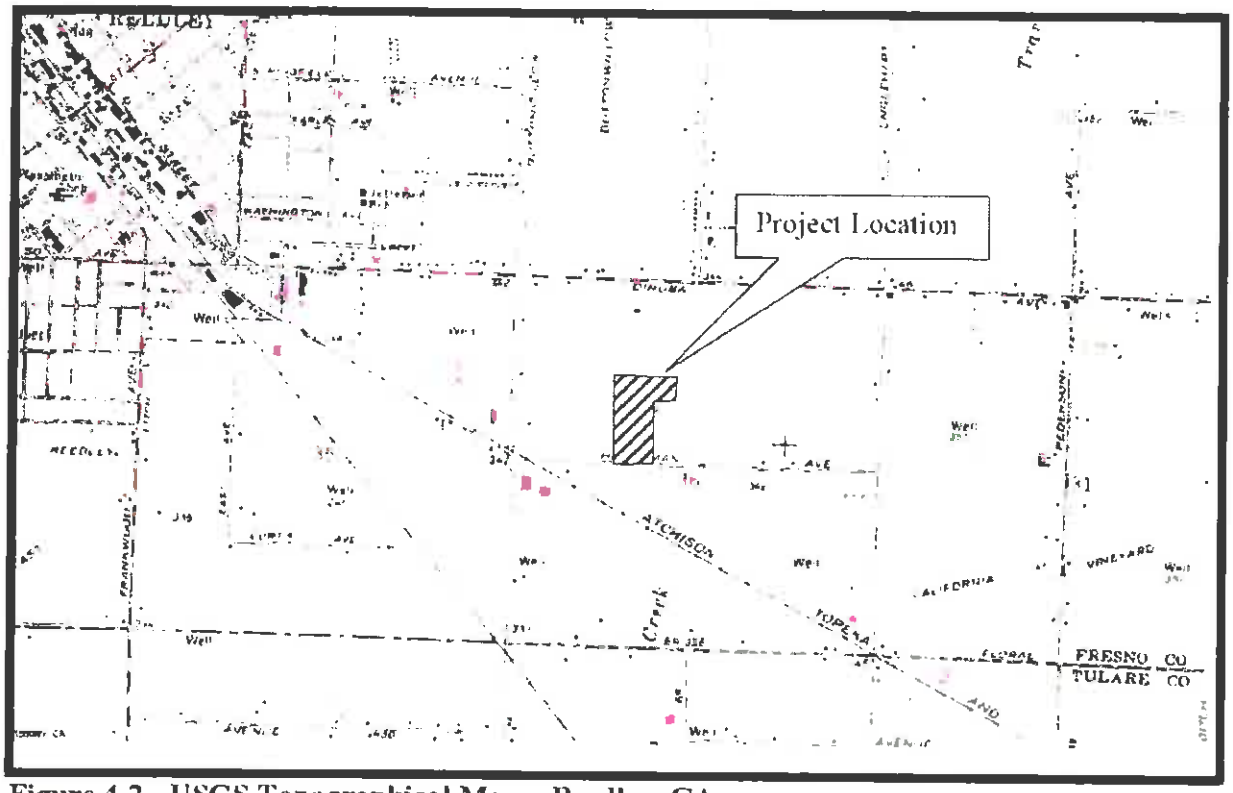

Figure 4-2 - USGS Topographical Map – Reedley, CA

The project site is located at an elevation of approximately 341' above mean sea level. Currently the project site is in agriculture production. The project site has agriculture land to the north, east and south with agricultural processing facilities to the west.

Under the provisions of the Federal Clean Air Act, the San Joaquin Valley Air Basin has been classified as non-attainment, attainment, unclassified/attainment or unclassified under the established Federal and State standards. **Table 4-1** provides the San Joaquin Valley Air Basin's designation and classification based on the various criteria pollutants under both state and federal standards. **Table 4-2** provides the Federal and California Air Quality Standards.

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Table 4-1 - SJVAB ATTAINMENT STATUS		
Pollutant	**Federal Standards[a]**	**State Standards[b]**
Ozone, 1 hour	No Federal Standard[f]	Nonattainment/Severe
Ozone, 8 hour	Nonattainment/Serious[e]	Nonattainment
PM_{10}	Attainment[c]	Nonattainment
$PM_{2.5}$	Nonattainment[d]	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing particulates	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

[a] See 40 CFR Part 81
[b] See CCR Title 17 Sections 60200-60210
[c] On September 25, 2008 EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan
[d] The Valley is designated nonattainment for the 1997 PM 2.5 federal standards. EPA designations for the 2006 PM 2.5 standards will be finalized in December 2009 The District has determined, as of the 2004-06 PM 2.5 data that the Valley has attained the 1997 24-Hour PM 2.5 standard.
[e] On April 30 2007 the Governing Board of the San Joaquin Valley Air Pollution Control District voted to request EPA to reclassify the San Joaquin Valley Air Basin as extreme nonattainment for the federal 8-hour ozone standards The California Air Resources Board on June 14, 2007, approved this request This request must be forwarded to EPA by the California Air Resources Board and would become effective upon EPA final rulemaking after a notice and comment process: it is not yet in effect
[f] Effective June 15, 2005, the U S Environmental Protection Agency (EPA) revoked in the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB
Sources SJVAPCD 2008

Table 4-2 - Federal & California Standards[1]

		Federal Standards	California Standards
Pollutant	Averaging Time	Concentration	
Ozone	8 Hour	0.075 ppm (147 μg/m³)[d]	0.070 ppm (137 μg/m³)
	1 Hour	[d]	0.09 ppm (180 μg/m³)
Carbon Monoxide	8 Hour	9 ppm (10 mg/m³)	9.0 ppm (10 mg/m³)
	1 Hour	35 ppm (40 mg/m³)	20 ppm (23 mg/m³)
Nitrogen Dioxide	Annual Average	0.053 ppm (100 μg/m³)	0.030 ppm (56 μg/m³)
	1 Hour		0.18 ppm (338 μg/m³)
Sulfur Dioxide	Annual Average	0.03 ppm (80 μg/m³)	
	24 Hour	0.14 ppm (365 μg/m³)	0.04 ppm (105 μg/m³)
	1 Hour		0.25 ppm (655 μg/m³)
Particulate Matter (PM10)	Annual Arithmetic Mean		20 μg/m³
	24 Hour	150 μg/m³	50 μg/m³
Fine Particulate Matter (PM2.5)[b]	Annual Arithmetic Mean	15 μg/m³	12 μg/m³
	24 Hour	35 μg/m³	
Sulfates	24 Hour		25 μg/m³
Lead[e]	Calendar Quarter	1.5 μg/m³	
	30 Day Average		1.5 μg/m³
Hydrogen Sulfide	1 Hour		0.03 ppm (42 μg/m³)
Vinyl Chloride (chloroethene)	24 Hour		0.010 ppm (26 μg/m³)
Visibility Reducing particles	8 Hour (1000 to 1800 PST)		(See Note 1)

ppm = parts per million mg/m3 = milligrams per cubic meter μg/m³ = micrograms per cubic meter

[a] 1-Hour ozone standard revoked effective June 15, 2005

[b] The 1997 PM 2.5 standards were replaced by the 2006 PM 2.5 standards effective December 18, 2006. The 2008 PM 2.5 Plan due to EPA in April 2008 addresses attainment of the 1997 PM 2.5 standards. For this reason, the District continues to list the 1997 24-hour PM 2.5 standard

[c] Annual PM 10 standard revoked effective December 17, 2006

[d] EPA finalized the revised (2008) 8-hour ozone standard of 0.075 ppm on March 27, 2008. The 1997 8-hour ozone standard of 0.08 ppm has not been revoked

[e] On October 15, 2008, EPA strengthened the lead standard.

The project location has been designated as unclassified/attainment for the National Ambient Air Quality Standards (NAAQS) for CO, NOx, and SO_2. The project location has been designated as non-attainment/serious for the O_3 eight-hour average standard, attainment for the PM_{10} standard and non-attainment for the $PM_{2.5}$ standard. A Federal designation for lead has not been made and NAAQS do not exist for O_3 (1-hour average), hydrogen sulfide (H_2S).

[1] http://www.arb.ca.gov/aqs/aqs.htm

vinyl chloride, sulfates or visibility reducing particles

The project location has been designated as non-attainment/severe with the state one hour standard for O_3, non-attainment for the O_3 eight-hour average standard, PM_{10} standard and $PM_{2.5}$, unclassified for H_2S and visibility reducing particles, attainment/unclassified for CO, and attainment for all other compounds for which a state standard exists

The SJVAPCD along with the CARB operates an air quality monitoring network that provides information on average concentrations of those pollutants for which state or Federal agencies have established ambient air quality standards. Information from the various monitoring stations is available from the agency web sites. A map of the various monitoring stations in the San Joaquin Valley is provided below

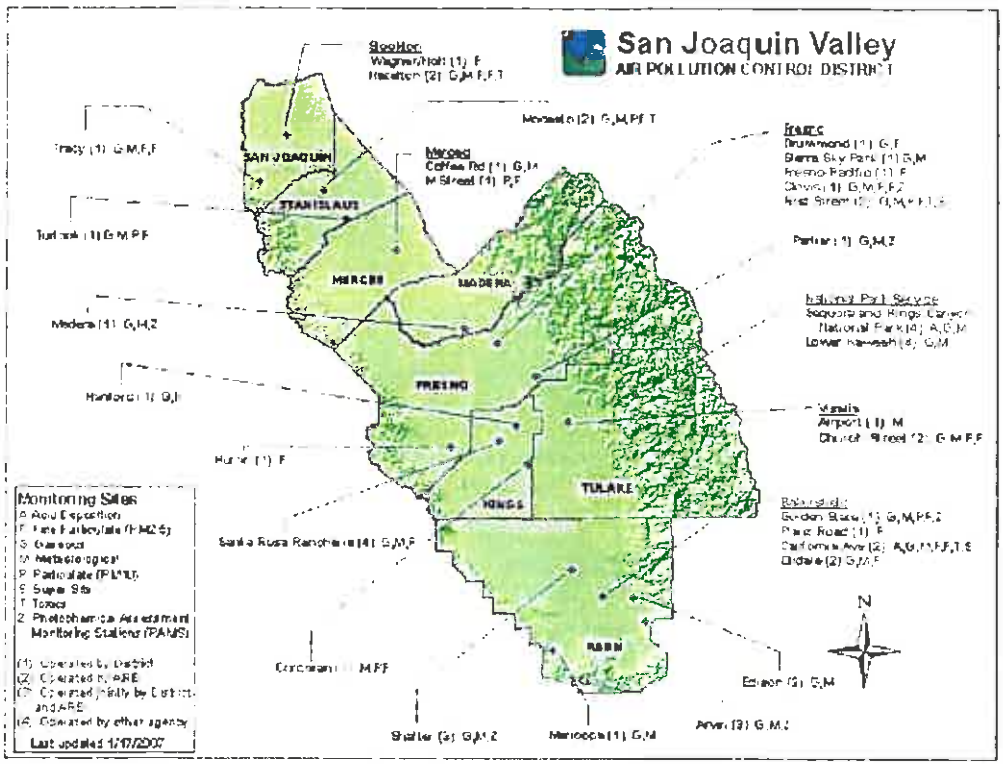

Figure 4-3 – San Joaquin Valley APCD Monitoring Network

Existing Air Quality

For the purposes of background data and this air quality assessment, this analysis relied on data collected in the last three years for the CARB monitoring stations that are located in the closest proximity to the project site. **Tables 4-3** through **4-9** provide the background concentrations for ozone, particulate matter of 10 microns (PM_{10}), particulate matter of less than 2.5 microns ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NOx), sulfur dioxide (SO_2), and lead (Pb) as of June 2009. Information is provided for the Fresno - Drummond Street, Fresno - Hamilton and Winery, Fresno - 1st Street, Visalia - N Church Street and Parlier monitoring stations for 2006 through 2008. Additional information for these monitoring stations is also presented in **Attachments A, B, C and D**. No data is

available for Hydrogen Sulfide, Vinyl Chloride or other toxic air contaminants in Fresno County.

Table 4-3a - Background Ambient Air Quality Data – Ozone[2]

CARB Air Monitoring Station	Number of Days Exceeding 1-Hour CAAQS (0.09 ppm)			Maximum 1-Hour Concentration (ppm)		
	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	11	2	19	0.121	0.110	0.124
Visalia – N Church Street	30	11	44	0.116	0.107	0.130
Parlier	52	18	36	0.131	0.113	0.137

Table 4-3b - Background Ambient Air Quality Data – Ozone[3]

CARB Air Monitoring Station	Number of Days Exceeding 8-Hour NAAQS (0.075 ppm)			Number of Days Exceeding 8-Hour CAAQS (0.07 ppm)			Maximum 8-Hour Concentration (ppm)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	21	9	20	34	18	36	0.097	0.092	0.112
Visalia – N Church Street	51	31	60	72	56	94	0.096	0.0099	0.121
Parlier	61	30	51	85	54	73	0.107	0.096	0.116

Table 4-4 - Background Ambient Air Quality Data – PM_{10}[4]

CARB Air Monitoring Station	Days Exceeding 24-hour NAAQS (150 µg/m³)			Annual Arithmetic Mean NAAQS (µg/m³)			Days Exceeding 24-hour CAAQS (50 µg/m³)			Maximum Concentration (µg/m³)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	0	0	0	43.3	38.0	40.0	16	10	21	132.0	92.0	98.8
Visalia – N Church Street	0	0	0	47.2	42.6	47.3	26	15	26	145.0	98.0	103.9

Table 4-5 - Background Ambient Air Quality Data – $PM_{2.5}$[5]

CARB Air Monitoring Station	Days Exceeding 24-hour NAAQS (35 µg/m³)			Annual Arithmetic Mean NAAQS (µg/m³)			Maximum 24-Hour Concentration (µg/m³)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Hamilton and Winery	13	16	11	17.6	16.8	16.5	87.0	65.1	46.6
Visalia – N Church Street	10	18	17	18.8	20.4	19.8	65.0	71.0	68.2

[2] California Air Resources Board Website Data as of February 2009
[3] California Air Resources Board Website Data as of February 2009
[4] Ibid
[5] Ibid

Table 4-6 - Background Ambient Air Quality Data – CO[6]

CARB Air Monitoring Station	Number of Days Exceeding 8-Hour NAAQS (9.0 ppm)			Number of Days Exceeding 8-Hour CAAQS (9.0 ppm)			Maximum 8-Hour Concentration NAAQS (9.0 ppm) CAAQS (9.0 ppm)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno - Drummond Street	0	0	0	0	0	0	3.31	2.37	2.14
Fresno - 1st Street	0	0	0	0	0	0	3.20	2.60	2.34

NR = Not Reported

Table 4-7 - Background Ambient Air Quality Data – NOx[7]

CARB Air Monitoring Station	Annual Average (ppm)			Number of Days Exceeding CAAQS (0.03 ppm)			Maximum 1-Hour Concentration CAAQS (0.18 ppm)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno – Drummond Street	0.017	0.016	0.015	0	0	0	0.072	0.067	0.076
Visalia - N Church Street	0.014	0.015	0.014	0	0	0	0.063	0.071	0.077
Parlier	0.011	0.011	0.009	0	0	0	0.062	0.055	0.049

NR = Not Reported

Table 4-8 - Background Ambient Air Quality Data – SOx[8]

CARB Air Monitoring Station	Annual Average NAAQS (0.03 ppm)			Maximum 24-Hour Concentration NAAQS (0.14 ppm) CAAQS (0.04 ppm)		
	2006	2007	2008	2006	2007	2008
Fresno – 1st Street	NR	0.007	0.010	NR	0.067	0.030

NR = Not Reported

Table 4-9 - Background Ambient Air Quality Data – Lead[9]

CARB Air Monitoring Station	Days Exceeding CAAQS 30-day Standard (1.5 μg/m³)			Calendar Quarter NAAQS (1.5 μg/m³)			Maximum 30-Day Concentration CAAQS (1.5 μg/m³)		
	2006	2007	2008	2006	2007	2008	2006	2007	2008
Fresno - 1st Street	NR	NR	NR	NR	NR	NR	NR	NR	NR

NR = Not Reported

The following is a discussion of the governmentally regulated air pollutants and their recent documented levels in the vicinity of the project area that are expected to be emitted from the construction and operation of the proposed project:

[6] Ibid
[7] Ibid
[8] Data not available after 2001 as of February 2009
[9] Data not available after 2002 as of February 2009

Ozone (O_3)

The most severe air quality problem in San Joaquin Valley is high concentrations of O_3. High levels of O_3 cause eye irritation and can impair respiratory functions. High levels of O_3 can also affect plants and materials. Particularly vulnerable to O_3 damage are grapes, lettuce, spinach and many types of garden flowers and shrubs. O_3 is not emitted directly into the atmosphere but is a secondary pollutant produced through photochemical reactions involving hydrocarbons (HC) and nitrogen oxides (NOx). Significant O_3 generation requires about one to three hours in a stable atmosphere with strong sunlight. For this reason, the months of April through October comprise the "ozone season." O_3 is a regional pollutant because O_3 precursors are transported and diffused by wind concurrently with the reaction process. The data contained in **Tables 4-3a and 4-3b** shows that for the 2006 through 2008 period, the project area exceeded the State one-hour average ambient O_3 standard, and the Federal and State eight-hour average ambient O_3 standards.

Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)

Both state and Federal particulates standards now apply to particulates under 10 microns (PM_{10}) rather than to total suspended particulate (TSP), which includes particulates up to 30 microns in diameter. Continuing studies have shown that the smaller-diameter fraction of TSP represents the greatest health hazard posed by the pollutant; therefore, EPA has recently established ambient air quality standards for $PM_{2.5}$. The project area is classified as attainment per the EPA for PM_{10}, while non-attainment for the state for $_{PM10}$. The project area is classified as non-attainment for $PM_{2.5}$ for both the Federal and State.

The largest sources of PM_{10} and $PM_{2.5}$ in Fresno County are vehicle movement over paved and unpaved roads, demolition and construction activities, farming operations, and unplanned fires. PM_{10} and $PM_{2.5}$ are considered regional pollutants with elevated levels typically occurring over a wide geographic area. Concentrations tend to be highest in the winter, during periods of high atmospheric stability and low wind speed.

Table 4-4 shows that PM_{10} levels at two monitoring stations regularly exceeded the corresponding 24-hour state ambient standard over the three-year period of 2006 through 2008 but did not exceeded the Federal ambient standards. **Table 4-5** shows that $PM_{2.5}$ exceedences were recorded over the three-year period of 2006 through 2008 of the Federal 24-hour ambient standards. Similar levels can be expected to occur in the vicinity of the project site.

Carbon Monoxide (CO)

Ambient CO concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. Wind speed and atmospheric mixing also influence CO concentrations; however, under inversion conditions prevalent in the valley, CO concentrations may be more uniformly distributed over a broad area. High concentrations of CO can impair the transport of oxygen in the bloodstream and thereby aggravate cardiovascular disease, causing fatigue, headaches, and dizziness. **Table 4-6** shows that CO levels at two Fresno monitoring stations are well below the standards for the three-year period of 2006 through 2008; therefore, the vicinity of the

project site is expected to be even lower than levels measured in Fresno.

Nitrogen Dioxide (NO_2)

NO_2 is the "whiskey brown" colored gas readily visible during periods of heavy air pollution. Mobile sources and oil and gas production account for nearly all of the county's nitrogen oxides (NOx) emissions, most of which is emitted as NO_2. Fresno County has been designated as an attainment/unclassified area for the NAAQS and attainment for the CAAQS for NO_2. In addition, **Table 4-7** shows that no excesses of the Federal or State NO_2 standards have been recorded at the Fresno, Visalia, or Parlier area-monitoring stations investigated over the three-year period of 2006 through 2008.

Sulfur Dioxide (SO_2)

Fuel combustion for oil and gas production and petroleum refining account for nearly all of the county's SO_2 emissions. Fresno County has been designated as an attainment/unclassified area for the NAAQS attainment for the CAAQS for SO_2. **Table 4-8** shows one exceedance of the more stringent state air quality standard over the three-year period in Fresno.

Lead (Pb) and Suspended Sulfate

Ambient Pb levels have dropped dramatically due to the increase in the percentage of motor vehicles that run exclusively on unleaded fuel. No ambient Pb levels were taken in Fresno over the three-year period of 2006 through 2008 as demonstrated in **Table 4-9**.

5.0 AIR POLLUTION CONSTITUENTS

To assist in the evaluation of the air quality impacts, the regulated contaminants are discussed briefly below:

Carbon Monoxide (CO)

Sources

Internal combustion engines, principally in vehicles, produce carbon monoxide due to incomplete fuel combustion. Various industrial processes also produce carbon monoxide emissions through incomplete combustion. Gasoline-powered motor vehicles are typically the major source of this contaminant.

Effects:

Carbon monoxide does not irritate the respiratory tract, but passes through the lungs directly into the blood stream, and by interfering with the transfer of fresh oxygen to the blood, deprives sensitive tissues of oxygen. CO is not known to have adverse effects on vegetation, visibility or materials.

Level of Significance:

The SJVAPCD has not established a CO emissions significance threshold for development projects covered by the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI).

Nitrogen Dioxide (NO_2)/Nitrogen Oxides (NOx)

Sources:

High combustion temperatures in both external combustion sources and internal combustion sources cause nitrogen and oxygen to combine and form nitric oxide. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Railroads and aircraft are other potentially significant sources of combustion air contaminants.

Effects:

Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of hydrocarbons and sunlight to form nitrogen dioxide and ozone. Nitrogen dioxide, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppmv on days of 10-mile visibility. NOx is an important air pollutant in the region because it is a primary receptor of ultraviolet light, which initiates the reactions producing photochemical smog. It also reacts in the air to form nitrate particulates.

Level of Significance:

The SJVAPCD has established a NOx emissions significance threshold for development projects covered by the GAMAQI of 10 tons per year.

Sulfur Dioxide (SO_2)/Sulfur Oxides (SOx)

Sources:

SO_2 is the primary combustion product of sulfur, or sulfur containing fuels. Fuel combustion is the major source of this pollutant, while chemical plants, sulfur recovery plants, and metal processing facilities are minor contributors. Gaseous fuels (natural gas, propane, etc.) typically have lower percentages of sulfur containing compounds than liquid fuels such as diesel or crude oil. SO_2 levels are generally higher in the winter months. Decreasing levels of SO_2 in the atmosphere reflect the use of natural gas in power plants and boilers.

Effects:

At high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when respirated in combination with particulates, SO_2 can result in greater harm by injuring lung tissues. Sulfur oxides (SOx), in combination with moisture and oxygen, results in the formation of sulfuric acid, which can yellow the leaves of plants, dissolve marble, and oxidize iron and steel. Sulfur oxides can also react to produce sulfates that reduce visibility and sunlight

Level of Significance:

The SJVAPCD has not established a SOx emissions significance threshold for development projects covered by the GAMAQI.

Particulates

Sources:

Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion, and from atmospheric photochemical reactions. Natural activities also increase the level of particulates in the atmosphere; wind-raised dust and ocean spray are two sources of naturally occurring particulates.

Effects:

In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Particulates of aerosol size suspended in the air can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Level of Significance:

Although a threshold was not established in GAMQI by the SJVAPCD, a 15 tons per year threshold for PM_{10} was utilized in this analysis. This threshold was established by SJVAPCD as the limit at which an impact to the SJVAB may occur.

Hydrocarbons (HC) and other Reactive Organic Gases (ROG)

Sources:

Motor vehicles are the major source of reactive hydrocarbons in the basin. Other sources include evaporation of organic solvents and petroleum production and refining operations.

Effects:

Certain hydrocarbons can damage plants by inhibiting growth and by causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions which produce photochemical oxidants.

Level of Significance:

The SJVAPCD has established a ROG emissions significance threshold for development projects covered by the GAMAQI of 10 tons per year.

6.0 CLIMATE

The most significant single control on the weather pattern of the San Joaquin Valley is the semi-permanent subtropical high-pressure cell, referred to as the "Pacific High." During the summer, the Pacific High is positioned off the coast of northern California, diverting ocean-derived storms to the north. Hence, the summer months are virtually rainless. During the winter, the Pacific High moves southward allowing storms to pass through the San Joaquin Valley. Almost all of the precipitation expected during a given year occurs from December through April. During the summer, the predominant surface winds are out of the northwest. Air enters the Valley through the Carquinez strait and flows toward the Tehachapi Mountains. This up-valley (northwesterly) wind flow is interrupted in early fall by the emergence of nocturnal, down-valley (southeasterly) winds which become progressively more predominant

as winter approaches. Wind speeds are generally highest during the spring and lightest in fall and winter. The relatively cool air flowing through the Carquinez strait is warmed on its journey south through the Valley. On reaching the area of the Valley where the proposed project is located, the average high temperature during the summer is nearly 97 degrees Fahrenheit (°F). Relative humidity during the summer is quite low, causing large diurnal temperature variations. Temperatures during the summer often drop into the upper 50s to low 60s. In winter, the average high temperatures reach into the mid-50s and the average low drops to the mid-30s. In addition, another high-pressure cell, known as the "Great Basin High," develops east of the Sierra Nevada Mountain Range during winter. When this cell is weak, a layer of cool, damp air becomes trapped in the basin and extensive fog results. During inversions, vertical dispersion is restricted, and pollutant emissions are trapped beneath the inversion and pushed against the mountains, adversely affecting regional air quality. Surface-based inversions, while shallow and typically short-lived, are present most mornings. Elevated inversions, while less frequent than ground-based inversions, are typically longer lasting and create the more severe air stagnation problems. The winter season characteristically has the poorest conditions for vertical mixing of the entire year.

Meteorological data for various monitoring stations is maintained by the Western Regional Climate Center. Meteorological data for the project site is expected to be similar to the data recorded at the Visalia monitoring station. This data is provided in **Table 6-1 – Visalia Weather Data**, which contains average precipitation data recorded at the Visalia monitoring station. Over the 114-year period from 1895 to 2009 (the most recent data available), the average annual precipitation was 10.13 inches.

Table 6-1 – Visalia Weather Data[10]

Period of Record Monthly Climate Summary for the Period 2/1/1895 to 4/30/2009													
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Maximum Temp (F)	55.9	62.7	68.1	74.8	82.7	91.2	97.7	96.3	90.1	80.3	67.4	56.9	77.0
Average Minimum Temp (F)	36.8	40.8	43.7	47.5	53.0	59.0	63.3	61.5	57.1	50.1	41.6	36.7	49.3
Average Total Precip.(in.)	1.99	1.84	1.73	0.96	0.37	0.08	0.01	0.01	0.14	0.48	0.99	1.54	10.13
Average Snowfall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent of possible observations for period of record Max. Temp.: 97.4% Min. Temp.: 97.4% Precipitation: 99.3% Snowfall: 97.0% Snow Depth: 96.8%													

[10] Western Regional Climate Center, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca9367

7.0 Significance Criteria

Evaluation of the significance of air quality impacts from a proposed project is difficult as there is no single measure that definitively determines that the impacts will be significant. A number of methods have been used to demonstrate significance ranging from determining impacts based on geographical area, basin-wide impacts or impacts to the ambient air quality. The preponderance of air quality regulation is based on mass emissions rather than ambient concentrations because of the uncertainties in the accuracy of the most widely used and approved emissions models.

In order to ascertain what would likely pose a significant impact from a particular project, local, state and federal agencies have developed various means by which a project's impacts may be measured and evaluated. Such measures of significance can generally be categorized as follows:

- Measures adopted by air quality agencies to guide lead agencies in their evaluation of air quality impacts under the California Environmental Quality Act (CEQA);
- Measures utilized in the evaluation of industrial or stationary sources in conjunction with applications for and issuance of Authorities to Construct or Permits to Operate or to determine the applicability of other permit program requirements, i.e. New Source Review.
- Measures utilized to determine if a project will cause or contribute significantly to violations of the ambient air quality standards or other concentration-based limits; and
- Measures utilized in areas where severe air quality problems exist.

Summary tables of these emission-based and concentration-based measures of significance for each pollutant are provided below along with a discussion of their applicability.

Measures Adopted for the Evaluation of Air Quality Impacts Under CEQA

In order to maintain consistency with CEQA, the SJVAPCD adopted guidelines[11] to assist applicants in complying with the various requirements. According to the District's GAMAQI, potentially significant air quality impacts are identified as effects that:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Cause a violation of any air quality standard or substantial contribution to an existing or projected air quality standard;
- Cause a cumulatively considerable net increase of any criteria pollutant for which the project region is designated non-attainment under an applicable Federal or State ambient air quality standard (including emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Cause the creation of objectionable odors that affect a substantial number of people.

[11] SJVAPCD Guidelines for Assessing and Mitigating Air Quality Impacts (GAMAQI), August 20, 1998 (Revised January 10, 2002)

The GAMAQI thresholds are designed to implement the general criteria for air quality emissions as required in the State CEQA Guidelines. Appendix G[12] and as encouraged by CEQA[13]. As such, SJVAPCD thresholds provide a means by which the general standards set forth by Appendix G may be used to quantitatively measure the air quality impacts of a specific project.

Measures Based on Ambient Air Quality Impacts

State CEQA Guidelines – Appendix G (Environmental Checklist) states that a project that would "*violate any air quality standard or contribute substantially to an existing or projected air quality violation*" would be considered to create significant impacts on air quality. Therefore, an air quality impact analysis should determine whether the emissions from a project would cause or contribute significantly to violations of the National (NAAQS) or California Ambient Air Quality Standards (CAAQS) when added to existing ambient concentrations.

In order to determine what comprises "significant impact levels" the U.S EPA has established the federal Prevention of Significant Deterioration (PSD) program to assess whether a project should be required to conduct a detailed cumulative increment analysis in areas deemed to be in attainment with the NAAQS. A project's impacts are considered negligible if emissions are below PSD significant impact levels (SIL) for a particular pollutant. When a SIL is exceeded, an additional "increment analysis" is required. The increment analysis encompasses both the project and certain other existing, proposed, and reasonably foreseeable projects. Incremental increases in deterioration of air quality may be considered minor or insignificant. Emissions impacts below these thresholds are considered insignificant on both a project level and a cumulative level. The projected emissions for the proposed project are significantly below levels that would require analysis under the federal PSD program. Similarly, the San Joaquin Valley Air Basin is classified as non-attainment for the ozone NAAQS and, as such, is subject to "non-attainment new source review" (NSR). PSD SILs and increments are more stringent than the state or NAAQS and represent the most stringent significance criteria. As the project is not considered a "stationary source" under NSR, it will not be subject to either PSD or NSR review.

Measures Used in Areas with Severe Air Quality Issues

Several special interest groups have suggested what has come to be known as the "one-molecule theory". This theory supposes that the addition of even one molecule of a criteria pollutant in a non-attainment air basin would constitute a significant increase. While these groups have attempted to enforce this theory in various jurisdictions, the Court of Appeals has held that CEQA does not require this approach. One court has stated, "the 'one [additional] molecule rule' is not the law" (*Communities for a Better Environment v California Resources Agency* 2002, 103 Cal.App 4th 98, 119). Therefore, the Measures of Significance included in the following tables were applied to the subject project to determine the project's level of significance.

[12] State of California CEQA Guidelines, Appendix G, Paragraph III
[13] State of California CEQA Guidelines, §15064.7

Table 7-1 Measures of Significance – OZONE (ROG and NOx Emissions)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	10 tons/yr NOx 10 tons/yr ROG	SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts, August 20, 1998 (Revised January 10, 2002)
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-3 and 6-4 are implemented as appropriate

Table 7-2 Measures Based on Ambient Air Quality Impacts (NOx)

Agency	Level	Description
CARB	338 µg/m3	California One-Hour AAQS for NO_2
USEPA	100 µg/m3	National annual AAQS for NO_2
USEPA	1.0 µg/m3	Class II significant impact level for PSD
USEPA	25 µg/m3	Class II increment for PSD

Table 7-3 Measures of Significance – CARBON MONOXIDE (CO)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	9 ppm, 8-hr avg 20 ppm, 1-hr avg	SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts, August 20, 1998 (Revised January 10, 2002)
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Table 6-4 are implemented as appropriate.
Measures Based on Ambient Air Quality Impacts		
CARB	23,000 µg/m3 10,000 µg/m3	California 1-hour AAQS for CO National and California 8-hour AAQS for CO

Table 7-4 Measures of Significance – SULFUR DIOXIDE (SO_2)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Table 6-4 are implemented as appropriate
Measures Based on Ambient Air Quality Impacts		
CARB	655 µg/m3	California 1-hour AAQS for SO_2
	105 µg/m3	California 24-hour AAQS for SO_2
USEPA	1,300 µg/m3	National 3-hr AAQS for SO_2
	80 µg/m3	National annual AAQS for SO_2
	25 µg/m3	3-hr Class II significant impact level for PSD
	5 µg/m3	24 hr Class II significant impact level for PSD
	1.0 µg/m3	Annual Class II significant impact level for PSD
	512 µg/m3	3-hr Class II increment for PSD
	91 µg/m3	24 hr Class II increment for PSD
	20 µg/m3	Annual Class II increment for PSD

Table 7-5 Measures of Significance – RESPIRABLE PARTICULATES (PM_{10})

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-2 and 6-3 are implemented as appropriate
Measures Based on Ambient Air Quality Impacts		
CARB	50 µg/m3	California 24 hour AAQS for PM_{10}
	20 µg/m3	California Annual AAQS for PM_{10}
USEPA	5 µg/m3	24 hr Class II significant impact level for PSD
	1 µg/m3	Annual Class II significant impact level for PSD
	30 µg/m3	24 hr Class II increment for PSD
	17 µg/m3	Annual Class II increment for PSD

Table 7-6 Measures of Significance – RESPIRABLE PARTICULATES ($PM_{2.5}$)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors During Operation, then Construction Impacts are Assumed to be Less Than Significant when compliance with Regulation VIII is achieved and the control measures of GAMAQI Tables 6-2 and 6-3 are implemented as appropriate
Measures Based on Ambient Air Quality Impacts		
CARB	12 µg/m3	California Annual AAQS for $PM_{2.5}$
USEPA	35 µg/m3	National 24 hr AAQS for $PM_{2.5}$

Table 7-7 Measures of Significance – TOXIC AIR CONTAMINANTS (TACs)

Agency	Level	Description
Measures Adopted for the Evaluation of Impacts Under CEQA		
SJVAPCD	Not Significant	If Construction Emissions do not exceed CEQA Guide for Ozone Precursors during operation, then construction impacts are assumed to be *less than significant* when compliance with Regulation VIII is achieved and the control measures of CEQA Appendix G Tables 6-3 and 6-4 are implemented as appropriate.
	10 in one million	Carcinogenic Risk Limit for Maximally Exposed Individual
	Hazard Index >1	Chronic and Acute Hazard Index Risk for Maximally Exposed Individual.

8.0 PROJECT-RELATED EMISSIONS

This document was prepared pursuant to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI), *January 10, 2002 Revision*. GAMAQI does not necessarily require a quantification of construction emissions for all projects. Emissions quantification is typically required only at the request of the lead agency. The SJVAPCD generally assumes that implementation of any construction-related mitigation measures will result in construction emissions impacts that are *less than significant*. The GAMAQI identifies thresholds that separate a project's short-term emissions from its long-term emissions.

In order to estimate emissions associated with the proposed project, several changes were made to the standard defaults provided in the URBEMIS2007 9.2.4 Mathematical Model (URBEMIS). These changes are detailed within the modeling program results that are provided in **Attachment E** and are explained further below.

Short-Term Emissions

Short-term emissions are primarily related to the grading and construction phases of a project and are recognized to be short in duration and without lasting impacts on air quality.

As the precise construction details about the proposed project were unknown at the time this analysis was conducted, the default equipment provided in URBEMIS along with estimates from the project's architectural firm were used to estimate the (short-term) grading, construction, and paving phase emissions. While emissions from the project are expected to vary substantially from day to day, they are expected to be approximately equal over the course of the construction period. Many variables are factored into the calculation of construction emissions such as length of the construction period, number of each type of equipment, site characteristics, area climate, and construction personnel activities. In order to present the most conservative approach to estimating construction emissions from the project; all equipment was assumed to be in use 6 to 8 cumulative hours per day at full power, which is the URBEMIS default. In reality, much of this equipment will be used significantly less than this due to idling time, operator breaks, equipment breakdowns, etc.

According to the GAMAQI, it is recommended that projects with buildout periods in excess of five (5) years also model the proposed project's emissions at the projected mid-way point[14]. As the subject project is *not* expected to have a buildout of more than five years an additional (intermediate) URBEMIS modeling run is not required for the project. **Table 8-1** presents the project's unmitigated and mitigated short-term emissions based on the expected full buildout period.

Table 8-1 – Short-Term Project Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NOx	CO*	SOx*	PM_{10}	$PM_{2.5}$
Unmitigated Emissions						
Construction Emissions – 2009	0.06	0.47	0.26	0.00	1.65	0.36
Construction Emissions – 2010	0.61	1.54	1.17	0.00	0.58	0.20
SJVAPCD Annual Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded Before Mitigation?	No	No	-	-	No	-
Mitigated Emissions						
Construction Emissions – 2009	0.06	0.47	0.26	0.00	0.18	0.06
Construction Emissions – 2010	0.58	1.54	1.17	0.00	0.15	0.11
SJVAPCD Annual Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	No	No	-	-	No	-

NOTES:
* The SJVAPCD has not established significance thresholds for CO, SOx or PM2.5

[14] SJVAPCD GAMAQI- Page 40

As calculated (see **Attachment E**) the short-term emissions, for each year of construction, are predicted to be *less than* SJVAPCD significance threshold levels. Short-term emissions from the project as calculated by URBEMIS, using the default equipment listing would be less than SJVAPCD significance levels. Project construction emissions are expected to remain *below significance threshold levels*.

Long-Term Emissions

Long-term emissions are related to the activities that will occur indefinitely because of project operations and are the primary focus of the SJVAPCD and of this analysis. Long-term emissions are caused by operational (mobile) sources and area (heating, cooling and structural) sources. The greatest of these emissions impacts emanate from mobile sources traveling to and from the project area. Although emissions from existing mobile equipment will be occurring prior to completion of the proposed project, these long-term emissions will cease at the existing locations and start at the new location with the completion of construction. Therefore, in order to get a true representation of the impact of the project current operational emissions were calculated and compared to the new project operational emissions to determine the incremental increase this project will cause. Long-term emissions will consist of the following components:

Fugitive Dust Emissions

Operation of the project site at full buildout is not expected to present a significant source of fugitive dust (PM_{10}) emissions. The main source of PM_{10} emissions will be from vehicular traffic associated with the project site.

PM_{10} generated as a part of fugitive dust emissions, as noted by the regulatory agencies, pose a potentially serious health hazard, alone or in combination with other pollutants. Control measures required and enforced by the SJVAPCD under Regulation VIII will assist in minimizing these emissions to a less than significant level. The following SJVAPCD Rules and Regulations apply to the control of fugitive dust from the proposed project:

- Rule 4102 - Nuisance
- Rule 8011 - General Requirements
- Rule 8021 - Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities
- Rule 8041 - Carryout and Trackout
- Rule 8051 - Open Areas

Compliance with applicable SJVAPCD Rules and Regulations, the local zoning codes, and additional mitigation measures required in this analysis will reduce PM_{10} fugitive dust emissions even further to ensure that the project's emissions remain at a "*less than significant*" level.

Equipment and Vehicle Exhaust

Exhaust emissions from this project include emissions produced on-site as consumers, employees, and residences travel to and from the site. Emitted pollutants include CO, ROG, NOx, SOx, and PM_{10}

Exhaust emissions will vary from day to day. The variables factored into estimating total project emissions include: level of activity, site characteristics, weather conditions, and predicted number of residents.

Table 8-2 – Emissions Sources

Emissions Source	Service and Pollutants
Facility Buildings[1]	Air conditioning and heating system as well as water heater emissions will occur from the manufacturing facility. While most of the facility will operate with electrical power, minor sources of combustion are used for these incidental items. Criteria pollutant emissions will consist of ROG, NOx, CO, SO_2 and PM_{10}.
Vehicles[1]	Delivery and employee vehicles will be used to transport product and employees to and from the facility. Criteria pollutant emissions will consist of ROG, NOx, CO, SO_2 and PM_{10}.

NOTES:
[1] Emissions factors and emissions were based on URBEMIS

The emissions from this project were evaluated based on the incremental difference between the current location of the facility and the new facility location. If the proposed project is approved using, at a minimum, the mitigation measures identified, this project is expected to have the long-term air quality impacts shown in the **Table 8-3**.

Table 8-3 – Long-Term Incremental Emissions

Emissions Source	Pollutant (tons/year)					
	ROG	NOx	CO*	SOx*	PM_{10}	$PM_{2.5}$*
Baseline						
Direct Exhaust Emissions	0.06	0.41	0.31	0.00	0.02	0.02
Indirect Exhaust Emissions	0.71	14.96	6.34	0.02	0.50	0.46
Area Source Emission[1]	0.00	0.00	0.00	0.00	0.00	0.00
Baseline Total	**0.77**	**15.37**	**6.65**	**0.02**	**0.52**	**0.48**
Project Emissions						
Direct Exhaust Emissions	0.08	0.56	0.43	0.00	0.03	0.03
Indirect Exhaust Emissions	0.98	20.95	10.28	0.03	0.69	0.64
Area Source Emission	0.05	0.03	0.31	0.00	0.00	0.00
Project Total	**1.11**	**21.53**	**11.03**	**0.03**	**0.73**	**0.67**
Total Mitigated Incremental Increase Long-Term Emissions[2]	**0.34**	**6.16**	**4.38**	**0.01**	**0.21**	**0.19**
SJVAPCD Threshold	10	10	NA	NA	15	NA
Is Threshold Exceeded After Mitigation?	No	No	-	-	No	-

NOTES:
[1] Since current facilities will not be demolished and continue to be used in some capacity the baseline area emissions will be zero
[2] Numbers may not add due to rounding by the URBEMIS for Windows 9.2.4 Model
* The SJVAPCD has not established significance thresholds for CO, SOx or PM

As calculated (see **Attachment E**), the mitigated long-term operational (mobile) and area source emissions associated with the proposed project would be *less than* SJVAPCD threshold levels and would, therefore, *not pose a significant impact*

Potential Impact on Sensitive Receptors

Based on the emissions impacts expected, the proposed project is not expected to affect sensitive receptors. Sensitive receptors are defined as areas where young children, chronically ill individuals, the elderly or people who are more sensitive than the general population reside. Schools, hospitals, nursing homes and daycare centers are locations where sensitive receptors would likely reside. The nearest sensitive receptors to the project site are listed in the table below.

Table 8-4 – Sensitive Receptors Located < 2 Miles from Project

Receptor	Type of Facility	Distance from Project (miles)	Direction from Project
Monte View School	1-12 Public	0.96	NW
Jefferson Elementary School	K-5 Public	1.07	NW
Aly's Angles Day Care	Daycare	1.27	NW
YMCA	Daycare	1.43	NW
General Grant Middle School	6-8 Public	1.51	NW
Lincoln Elementary School	K-5 Public	1.64	NW
Chapter One School	Daycare	1.68	NW
Kids Corner After School Program	Daycare	1.69	NW
Washington Elementary School	K-5 Public	1.70	NW
Palm Village Retirement Community	Nursing Home	1.75	W
Cym Learning Center	Daycare	1.84	NW
Immanual Schools	K-12 Private	1.85	NW
St La Salle Elementary School	PK-8 Public	1.86	NW

Additionally, the project is not a facility that is expected to be a source of odors as defined by the GAMAQI[15]. Therefore, based on the predicted emissions from the project during both intermediate and completion phases, the project is *not expected to have any adverse impacts on any known sensitive receptor*.

Potential Impacts to Visibility to Nearby Class 1 Areas

It should be noted that visibility impact analyses are not usually conducted for area sources. The recommended analysis methodology was initially intended for stationary sources of emissions which were subject to the Prevention of Significant Deterioration (PSD) requirements in 40 CFR Part 60. Since the project's emissions are predicted to be significantly less than the PSD threshold levels, an impact at any Class 1 area within 100 kilometers of the project is extremely unlikely. Therefore, based on the project's predicted emissions, the project is *not expected to have any adverse impact to visibility at any Class 1 Area*.

[15] SJVAPCD GAMAQI- Table 4-2, Page 27

Potential Impacts From Carbon Monoxide (CO) – Mobile Sources

Ambient carbon monoxide (CO) concentrations normally correspond closely to the spatial and temporal distributions of vehicular traffic. Relatively high concentrations of CO would be expected along heavily traveled roads and near busy intersections. CO concentrations are also influenced by wind speed and atmospheric mixing; however, under inversion conditions prevalent in the valley, CO concentrations may be more uniformly distributed over a broad area. Under certain meteorological conditions CO concentrations along a congested roadway or intersection may reach unhealthful levels for sensitive receptors, e.g. children, the elderly, hospital patients, etc. This localized impact can result in elevated levels of CO, or "hotspots" even though concentrations at the closest air quality monitoring station may be below state and federal standards.

The localized project impacts depend on whether ambient CO levels in the project vicinity would be above or below federal air quality standards. If ambient levels are below the standards, a project is considered to have significant impacts if project emissions would result in an exceedence of one or more of these standards. There are two criteria established by the San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI), *January 10, 2002 Revision* by which CO "Hot Spot" modeling is required:

I. A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
II. A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

The Traffic Study prepared for this project[16] indicated that potentially impacted intersections and roadway segments would operate at a level of service (LOS) that is within the GAMAQI significance criteria[17]. Therefore, CO "Hotspot" Modeling was not conducted for this project and no concentrated excessive CO emissions are expected to be caused by the completed project.

Predicted Health Risk Impacts

As noted above, the GAMAQI recommends that Lead Agencies also consider the situations wherein a new or modified source of hazardous air pollutants (HAPs) is proposed for a location near an existing residential area or other sensitive receptor when evaluating potential impacts related to HAPs. The proposed facility will result in emissions of HAPs and will be located near existing residences and businesses; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed project is required.

Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Similarly, predicted concentrations were used to calculate non-cancer chronic hazard indices (HIs), which are the ratio of expected

[16] TPG Consulting Incorporated, Traffic Impact Study Central Valley Transportation, July 2009
[17] GAMAQI SJVAPCD Section 5.6.3, p. 49

exposure to acceptable exposure. Individuals at businesses are not subject to a continuous exposure over a 70-year lifetime; therefore worker exposure duration for cancer risk may be adjusted to HARP default worker exposure assumptions.

The basis for evaluating potential health risk is the identification of sources of hazardous air pollutants Diesel exhaust particulate matter has been identified as a hazardous air pollutant with the potential to produce carcinogenic and non-cancer chronic health impacts. Gasoline pumps operation's emissions have been identified as a hazardous air pollutant with the potential to produce carcinogenic and non-cancer chronic and acute health impacts. Therefore, diesel exhaust particulate matter emissions from the on-site travel of heavy-duty diesel vehicles and gasoline pump emissions from the filling station operations were evaluated.

Health risk is determined using the Hotspots Analysis and Reporting Program (HARP) software distributed by the California Air Resources Board, which requires annual-averaged emission rates for each modeling source to estimate carcinogenic and non-cancer chronic and acute health impacts. The modeled emission rates were based on the estimated number of vehicles, the on-site distance of travel, five minutes of idling per vehicle, gasoline pump operations and SJVAPCD-approved emission factors[18]. Annual emissions for truck travel, idling, and gasoline pump operations are provided in **Attachment F**.

The most recent version of EPA's AMS/EPA Regulatory Model - AERMOD (recompiled for the Lakes ISC-AERMOD View interface) was used to predict the dispersion of emissions from the proposed project. All of the regulatory default AERMOD model keyword parameters were employed. Elevated terrain options were not employed due to the lack of complexity of the project area terrain in the specified model domain. Structure-induced downwash was included in the air dispersion modeling. AERMOD was used to generate ambient concentrations for the 1-hour, 4-hour, 6-hour, monthly and annual periods. Diesel combustion emissions from the diesel vehicles traveling were modeled as area sources with a point source representing the location where idling emissions may occur and two point sources and two volume sources were used to represent the gasoline refueling operations. SJVAPCD-approved[19] release parameters were employed. Unit emission rates of 1 g/sec for the volume and point sources were input to AERMOD. A total of 561 receptors were modeled in order to assess risk to the nearest receptors. An SJVAPCD AERMET-processed meteorological data set for the Fresno Airport (2004-2008) was input to the AERMOD model. Rural dispersion parameters were used because the operation and the majority of the land surrounding the facility is considered "rural" under the Auer land use classification method.[20] The facility boundary, emission sources and coordinate locations for each of the modeled receptors are graphically displayed in **Figure 8-1**.

[18] SJVAPCD Guidance for Air Dispersion Modeling August 2006 (Revision1.2), page 75

[19] Ibid

[20] Auer, Jr., A.H., Correlation of Land Use and Cover with Meteorological Anomalies. *Journal of Applied Meteorology*, 17(5) 636-643, 1978

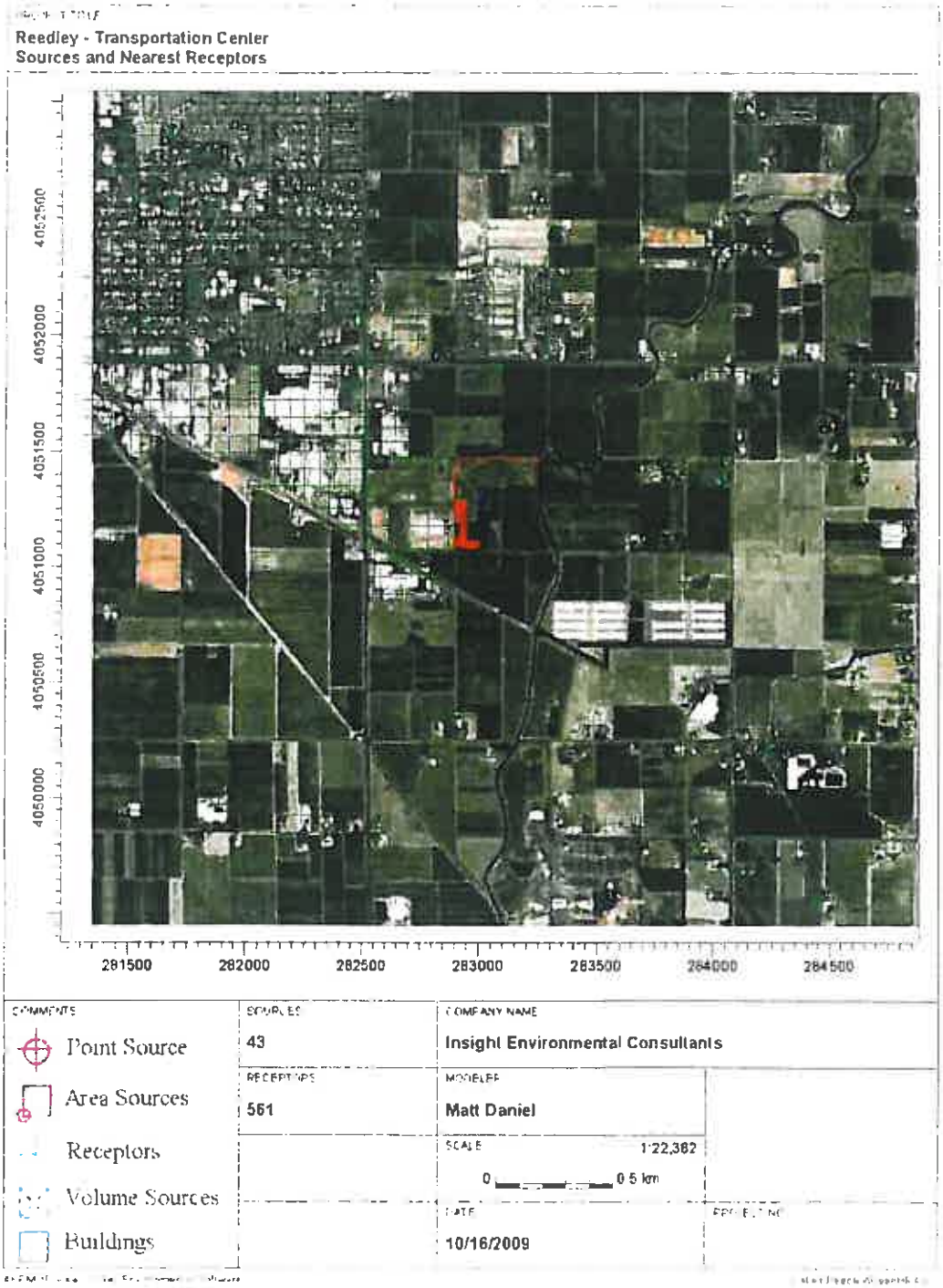

Figure 8-1 – Predicted Health Risk Modeled Receptors Impacts

Plot files generated by AERMOD were imported to HARP ONRAMP software wherein pollutant-specific emission rates were assigned to adjust the AERMOD-predicted air concentrations calculated with unit emission rates. HARP ONRAMP was used to generate source, X/Q and emission import files for HARP.

HARP post-processing was used to assess the potential for excess cancer risk and chronic non-cancer effects using the most recent health effects data from the California EPA Office of Environmental Health Hazard Assessment (OEHHA) are used in the HRA. Risk reports were generated using the derived OEHHA analysis method for carcinogenic risk and non-carcinogenic chronic risk. Site parameters are included in the HARP output files. Total cancer risk was predicted for inhalation and non-inhalation pathways at each receptor. A hazard index was computed for chronic and acute non-cancer health effects for each applicable endpoint and each receptor. SJVAPCD has set the level of significance for carcinogenic risk to ten in one million, which is understood as the possibility of causing ten additional cancer cases in a population of one million people. The level of significance for chronic and acute non-cancer risk is a hazard index of 1.

The carcinogenic risk and the health hazard index (HI) for chronic and acute non-cancer risk at all of the modeled receptors do not exceed the significance levels of less than ten in one million (10×10^{-6}) and 1, respectively except for one business receptor. Therefore, the application of HARP default worker exposure assumptions to reduce continuous exposure to less than a 70-year lifetime was not necessary for the business receptors. The risk predicted by HARP for the potential maximum impacts, as identified by receptor number, type, risk and location, are provided in **Table 8-6**.

Table 8-6 - Potential Maximum Impacts Predicted By HARP

	Receptor	Value	UTM East	UTM North	Pathway
Excess Cancer Risk[a]	332	5.10E-06	282872	4071175	Inhalation
Chronic Hazard Index[b]	332	2.47E-03	282872	4071175	Respiratory System
Acute Hazard Index[b]	327	1.99E-04	282872	4051077	Respiratory System

[a] Based on continuous, 70-year residential exposure for the residential receptors and default worker exposure assumptions for all business receptors.

[b] Based on continuous, 70-year residential exposure for the most sensitive receptor.

As shown above in **Table 8-6**, the maximum predicted cancer risk for the facility is 5.10E-06. The maximum chronic and acute non-cancer hazard indexes are 2.47E-03 and 1.99E-04 respectively. Cancer risk and chronic and acute non-cancer risk are attributable to emissions of diesel exhaust particulate matter from the on-site travel of heavy-duty vehicles and gasoline pump operation emissions.

In accordance with the GAMAQI, the potential health risk attributable to the proposed project is determined to be *less than significant* based on the following conclusions:

1) Potential chronic carcinogenic risk from the proposed project is *below* the significance level of ten in a million at each of the modeled receptors; and
2) The hazard index for the potential chronic non-cancer risk from the proposed project is *below* the significance level of one at each of the modeled receptors

It should be noted that the health risk results presented herein were produced by following extremely conservative analysis methods that most likely represent an overestimate of potential health impacts.

Odor Impacts and Mitigation

The San Joaquin Valley Air Pollution Control District's (SJVAPCD) GAMAQI states that an evaluation "*should be conducted for both of the following situations: 1) a potential source of objectionable odors is proposed for a location near existing sensitive receptors, and 2) sensitive receptors are proposed to be located near an existing source of objectionable odors.*"[21] The criteria for this evaluation are based on the Lead Agency's determination of the proximity to one another of the proposed project and the sensitive receptors. The SJVAPCD identifies a sensitive receptor as a location where human populations, especially children, senior citizens and sick persons, are present, and where there is a reasonable expectation of continuous human exposure to pollutants, according to the averaging period for ambient air quality standards, i.e. the 24-hour, 8-hour or 1-hour standards. Commercial and industrial sources are not considered sensitive receptors. As shown in **Table 8-4**, there are sensitive receptors that are in relative close proximity (within a two mile radius) to the project area.

Based on the provisions of the SJVAPCD's GAMAQI, the proposed project is not considered a source of objectionable odors or odorous compounds[22]. Furthermore, there does not appear to be any significant source of objectionable odors in close proximity that may adversely impact the project site when it is in operation. Additionally, the dispersion modeling presented in this analysis indicates that emissions from the project site will not adversely impact surrounding receptors. As such, the proposed project is not expected to be a source of any odorous compounds nor will it likely be impacted by any odorous source.

Impacts to the Ambient Air Quality

An ambient air quality analysis was performed to determine if the proposed project has the potential to impact ambient air quality through a violation of the ambient air quality standards or a substantial contribution to an existing or projected air quality standard. The basis for the analysis is dispersion modeling, the project's specifications described in previous sections and the project's long-term air quality impacts shown in the **Table 8-3**.

The maximum off-site ground level concentration of each pollutant for the 1-hour, 3-hour, 8-hour, 24-hour and annual periods was predicted using the most recent version of EPA's AMS/EPA Regulatory Model (AERMOD) dispersion software under the Lakes Environmental ISC-AERMOD View interface. An approved pre-processed AERMET meteorological data set for the Fresno area (2004-2008) was supplied by the SJVAPCD for input to the AERMOD model. All of the regulatory default AERMOD model keyword parameters were employed. Rural dispersion parameters were used for this project, which differs from the urban setting used in the URBEMIS model. The URBEMIS selection criteria is based on trip distances to the project site and the AERMOD selection criteria is

[21] SJVAPCD GAMAQI- Page 50
[22] SJVAPCD GAMAQI- Table 4-2, Page 27

based on the majority of the land use surrounding the facility. The majority of the land surrounding the project site is considered "rural" under the Auer land use classification method.

Emissions were evaluated for each pollutant on a short-term (correlating to pollutant averaging period) and long-term (annual) basis, with the exception of CO that was evaluated only for short-term exposures. Emissions were modeled as an area source with a release height of 1.0 meters.

A fenceline coordinate grid of receptor points was constructed. The grid consisted of a 25-meter fenceline spacing and 25-meter tier spacing extending a distance of 100 meters with initial receptors starting 25-meters from the facility boundary. Elevated terrain options were not employed due to the lack of complex terrain in the project area.

The results of the air dispersion modeling, presented in **Table 8-7**, demonstrate that the maximum impacts attributable to the project, when considered in addition to the existing background concentrations, are below the applicable ambient air quality standard for NO_x, SO_x and CO. The AERMOD output files are provided in the appendices.

Table 8-7 - Predicted Ambient Air Quality Impacts

Pollutant	Averaging Period	Background ($\mu g/m^3$)	Project ($\mu g/m^3$)	Project + Background ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	CAAQS ($\mu g/m^3$)	PSD SIL ($\mu g/m^3$)
NO_2	1-hour	7.80E-02	2.73E+02	2.73E+02	---	470	0
	Annual	2.10E-02	8.93E+00	8.95E+00	100	---	1
SO_2	1-hour	3.00E-02	5.90E-01	6.20E-01	---	655	0
	3-hour	1.50E-02	2.45E-01	2.60E-01			25
	24-hour	5.00E-03	8.24E-02	8.74E-02	---	105	5
	Annual	2.00E-03	1.93E-02	2.13E-02	80	---	1
CO	1-hour	3.20E+00	2.59E+02	2.62E+02	40,000	23,000	2000
	8-hour	2.10E+00	7.84E+01	8.05E+01	10,000	10,000	500
PM_{10}	24-hour	1.07E+02	1.73E+00	1.09E+02	150	50	10.4*
	Annual	4.30E+01	4.06E-01	4.34E+01	---	20	NA*
$PM_{2.5}$	24-hour	7.51E+01	1.57E+00	7.67E+01	35	---	10.4*
	Annual	1.87E+01	3.67E-01	1.91E+01	15	12	NA*

* District recommended significant impact level in lieu of PSD levels. If the 24-hour averaging period passes then it is accepted that the Annual averaging period also passes

Pre-project concentrations of PM_{10} and $PM_{2.5}$ exceed their respective ambient air quality standards. PM_{10} is evaluated in accordance with the SJVAPCD recommended significant impact level (SIL) for fugitive PM_{10} emissions of 10.4 $\mu g/m^3$. It is the District's policy to use significant impact levels to determine whether a proposed new or modified source will cause or contribute significantly to an AAQS or PSD increment violation. If a project's maximum impacts are below the District or PSD SIL, the project is judged to not cause or contribute significantly to an AAQS or PSD increment violation. A comparison of the proposed impact from the project to the District and PSD SIL values is provided in **Table 8-6**. The modeled PM_{10} impacts directly attributable to the project are *below the District's significance levels*.

Pre-project concentrations of $PM_{2.5}$ also exceed the ambient air quality standard. The U.S. Environmental Protection Agency proposed[23] to adopt key elements of the PSD program for $PM_{2.5}$, including three options for developing SILs for $PM_{2.5}$. The original comment period was extended to January 21, 2008[24]. Until a SIL is adopted for $PM_{2.5}$, pursuant to District's guidance the PM_{10} program is to be used as a surrogate. A comparison of the proposed impact from the project to the District and PSD SIL values is provided in **Table 8-6.** The modeled $PM_{2.5}$ impacts directly attributable to the project are *below the District's significance levels.*

9.0 CONSISTENCY WITH THE AIR QUALITY ATTAINMENT PLAN

Air quality impacts from proposed projects within Reedley, California are controlled through policies and provisions of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the City of Reedley and Fresno County General Plans. In order to demonstrate that a proposed project will not cause further air quality degradation in either of the SJVAPCD's plan to improve air quality within the air basin or federal requirements to meet certain air quality compliance goals, each project should also demonstrate consistency with the SJVAPCD's adopted Air Quality Attainment Plans (AQAP) for ozone and PM_{10}. The SJVAPCD is required to submit a "Rate of Progress" document to the California Air Resources Board (CARB) that demonstrates past and planned progress toward reaching attainment for all criteria pollutants. The California Clean Air Act (CCAA) requires air pollution control districts with severe or extreme air quality problems to provide for a 5 percent reduction in non-attainment emissions per year. The AQAP prepared for the San Joaquin Valley by the SJVAPCD complies with this requirement. CARB reviews, approves or amends the document and forwards the plan to the U.S. Environmental Protection Agency (U.S. EPA) for final review and approval within the State Implementation Plan (SIP).

Air pollution sources associated with stationary sources are regulated through the permitting authority of the SJVAPCD under the New and Modified Stationary Source Review Rule (SJVAPCD Rule 2201). Owners of any new or modified equipment that emits, reduces or controls air contaminants, except those specifically exempted by the SJVAPCD, are required to apply for an Authority to Construct and Permit to Operate (SJVAPCD Rule 2010). Additionally, best available control technology (BACT) is required on specific types of stationary equipment and such projects are required to offset both stationary source emission increases along with increases in mobile emissions if the specified threshold levels are exceeded (SJVAPCD Rule 2201, 4.7.1). Through this mechanism, all stationary sources within the project area would be subject to the standards of the SJVAPCD to ensure that new developments do not result in net increases in stationary sources of criteria air pollutants.

Required Evaluation Guidelines

State CEQA Guidelines and the Federal Clean Air Act (Sections 176 and 316) contain specific references on the need to evaluate consistencies between the proposed project and the

[23] Federal Register September 21, 2007, Volume 72, Number 183.

[24] Federal Register November 20, 2007, Volume 72, Number 223.

applicable AQAP for the project site. To accomplish this, CARB has developed a three-step approach to determine project conformity with the applicable AQAP:

1. *Determination that an AQAP is being implemented in the area where the project is being proposed.* The SJVAPCD has implemented the current, modified, AQAP as approved by the CARB. The current AQAP is under review by the U.S. EPA.
2. *The proposed project must be consistent with the growth assumptions of the applicable AQAP.* The proposed project is included within the population and commercial property increases projected in the City of Reedley and Fresno County General Plans.
3. *The project must contain in its design all reasonably available and feasible air quality control measures.* The proposed project incorporates various policy and rule-required implementation measures that will reduce related emissions.

The CCAA and AQAP identify transportation control measures as methods to further reduce emissions from mobile sources. Strategies identified to reduce vehicular emissions such as reductions in vehicle trips, vehicle use, vehicle miles traveled, vehicle idling and traffic congestion, in order to reduce vehicular emissions, can be implemented as control measures under the CCAA as well. Additional measures may also be implemented through the building process such as providing electrical outlets on exterior walls of structures to encourage use of electrical landscape maintenance equipment or measures such as electrical outlets for electrical systems on diesel trucks to reduce or eliminate idling time.

As the growth represented by the proposed project was anticipated by the City of Reedley and Fresno County General Plans and incorporated into the AQAP, conclusions may be drawn from the following criteria:

1. The findings of the analysis conducted using Traffic Analysis Zones show that sufficient employment increase is planned for the project area;
2. The proposed emissions from the project are by definition below the SJVAPCD's established emissions impact thresholds;
3. The primary source of emissions from the project will be vehicular traffic that are licensed through the State of California and whose emissions are already incorporated into the CARB's San Joaquin Valley Emissions Inventory.

Based on these factors, the project *appears to be consistent with the AQAP.*

Consistency With the Fresno Council of Government's Regional Conformity Analysis

The Fresno Council of Governments (Fresno COG) Conformity Analysis demonstrates that the regional transportation plans (RTP) and transportation improvement plan (TIP) in the Fresno County portion of the San Joaquin Valley air quality attainment areas will not hinder the efforts set out in the CARB's State Implementation Plan (SIP) for each area's non-attainment pollutants (CO, Ozone, PM_{10} and $PM_{2.5}$). All analyses for the Conformity Analysis were conducted using the latest planning assumptions and emissions models in force at the time the conformity analysis started in March 2006

The Fresno COG Conformity Analysis considers General Plan Amendments (GPA) and zone changes that were enacted at the time of the analysis as projected growth within the area based on land use designations incorporated within the Fresno County General Plan. Land use designations that are altered based on subsequent GPAs that were not included in the Regional Conformity Analysis were not incorporated into the Fresno COG analysis. Consequently, if a proposed project is not included in the regional growth forecast using the latest planning assumptions, it may not be said to conform to the regional growth forecast. Under the current County of Fresno Zoning Map, the project site is designated as agricultural (see **Figure 9-1**).

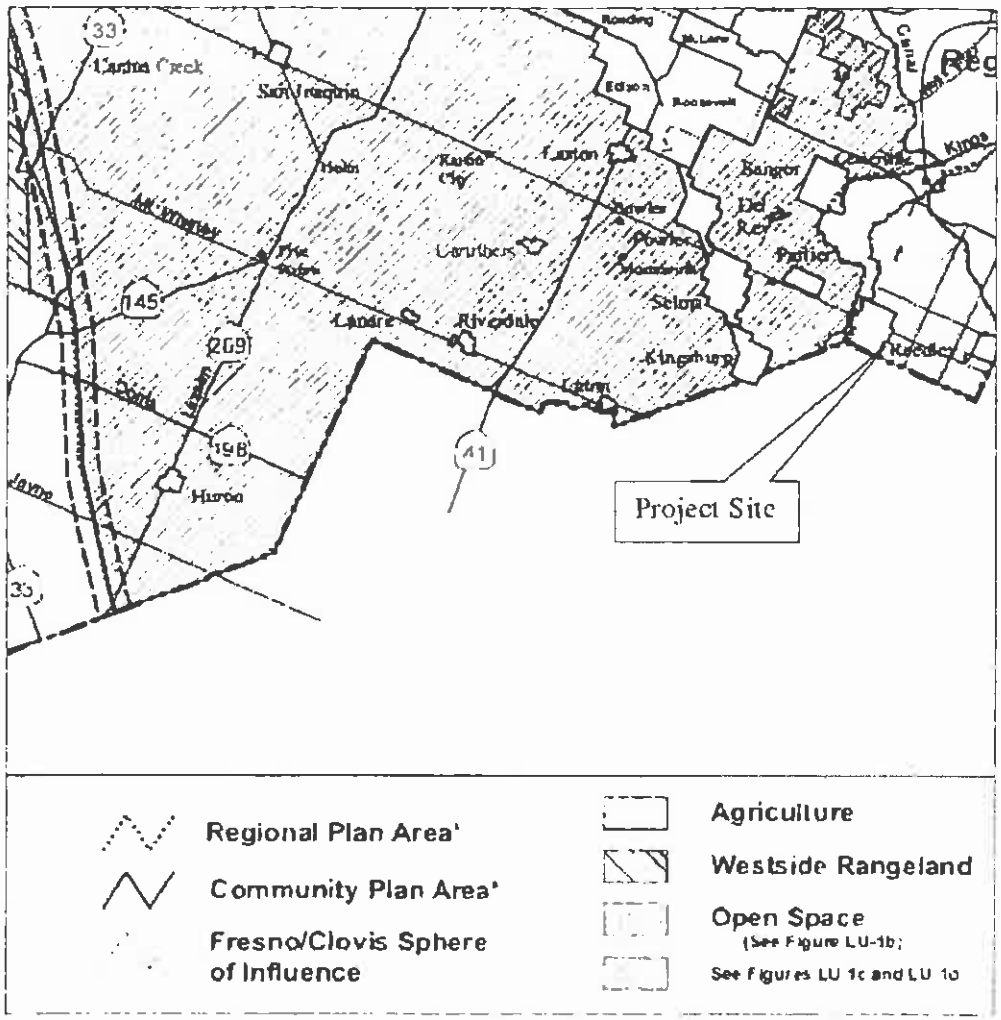

Figure 9-1 – County of Fresno General Plan Landuse Map

Under current policies, only after a General Plan Amendment (GPA) is approved, can housing and employment assumptions be updated to reflect the capacity changes. Since the proposed development does require a GPA, the existing growth forecast will be modified. In order to determine whether the forecasted growth for the project area is sufficient to account for the projected increases in employment, an analysis based on Fresno COG regional forecast was conducted.

The adopted growth forecast for the project site is distributed to Traffic Analysis Zones (TAZ) 539 (see **Figure 9-2**). The project site is located near the center of a number of commercial and residential developments that are expected to impact the surrounding TAZs as well. TAZs 538, 539, 586-589, 594, 595, and a portion of Tulare County will experience moderate growth based on projects planned and approved for these areas. In order to evaluate the impacts to the area, an analysis was conducted that included TAZs 538, 539, 586-589, 594, 595, and a portion of Tulare County. This placed the project site at the center of the analysis area and provides a conservative evaluation of the TAZ data. Fresno COG has predicted a moderate growth in housing (35%), population (53%) and employment (23%) between 2009 and 2014. The TAZ analysis area appears to be sufficient to account for 100% of the planned employment growth attributed to the proposed project. In order to be considered "consistent" and, therefore, in conformance with the AQAP, these increases would need to occur over the same time as the adopted growth forecast. From 2009 through 2014, approximately 327 new jobs are forecast to be added to the analysis area. This is a sufficient forecasted increase to include the anticipated 14 jobs the proposed project will create.

Figure 9-2 – TAZ Analysis Area

Table 9-1 provides the projected growth rates for the TAZ analysis area.

Table 9-1 – TAZ Analysis Area Projected Growth Analysis[25]

Years:	2009	2014
Population	2188	3348
Households	1254	1687
Employment	1426	1753

Table 9-2 provides the percent increase/decrease for the analysis area population, households and employment.

Table 9-2 – Percent Increase/Decrease on TAZ Analysis Area

Years	Per Cent Increase / Decrease		
	Population	Households	Employment
2009*	0	0	0
2014	53	35	23

*Baseline year of 2009 was valued at "0" to measure net percent increase/decrease.

The projected growth within the TAZ analysis area appears to be sufficient to account for the projected employment increases proposed by the project. Additionally, as this growth is forecast for the proposed project, and as Fresno COG's analysis does not stipulate that such growth will occur uniformly over the anticipated life expectancy of the project, *the project should be considered consistent with the adopted growth forecast and, therefore, in conformance with the San Joaquin Valley Air Basin's AQAP.*

10.0 CUMULATIVE IMPACTS

The GAMAQI under CEQA defines cumulative impacts as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The document also states that "*any proposed project that would individually have a significant air quality impact... would also be considered to have a significant cumulative air quality impact. Impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards*"[26]. Based on the analysis conducted for this project, it is individually *less than significant*. This AQIA, however, also considered impacts of the proposed project in conjunction with the impacts of other projects previously proposed in the area. The following cumulative impacts were considered:

- Cumulative Ozone Impacts (ROG and NOx) from numerous sources within the region including transport from outside the region. Ozone is formed through chemical reactions of ROG and NOx in the presence of sunlight.
- Cumulative CO Impacts produced primarily by vehicular emissions.

[25] Fresno Planning Department Data 2009
[26] GAMAQI, Page 29

- Cumulative PM_{10} Impacts from within the region and locally from the various projects. Such projects may cumulatively produce a significant amount of PM_{10} if several projects conduct grading or earthmoving activities at the same time; and
- Hazardous Air Pollutant (HAP) Impacts on sensitive receptors from within the District recommended screening radius of one mile.

The cumulative analysis is based on a quantitative cumulative analysis of projects located within a one-mile radius of the proposed project (see **Figure 4-1** One-Mile Radius Map). The one-mile radius analysis quantifies cumulative operational and area impacts from the proposed project in conjunction with impacts from sources planned within the analysis area. These emissions are then compared to the proposed growth and anticipated emissions increases included in the various regional growth forecasts to determine 1) if they were included in the forecast; 2) if their inclusion can be considered consistent with the attainment plan for air emissions within the air basin; and 3) if these emissions are in conformance with the State Implementation Plan emission budget or baseline emissions for ROG, NOx, CO and PM_{10}. A one-mile limit is recommended by the SJVAPCD for HAPs pollutants as such emissions primarily impact individuals that reside or work within the immediate vicinity (one-mile) of the emissions source. For this reason it is believed that the most significant impacts attributable to any project are likely to be within this one-mile area. As such, evaluation of the potentially cumulative impacts from planned and future projects within this area were used to evaluate the cumulative impacts associated with the proposed project.

Cumulative Localized Air Quality Impacts

A review of the City of Reedley and the Fresno County Planning Departments' files indicates that there are sixteen (16) Tentative Tracts or other planned developments within the City of Reedley

The listing provided below in **Table 10-5** is only a geographical reference to demonstrate the construction activity in the project vicinity. The number or size of these projects is of no particular significance since no "cumulative" emissions thresholds have been established by the SJVAPCD or the Reedley Planning Department. In accordance with SJVAPCD guidance, fireplaces were not considered since they are seasonal in nature and because residential developments are prohibited from installing wood burning fireplaces[27].

[27] SJVAPCD Rule 4901, Amended July 17, 2003

Table 10-5 – Cumulative Long-Term Emissions*

Scheduled Developments**	Pollutant (tons/year)					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
This Project* **	**0.34**	**6.16**	**4.38**	**0.01**	**0.21**	**0.19**
Sonora Development – 168 lots	6.25	5.81	40.77	0.05	5.57	2.03
Tract 4490 – River Glen Partners – 9 lots	0.33	0.31	2.19	0.00	0.30	0.11
Tract 4763 – River Glen Partners – 7 lots	0.22	0.18	1.54	0.00	0.19	0.06
Tract 5013 – Generation Homes – 17 lots	0.62	0.58	4.13	0.00	0.57	0.20
Tract 5149 – AKS Enterprises – 30 lots	1.13	1.03	7.28	0.00	1.00	0.36
Tract 5263 – Sharon Shamoon – 16 lots	0.58	0.55	3.88	0.00	0.53	0.20
Tract 5353 – Cambridge Homes – 103 lots	3.83	3.56	25.00	0.03	3.42	1.24
Tract 5373 – Quiring Properties – 4 lots	0.15	0.14	0.97	0.00	0.13	0.05
Tract 5399 – Sean Welch – 46 lots	1.71	1.60	11.16	0.02	1.53	0.56
Tract 5417 – Workman Bro.'s Dev. Co. – 165 lots	6.14	5.71	40.05	0.05	5.47	2.00
Tract 5452 – Quiring Properties – 209 lots	7.78	7.23	50.72	0.06	6.94	2.52
Tract 5475 – Quiring Properties – 12 lots	0.45	0.42	2.91	0.00	0.39	0.14
Tract 5535 – Victor Santos – 19 lots	0.70	0.66	4.61	0.00	0.63	0.23
Tract 5767 – Barsoom Bro.'s Co. Inc. – 196 lots	7.28	6.78	47.58	0.06	6.50	2.36
Tract 5882 – M-D Ventures – 11 lots	0.41	0.39	2.67	0.00	0.37	0.13
Tract 5905 – Carmen Escobar – 20 lots	0.73	0.70	4.86	0.00	0.66	0.24

NOTES:

* The SJVAPCD has not established significance thresholds for cumulative emissions.

** These emissions (other than the proposed project) are overestimated, as they are discretionary projects that are subject to various mitigation measures that have not yet been determined nor their impacts reduced herein

*** Emissions presented are "mitigated" emissions for the proposed project only.

As details regarding the proposed emissions from the various projects listed above were not readily available through the Reedley Planning Department, the emissions estimates presented were modeled using the URBEMIS computer model to predict cumulative impacts (see **Attachment E** for output results). Emissions for the operational phase of each project were based on total number of lots or square footage for maximum project buildout as noted in the information provided by the City of Reedley Planning Division[28]. No mitigation measures were applied to any of the projects as it is not known which, if any, would be required by the City of Reedley or which may be voluntarily proposed by each developer or required by code or regulation. Additionally, no cumulative significance thresholds are shown since no cumulative thresholds have been established by the SJVAPCD, CARB or other regulatory authority. These projects represent all known and reasonably foreseeable projects in the area. As these projects are either currently under construction or, at a minimum, approved by the The City of Reedley Planning Division for consistency with applicable regulation, for the purposes of this analysis, it is assumed that they are in conformance with the regional AQAP.

The most recent, certified San Joaquin Valley Air Basin Emission Inventory data available from the California Air Resources Board (CARB) is based on data gathered for the 2008 annual inventory.[29] This data will be used to assist the SJVAPCD in demonstrating attainment of Federal 1-hour Ozone Standards and contained 220,642 tons/year VOC (ROG)

[28] Electronic Correspondence with Rob Terry, 8/19/09

[29] California Air Resources Board (CARB) Emissions Inventory Database

and 210,495 tons/year NOx[30] from all sources. On a regional basis, the proposed project represents approximately 0.0002% (two ten-thousandths of 1%) of the ROG and 0.003% (three thousandths of 1%) of the NOx emissions in the air basin. The incremental increase posed by the project upon the air basin appears to be insignificant since basin emissions would be essentially the same regardless of whether or not the project is built.

Cumulative Regional Air Quality Impacts

A review of the City of Reedley and the Fresno County Planning Departments' files indicates that there are sixteen (16) Tentative Tracts or other planned developments within the respective city and county limits. Projects that are planned but have not been submitted for review or approved by the city and/or county are not included in this analysis as there is no way to know or ascertain what they might consist of. The SJVAPCD requires use of a one-mile radius to identify HAP emissions as well as for most odor sources[31].

The most recent, certified San Joaquin Valley Air Basin Emission Inventory data available from the California Air Resources Board (CARB) is based on data gathered for the 2008 annual inventory.[32] This data will be used to assist the SJVAPCD in demonstrating attainment of Federal 1-hour Ozone Standards. **Table 10-1** provides a comparative look at the impacts proposed by the subject project to the San Joaquin Valley Air Basin Emissions Inventory.

Table 10-1 – Comparative Analysis Based on SJV Air Basin 2008 Inventory

Emissions Inventory Source	Pollutant (tons/year)				
	ROG	NOx	CO	SOx	PM_{10}
Fresno County - 2008[1]	53,801	41,208	133,553	3,285	29,966
San Joaquin Valley Air Basin - 2008[1]	220,642	210,495	620,390	9,599	122,238
Proposed Project (total direct and indirect source emissions)	0.34	6.16	4.38	0.01	0.21
Proposed Project's % of Fresno	0.0006	0.015	0.003	0.0003	0.0007
Proposed Project's % of SJVAB	0.0002	0.003	0.001	0.0001	0.0002

NOTES:
[1] This is the latest inventory available as of October 2009

As shown in **Table 10-1**, the incremental increase posed by the project upon the air basin appears to be insignificant since basin emissions would be essentially the same regardless of whether or not the project is approved.

Tables 10-2 through **10-4** provide California Air Resources Board (CARB) Emissions Inventory projections for the year 2020 for both the San Joaquin Valley Air Basin (SJVAB) and the Fresno County portion of the air basin. Looking at the SJVAB Emissions predicted

[30] San Joaquin Valley Air Basin Emissions Inventory to Demonstrating Attainment of Federal 1-hour Ozone Standards, San Joaquin Valley Air Pollution Control District, February 2007
[31] SJVAPCD GAMAQI, Revised January 10, 2002, Page 53, "Evaluating Cumulative Hazardous Air Pollutant Impacts"
[32] California Air Resources Board (CARB) Emissions Inventory Database

by the CARB year 2020 emissions inventory, the Fresno County portion of the air basin is a moderate source of the emissions. The proposed project appears to pose an extremely minute source of the total emissions in both Fresno County and the entire SJVAB.

Table 10-2 – Emission Inventory SJVAB 2020 Projection – Tons per Year

	ROG	NO_X	PM_{10}
Total Emissions	211,663	119,063	125,888
Percent Stationary Sources	15.00%	22.93%	8.09%
Percent Area-Wide Sources	29.44%	5.24%	77.07%
Percent Mobile Sources	15.00%	68.58%	4.67%
Percent Natural Sources	40.56%	3.25%	10.21%
Total Stationary Source Emissions	31,755	27,302	10,183
Total Area-Wide Source Emissions	62,305	6,241	97,017
Total Mobile Source Emissions	31,755	81,650	5,876
Total Natural Source Emissions	85,848	3,869	12,848

Source: California Air Resources Board (www.arb.ca.gov/app/emsinv/emssumcat.php)
Note: Total may not add due to rounding

Table 10-3 - Emission Inventory Fresno County 2020 Estimate Projection – Tons per Year

	ROG	NO_X	PM_{10}
Total Emissions	51,866	22,812	30,331
Percent Stationary Sources	13.65%	24.64%	5.65%
Percent Area-Wide Sources	27.45%	10.56%	89.05%
Percent Mobile Sources	13.93%	64.16%	3.49%
Percent Natural Sources	44.97%	0.80%	1.80%
Total Stationary Source Emissions	7,081	5,621	1,715
Total Area-Wide Source Emissions	14,235	2,409	27,010
Total Mobile Source Emissions	7,227	14,636	1,058
Total Natural Source Emissions	23,323	182	547

Source: California Air Resources Board (www.arb.ca.gov/app/emsinv/emssumcat.php)
Note: Total may not add due to rounding

Table 10-4 - 2020 Emissions Projections – Proposed Project, Fresno County, and San Joaquin Valley Air Basin

	ROG	NO_X	PM_{10}
Proposed Project	**0.34**	**6.16**	**0.21**
Fresno County	51,866	22,812	30,331
San Joaquin Valley Air Basin	211,663	119,063	125,888
Proposed Project Percent of Fresno County	0.0007	0.0270	0.0007
Proposed Project Percent of SJVAB	0.0002	0.0052	0.0002
Fresno County Percent of SJVAB	24.50%	19.16%	24.09%

Source: California Air Resources Board (www.arb.ca.gov/app.emsinv/emssumcat.php)
Notes: The emission estimates for Fresno County and the SJVAB are based on 2020 projections. The Proposed Project emission estimates are for the proposed incremental emissions increase that is not already included in the San Joaquin Valley Air Basin Emissions Inventory. Project emissions are based on 2012 emissions estimates to present the most conservative comparison. The Project's emissions are expected to decline as cleaner, less polluting vehicles replace vehicles with higher emissions.

As shown above, the proposed project will pose an extremely minute impact on regional ozone and PM_{10} formation. When mitigation measures and compliance with applicable rules, such as SJVAPCD's Rule 9510 (Indirect Source Rule) is considered, the regional contribution to these cumulative impacts will be almost negligible. It is reasonable to conclude that *the project is not cumulatively significant with regard to regional impacts.*

Cumulative Hazardous Air Pollutants (HAPs)

The GAMAQI also states that when evaluating potential impacts related to HAPs, "*impacts of local pollutants (CO, HAPs) are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects will exceed air quality standards.*" Based on the results of a health risk assessment and the project traffic analysis, the proposed project is *not expected to pose a significant cumulative CO or HAPs impact.*

Cumulative Carbon Monoxide (CO) - Mobile Sources

The SJVAPCD's GAMAQI has identified CO impacts from impacted traffic intersections and roadway segments as being potentially cumulatively considerable. Traffic increases and added congestion caused by a project can combine to cause a violation of the SJVAPCD's CO standard also known as a "Hotspot". There are two criteria established by the GAMAQI by which CO "Hot Spot" modeling is required:

- A traffic study for the project indicates that the Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to LOS E or F; or
- A traffic study indicates that the project will substantially worsen an already existing LOS F on one or more streets or at one or more intersections in the project vicinity.

The Traffic Study prepared for this project[33] indicated that potentially impacted intersections and roadway segments would operate at a level of service (LOS) that is within the GAMAQI significance criteria[34]. Therefore, CO "Hotspot" Modeling was not conducted for this project and no concentrated excessive CO emissions are expected to be caused by the completed project.

11.0 IMPACTS TO GLOBAL CLIMATE CHANGE

Global Climate Change Regulatory Issues

In 1988, the United Nations established the Intergovernmental Panel on Climate Change to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United Nations Framework Convention on Climate Change established an agreement with the goal of controlling greenhouse gas emissions, including methane. As a result, the Climate Change Action Plan was developed to

[33] TPG Consulting Incorporated. Traffic Impact Study Central Valley Transportation. July 2009
[34] GAMAQI - SJVAPCD Section 5.6.3, p. 49

address the reduction of greenhouse gases in the United States. The plan consists of more than 50 voluntary programs. Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere (chlorofluorocarbons [CFCs], halons, carbon tetrachloride, and methyl chloroform) were to be phased out by 2000 (methyl chloroform was to be phased out by 2005)

On September 27, 2006, Assembly Bill 32 (AB32), the California Global Warming Solutions Act of 2006 (the Act) was enacted by the State of California. The legislature stated, "global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California". The Act caps California's greenhouse gas (GHG) emissions at 1990 levels by 2020. The Act defines greenhouse gas emissions as all of the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexaflouride. This agreement represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB32 lays out a program to inventory and reduce greenhouse gas emissions in California and from power generation facilities located outside the state that serve California residents and businesses.

AB32 charges CARB with responsibility to monitor and regulate sources of greenhouse gas emissions in order to reduce those emissions. By July 1, 2007, CARB adopted a list of discrete early action measures to be adopted and implemented before January 1, 2010 to reduce greenhouse gas emissions. CARB staff recommended an amount of 427 million metric tons of carbon dioxide equivalent (MMTCO2e) as the total statewide greenhouse gas 1990 emissions level and 2020 emissions limit.[35] The Board approved the 2020 limit on December 6, 2007. This limit is an aggregated statewide limit, rather than sector- or facility-specific. CARB is then to conduct rulemaking, culminating in rule adoption by January 1, 2011, for reducing greenhouse gas emissions to achieve the emissions cap by 2020. The rules must take effect no later than 2012. In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic co-benefits for California, and complement the state's efforts to improve air quality.

At this time, the Environmental Protection Agency (EPA) does not regulate greenhouse gas emissions, however in *Massachusetts et al. v. EPA*[36], the U.S Supreme Court determined that EPA does have the authority to regulate greenhouse gases under the Clean Air Act. The Court also instructed EPA to review its policies toward regulation of vehicle emissions under the Clean Air Act. It is now anticipated that regulations will eventually be promulgated by EPA to further control greenhouse gas emissions from vehicles as well as other sources.

Global warming and climate change have received substantial public attention for more than 15 years. For example, the United States Global Change Research Program was established by the Global Change Research Act of 1990 to enhance the understanding of natural and

[35] CARB Staff Report, California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, Nov. 16, 2007
[36] http://www.supremecourtus.gov/opinions/06pdf/05-1120.pdf

human-induced changes in the Earth's global environmental system, to monitor, understand and predict global change, and to provide a sound scientific basis for national and international decision-making. Even so, the analytical tools have not been developed to determine the effect on worldwide global warming from a particular increase in greenhouse gas emissions, or the resulting effects on climate change in a particular locale. The scientific tools needed to evaluate the impacts that a specific project may have on the environment are even farther in the future.

Accordingly, there is currently no local or statewide significance threshold developed to evaluate the impacts of the proposed Project, or any project, on global climate change in California.

The Earth's atmosphere naturally includes a number of gases, including carbon dioxide (CO_2), methane, and nitrous oxides (N_2O) that are referred to as "greenhouse gases." These gases trap some amount of solar radiation and the Earth's own radiation, preventing it from passing through Earth's atmosphere and into space. Greenhouse gases are vital to life on Earth; without them Earth would be an icy planet. CO_2 is also a trace element that is essential to the cycle of life. It is essential to plant growth and studies have shown that vegetation growth has increased in North America commensurate with the increase in CO_2 over the past decades. However, increasing greenhouse gas concentrations tend to warm the planet. A warming trend of about 0.7°F to 1.5°F occurred during the 20th century, and a number of scientific analyses indicate that rising levels of greenhouse gases in the atmosphere may be contributing to climate change.

As the average temperature of the Earth increases, weather may be affected, including changes in precipitation patterns, accumulation of snow pack, and intensity and duration of spring snowmelt. There may be rises in sea level, resulting in coastal erosion and inundation of coastal areas. Emissions of air pollutants and ambient levels of pollutants also may be affected in areas. Climate zones may change, affecting the ecology and biological resources of a region. There may be changes in fire hazards due to the changes in precipitation and climate zones.

While scientists have established a connection between increasing CO_2 concentrations and increasing average temperatures, important scientific questions remain about how much warming will occur, how fast it will occur, and how the warming will affect the rest of the climate system. At this point, scientific efforts are unable to quantify the degree to which human activity impacts climate change. The phenomenon is worldwide, yet it is expected that there will be substantial regional and local variability in climate changes. It is not possible with today's science to determine the affect of global climate change in a specific locale, or whether the effect of one aspect of climate change may be counteracted by another aspect of climate change, or exacerbated by it.

Human activities generate greenhouse gases. Since pre-industrial times, there has been a build-up of levels of gases like carbon dioxide (CO_2) in the atmosphere. The human contribution to the increase in atmospheric CO_2 concentrations largely has resulted from the burning of fossil fuels. Fossil fuel combustion accounts for approximately 98% of carbon dioxide emissions from human activity.

The United States has the highest emissions of greenhouse gases of any nation on Earth, though CO_2 emissions in California are less than the national average, both in per capita emissions and in emissions per gross state product. Transportation is the largest source of CO_2 emissions in California, accounting for approximately 41 percent of total emissions. Electricity generation accounts for approximately 22 percent of CO_2 emissions in California, and the industrial sector accounts for approximately 20.5 percent.

Global Climate Change Impacts from the Proposed Project

There are a number of factors available for estimating the GHG from mobile sources. Not all GHG exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in carbon dioxide equivalencies (CO_2e). The CO_2e portion of GHG from the proposed project were estimated using the URBEMIS program and the California Climate Action Registry (CCAR) General Reporting Protocol and is shown in **Table 11-1** and can be found in **Attachment E.**

Table 11-1 – Estimated Annual Greenhouse Gas Emissions (Tons/Year)

Source	CO_2e
Construction Emissions (2009)*	42
Construction Emissions (2010)*	166
Operational Emissions***	1,010
Area Emissions*	41
Electricity Generation Total Emissions	26
Electricity Generation Emissions**	176
1.2 MW Solar Collection and Charging System	-150

Notes
*Calculated using URBEMIS2007 v9.2.4
**Calculated using CCAR Protocol
***Calculated using EMFAC2007

The Project will not result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF_6), the other gases identified as GHG in AB32. However, the impacts on global warming and climate change are indirect, not direct, and the emissions cannot be correlated with specific impacts based on currently available science. While climate change may be presumed to have global impacts, local government lacks the expertise, and/or regulatory authority to develop the scientific tools and policies needed to select a CEQA significance threshold for climate change or greenhouse gas emissions. The proposed project will be subject to any regulations developed under AB32 as determined by CARB. As there are no thresholds or other tools available to assess the impacts this analysis cannot determine whether the subject project will have a significant impact on global warming or climate change.

Feasible and Reasonable Mitigation Relative to Global Warming

CEQA requires that all feasible and reasonable mitigation be applied to the project to reduce the impacts from construction and operations on air quality. The SJVAPCD's "Non-Residential On-Site Mitigation Checklist" was utilized in preparing the mitigation measures

and evaluating the projects features. These measures include using controls that limit the exhaust from construction equipment and using alternatives to diesel when possible. Additional reductions will be achieved through the regulatory process of the air district and CARB as required changes to diesel engines are implemented which will affect the product delivery trucks and limits on idling

While it is not possible to determine whether the project individually will have a significant impact on global warming or climate change, the project will potentially contribute to cumulative greenhouse gas emissions in California as well as related health effects. The project emissions will be only a small fraction of the statewide greenhouse gas emissions. However, without the necessary science and analytical tools, it is not possible to assess, with certainty, whether the project's contribution will be cumulatively considerable, within the meaning of CEQA Guidelines Sections 15065(a)(3) and 15130. CEQA, however, does note that the more severe environmental problems the lower the thresholds for treating a project's contribution to cumulative impacts as significant. Given the position of the legislature in AB32 which states that global warming poses serious detrimental effects, and the requirements of CEQA for the lead agency to determine that a project not have a cumulatively considerable contribution, the effect of the project's CO_2 contribution may be considered cumulatively considerable. This determination is based on the lack of clear scientific evidence or other criteria for determining the significance of the project's contribution of GHG to the air quality in the San Joaquin Valley Air Basin.

AB32 requires that a list of emission reduction strategies be published to achieve the goals set forth in the law. Until CARB publishes those reduction strategies, emission reduction strategies to meet the Governor's Executive Order S-3-05 should be considered.

The strategies that CARB is to implement within the next two years that may help in reducing the project's GHG emissions are summarized in the table below.

Table 11-2 – Select CARB Greenhouse Gas Emission Reduction Strategies

Strategy	Description of Strategy
Statewide Measures	
Vehicle Climate Change Standards	AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by CARB in Sept. 2004.
Diesel Anti-Idling	In July 2004, CARB adopted a measure to limit diesel-fueled retail motor vehicle idling
Other Light-Duty Vehicle Technology	New standards would be adopted to phase in beginning in the 2017 model year
Alternative Fuels: Biodiesel Blends	CARB would develop regulations to require the use of 1% to 4% Biodiesel displacement of California diesel fuel
Alternative Fuels: Ethanol	Increased use of ethanol fuel
Heavy-Duty Vehicle Emission Reduction Measures	Increased efficiency in the design of heavy-duty vehicles and an educational program for the heavy-duty vehicle sector

While it will not be practicable for the project to implement all of these suggested strategies, legislatively driven changes in the future will further reduce the project's GHG footprint. Currently, the project proposes to install and operate a 1.2 MW Solar Collection and Charging

System which is anticipated to reduce the electrically generated GHG emissions by 85%. Additionally, the KCUSD has already converted 25 of their busses from diesel to CNG and will continue to replace diesel vehicles with CNG whenever feasible

CEQA Guidelines Section 15130 notes that sometimes the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis. Global climate change is this type of issue. The causes and effects may not be just regional or statewide, they may be worldwide. Given the uncertainties in identifying, let alone quantifying the impact of any single project on global warming and climate change, and the efforts made to reduce emissions of greenhouse gases from the project through design, in accordance with CEQA Section 15130, any further feasible mitigation will be accomplished through CARB regulations adopted pursuant to AB32. The cumulative impacts of the project to global climate change are not known with certainty. On December 5, 2008 the South Coast Air Quality Management District (SCAQMD) adopted an Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. This "tiered" approach set forth a significance level of 10,000 Metric Tons of CO2 Equivalent emissions.[37] In lieu of a significance threshold being established by CARB or the SJVAPCD, if this threshold is considered for this project, it appears that the project's impacts to global climate change will *remain below a level of significance.*

12.0 MITIGATION MEASURES

To ensure that project emissions are minimized, the applicant will implement and comply with a number of mitigation measures. Some of the listed mitigation measures are also regulatory requirements or construction requirements that result in emission reductions through their inclusion in project construction and long-term design. The following measures either have been applied to the project through the URBEMIS model and will be incorporated into the project by design or will be implemented in conjunction with SJVAPCD rules:

Planned PM_{10} Mitigation Measures

As the project will be completed in compliance with SJVAPCD Regulation VIII, dust control measures will be taken to ensure compliance specifically during grading and construction phases. The mitigation measures to be taken are as follows:

- Water previously exposed surfaces (soil) whenever visible dust is capable of drifting from the site or approaches 20% opacity.
- Water all unpaved haul roads a minimum of three-times/day or whenever visible dust from such roads is capable of drifting from the site or approaches 20% opacity.
- Reduce speed on unpaved roads to less than 15 miles per hour.
- Install and maintain a track out control device that meets the specifications of SJVAPCD Rule 8041 if the site exceeds 150 vehicle trips per day or more than 20 vehicle trips per day by vehicles with three or more axles.

[37] South Coast AQMD Executive Board - http://www.aqmd.gov/hb/2008/December/081231a.htm

- Stabilize all disturbed areas, including storage piles, which are not being actively utilized for production purposes using water, chemical stabilizers or by covering with a tarp or other suitable cover.
- Control fugitive dust emissions during land clearing, grubbing, scraping, excavation, leveling, grading, or cut and fill operations with application of water or by presoaking.
- When transporting materials offsite, maintain a freeboard limit of at least 6 inches and cover or effectively wet to limit visible dust emissions.
- Limit and remove the accumulation of mud and/or dirt from adjacent public roadways at the end of each workday. (Use of dry rotary brushes is prohibited except when preceded or accompanied by sufficient wetting to limit visible dust emissions and use of blowers is expressly forbidden).
- Stabilize the surface of storage piles following the addition or removal of materials using water or chemical stabilizer/suppressants.
- Remove visible track-out from the site at the end of each workday.
- Cease grading or other activities that cause excessive (greater than 20% opacity) dust formation during periods of high winds (greater than 20 mph over a one-hour period).

Measures to Reduce Equipment Exhaust

The GAMAQI guidance document lists the following measures as approved and recommended for construction activities. These measures should be required to ensure that the proposed project emissions are not exceeded:

- Maintain all construction equipment as recommended by manufacturer manuals.
- Shut down equipment when not in use for extended periods.
- Construction equipment shall operate no longer than eight (8) cumulative hours per day.
- Use electric equipment for construction whenever possible in lieu of diesel or gasoline powered equipment.
- Curtail use of high-emitting construction equipment during periods of high or excessive ambient pollutant concentrations
- All construction vehicles shall be equipped with proper emissions control equipment and kept in good and proper running order to substantially reduce NO_x emissions.
- On-Road and Off-Road diesel equipment shall use diesel particulate filters if permitted under manufacturer's guidelines.
- On-Road and Off-Road diesel equipment shall use cooled exhaust gas recirculation (EGR) if permitted under manufacturer's guidelines.
- All construction workers shall be encouraged to shuttle (car-pool) to retail establishments or to remain on-site during lunch breaks.
- All construction activities within the project area shall be discontinued during the first stage smog alerts.
- Construction and grading activities shall not be allowed during first stage ozone alerts. First stage ozone alerts are declared when the ozone level exceeds 0.20 ppm (1-hour average).

Other Mitigation Measures

The following mitigation measures are recommended to further reduce the potential for long-term emissions from the project. These measures will be required to ensure that the proposed project emissions are not exceeded:

- Installation of a 1.2 MW Solar Collection and Charging System.
- Replacing older diesel vehicles with CNG vehicles.
- The project design shall comply with standards set forth in Title 24 of the Uniform Building Code to minimize total consumption of energy.
- Applicants shall be required to comply with applicable mitigation measures in the Air Quality Attainment Plan, District Rules, Traffic Control Measures, Regulation VIII and Indirect Source Rules for the SJVAPCD.
- The developer shall comply with the provisions of SJVAPCD Rule 4601 - Architectural Coatings, during the construction of all buildings and facilities. Application of architectural coatings shall be completed in a manner that poses the least emissions impacts whenever such application is deemed proficient.
- The applicant shall comply with the provisions of SJVAPCD Rule 4641 during the construction and pavement of all roads and parking areas within the project area. Specifically, the applicant shall not allow the use of:
    - Rapid cure cutback asphalt;
    - Medium cure cutback asphalt;
    - Slow cure cutback asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.3); or Emulsified asphalt (as specified in SJVAPCD Rule 4641, Section 5.1.4).
    - The developer shall comply with applicable provisions of SJVAPCD Rule 9510 (Indirect Source Review).

13.0 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project will have short-term air quality impacts due to fugitive dust during grading and facility construction as well as vehicular emissions associated with the equipment used in the construction activities. Both of these impacts will be mitigated to the greatest extent possible and will *remain below a level of significance*.

The proposed project will result in long-term air quality impacts due to operational and related mobile source emissions. These impacts will be reduced to the extent feasible and will *remain below a level of significance.*

The proposed project in conjunction with other past, present and foreseeable future projects will result in cumulative long-term impacts to air quality. The SJVAB's cumulative air quality impacts would remain significant without this project since the air basin is currently considered to be in non-attainment for certain criteria pollutants. The proposed project's incremental contribution to these impacts will be mitigated to the extent feasible and may be considered to pose *an insignificant contribution to the cumulative impacts to air quality in the SJVAB.*

The proposed project in conjunction with other past, present and foreseeable future projects will result in cumulative long-term impacts to global climate change. The cumulative impacts of the project to global climate change are not known with certainty and levels of significance have not been established. Therefore, based on the predicted impacts of the project to air quality, it appears that the project's impacts to global climate change will *remain below a level of significance*.

14.0 ATTACHMENTS

A. Ozone Concentration Data
B. PM_{10} and $PM_{2.5}$ Concentration Data
C. SOx, NOx, and CO Concentration Data
D. Lead Concentration Data
E. Project Emissions Calculations
   1. URBEMIS 2007 For Windows v9.2.4 Project Construction and Area Output Files
   2. URBEMIS 2007 For Windows v9.2.4 Cumulative Output Files
   3. Vehicular Emission Calculations and EMFAC2007 Output Files
   4. Greenhouse Gas Emission Calculations
F. Ambient Air Quality Modeling Output Files – AERMOD
G. HRA Modeling Output Files – HARP and AERMOD
H. California Air Resources Board 2008 Estimated Annual Average Emissions – San Joaquin Valley Air Basin
I. California Air Resources Board 2008 Estimated Annual Average Emissions – Fresno County
J. California Air Resources Board – 2020 Forecasted Annual Average Emissions

15.0 REFERENCES

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ATTACHMENT A

Ozone Concentration Data

Welcome to California Air Resources Board

iADAM

Highest 4 Daily Maximum Hourly Ozone Measurements

Fresno-Drummond Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Jun 23	0.121	Sep 6	0.110	Jun 27	0.124
Second High:	Jul 20	0.114	Jul 7	0.095	Aug 14	0.123
Third High:	Jun 24	0.106	Jul 6	0.090	Jun 24	0.114
Fourth High:	Jul 17	0.101	Apr 27	0.089	Sep 6	0.114
# Days Above State Standard:		11		2		19
California Designation Value:		0.12		0.11		0.12
Expected Peak Day Conc.:		0.118		0.111		0.115
# Days Above Nat'l Standard:		*0*		*0*		*0*
National Design Value:		*0.119*		*0.110*		*0.114*
Year Coverage:		100		95		100

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics*.
State exceedances are shown in yellow. Exceedances of the revoked national 1-hour standard are shown in *orange*.
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Welcome to California

Air Resources Board

iADAM

Highest 4 Daily Maximum Hourly Ozone Measurements

Visalia-N Church Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Jul 8	0.116	Jul 5	0.107	Jul 10	0.130
Second High:	Jul 9	0.112	Sep 1	0.105	Jun 27	0.127
Third High:	Jul 16	0.110	Jul 6	0.102	Jul 26	0.125
Fourth High:	Aug 11	0.110	Jun 13	0.100	Sep 5	0.121
# Days Above State Standard:		30		11		44
California Designation Value:		0.12		0.12		0.12
Expected Peak Day Conc.:		0.122		0.118		0.123
# Days Above Nat'l Standard:		*0*		*0*		*3*
National Design Value:		*0.115*		*0.112*		*0.121*
Year Coverage:		98		99		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics* .
State exceedances are shown in yellow . Exceedances of the revoked national 1-hour standard are shown in *orange* .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

Welcome to California Air Resources Board

iADAM

Highest 4 Daily Maximum Hourly Ozone Measurements

Parlier

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Jun 23	0.131	Sep 6	0.113	Jun 27	0.137
Second High:	Jun 24	0.121	Jul 4	0.109	Aug 28	0.125
Third High:	Jul 19	0.121	Aug 21	0.107	Jun 28	0.122
Fourth High:	Sep 13	0.121	Jun 14	0.102	Jun 24	0.120
# Days Above State Standard:		52		18		36
California Designation Value:		0.13		0.12		0.13
Expected Peak Day Conc.:		0.126		0.123		0.134
# Days Above Nat'l Standard:		*1*		*0*		*2*
National Design Value:		*0.121*		*0.121*		*0.122*
Year Coverage:		96		94		94

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
The national 1-hour ozone standard was revoked in June 2005 and is no longer in effect. Statistics related to the revoked standard are shown in *italics* or *italics*.
State exceedances are shown in yellow. Exceedances of the revoked national 1-hour standard are shown in *orange*.
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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Welcome to California Air Resources Board

iADAM

Highest 4 Daily Maximum 8-Hour Ozone Averages

Fresno-Drummond Street

FAQs

Year:	2006		2007		2008	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Jun 23	0.097	Sep 6	0.092	Jun 27	0.112
Second High:	Jun 24	0.091	Jul 4	0.080	Aug 14	0.094
Third High:	Jul 16	0.085	Jul 6	0.080	Jun 24	0.093
Fourth High:	Sep 13	0.085	May 25	0.079	Jun 25	0.093
California:						
First High:	Jun 23	0.097	Sep 6	0.092	Jun 27	0.112
Second High:	Jun 24	0.091	Jul 6	0.081	Aug 14	0.094
Third High:	Jul 16	0.085	Jul 4	0.080	Jun 24	0.093
Fourth High:	Sep 13	0.085	Jul 5	0.080	Jun 25	0.093
National:						
# Days Above '08 Nat'l Std.:		21		9		20
'08 Nat'l Std. Design Value:		0.087		0.083		0.085
National Year Coverage:		100		96		100
California:						
# Days Above State Standard:		34		18		36
California Designation Value:		0.100		0.092		0.097
Expected Peak Day Conc.:		0.099		0.093		0.098
California Year Coverage:		100		95		100

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in orange . State exceedances are shown in yellow .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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iADAM

Highest 4 Daily Maximum 8-Hour Ozone Averages

Visalia-N Church Street

FAQs

Year:	2006		2007		2008	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Jun 23	0.096	Jul 5	0.099	Jun 27	0.121
Second High:	Jul 16	0.096	Jul 4	0.089	Jul 9	0.109
Third High:	Jun 21	0.092	Jul 6	0.088	Jul 10	0.109
Fourth High:	Jul 17	0.092	May 26	0.086	Jun 14	0.105
California:						
First High:	Jun 23	0.096	Jul 5	0.100	Jun 27	0.122
Second High:	Jul 16	0.096	Jul 4	0.089	Jul 10	0.110
Third High:	Jun 21	0.093	Jul 6	0.088	Jul 9	0.109
Fourth High:	Jul 9	0.092	Jun 13	0.087	Jun 14	0.105
National:						
# Days Above '08 Nat'l Std.:		51		31		60
'08 Nat'l Std. Design Value:		0.092		0.091		0.094
National Year Coverage:		99		99		98
California:						
# Days Above State Standard:		72		56		94
California Designation Value:		0.100		0.100		0.110
Expected Peak Day Conc.:		0.101		0.100		0.110
California Year Coverage:		98		99		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in orange . State exceedances are shown in yellow
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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Highest 4 Daily Maximum 8-Hour Ozone Averages

Parlier

FAQs

Year:	2006		2007		2008	
	Date	8-Hr Average	Date	8-Hr Average	Date	8-Hr Average
National:						
First High:	Jun 23	0.107	Sep 6	0.096	Jun 27	0.116
Second High:	Jun 24	0.104	Jul 5	0.092	Jun 24	0.106
Third High:	Sep 2	0.104	Jul 4	0.091	Jun 28	0.102
Fourth High:	Sep 13	0.099	Jun 14	0.090	Jun 25	0.101
California:						
First High:	Jun 23	0.108	Sep 6	0.096	Jun 27	0.117
Second High:	Sep 2	0.105	Jul 5	0.093	Jun 24	0.106
Third High:	Jun 24	0.104	Jul 4	0.092	Jun 25	0.102
Fourth High:	Sep 13	0.099	Jun 14	0.090	Jun 28	0.102
National:						
# Days Above '08 Nat'l Std.:		61		30		51
'08 Nat'l Std. Design Value:		0.092		0.093		0.096
National Year Coverage:		98		97		96
California:						
# Days Above State Standard:		85		54		73
California Designation Value:		0.104		0.105		0.108
Expected Peak Day Conc.:		0.104		0.105		0.112
California Year Coverage:		96		94		94

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
National exceedances are shown in orange . State exceedances are shown in yellow .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period. 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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ATTACHMENT B

PM_{10} and $PM_{2.5}$ Concentration Data

Welcome to California Air Resources Board

iADAM

Highest 4 Daily PM10 Measurements

Fresno-Drummond Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 7	132.0	Nov 9	92.0	Oct 9	98.8
Second High:	Sep 14	95.0	Jan 24	84.0	Oct 27	87.5
Third High:	Feb 10	89.0	Jul 5	78.0	Sep 3	80.9
Fourth High:	Sep 8	76.0	Feb 5	77.0	Sep 30	77.8
California:						
First High:	Dec 7	139.0	Nov 9	93.0	Oct 9	99.5
Second High:	Sep 14	93.0	Jan 24	89.0	Oct 27	88.6
Third High:	Feb 10	92.0	Feb 5	80.0	Sep 3	79.3
Fourth High:	Sep 8	75.0	Dec 14	77.0	Sep 30	76.3
Measured:						
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		16		10		21
Estimated:						
3-Yr Avg # Days Above Nat'l Std:		0.0		0.0		0.0
# Days Above Nat'l Standard:		0.0		0.0		0.0
# Days Above State Standard:		*		63.1		126.4
State 3-Yr Maximum Average:		41		39		41
State Annual Average:		*		38.2		40.5
National 3-Year Average:		*41*		*40*		*40*
National Annual Average:		*43.3*		*38.0*		*40.0*
Year Coverage:		89		97		100

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect
Statistics related to the revoked standard are shown in *italics* or *italics* .
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Statistics may include data that are related to an exceptional event.
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State statistics for 1998 and later are based on *local* conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on *local* conditions)
National statistics are based on *standard* conditions.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period, 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value

Switch: Hourly Ozone | 8-Hour Ozone | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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Air Resources Board

iADAM

Highest 4 Daily PM10 Measurements

Visalia-N Church Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 7	145.0	Nov 8	98.0	Oct 9	103.9
Second High:	Oct 26	132.0	Feb 5	88.0	Oct 27	91.0
Third High:	Sep 14	113.0	Nov 26	85.0	Nov 20	85.7
Fourth High:	Nov 1	99.0	Jan 24	80.0	Feb 12	80.6
California:						
First High:	Dec 7	151.0	Nov 8	99.0	Oct 9	104.7
Second High:	Oct 26	135.0	Feb 5	91.0	Oct 27	91.6
Third High:	Sep 14	110.0	Nov 26	89.0	Nov 20	88.3
Fourth High:	Nov 1	102.0	Jan 24	84.0	Feb 12	82.8
Measured:						
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		26		15		26
Estimated:						
3-Yr Avg # Days Above Nat'l Std:		0.0		0.0		0.0
# Days Above Nat'l Standard:		0.0		0.0		0.0
# Days Above State Standard:		156.3		91.5		160.8
State 3-Yr Maximum Average:		47		47		47
State Annual Average:		47.4		42.4		47.2
National 3-Year Average:		*44*		*44*		*46*
National Annual Average:		*47.2*		*42.6*		*47.3*
Year Coverage:		99		100		94

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
The national annual average PM10 standard was revoked in December 2006 and is no longer in effect.
Statistics related to the revoked standard are shown in *italics* or *italics* .
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Statistics may include data that are related to an exceptional event
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State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
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State statistics for 1998 and later are based on *local* conditions (except for sites in the South Coast Air Basin, where State statistics for 2002 and later are based on *local* conditions).
National statistics are based on *standard* conditions
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Measurements are usually collected every six days. Measured days counts the days that a measurement was greater than the level of the standard; Estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored
3-Year statistics represent the listed year and the 2 years before the listed year.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid
* There was insufficient (or no) data available to determine the value

Switch:	Hourly Ozone	8-Hour Ozone	PM2.5	Carbon Monoxide	Nitrogen Dioxide	Sulfur Dioxide	Hydrogen Sulfide
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Air Resources Board

iADAM

Highest 4 Daily PM2.5 Measurements

Fresno-Hamilton and Winery

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 7	87.0	Jan 21	65.1	Jan 19	46.6
Second High:	Feb 13	65.0	Nov 29	57.9	Nov 23	46.4
Third High:	Dec 4	55.0	Dec 11	57.4	Feb 9	44.5
Fourth High:	Dec 31	53.5	Jan 3	55.3	Nov 8	43.8
California:						
First High:	Dec 7	87.0	Jan 21	65.1	Jan 19	46.6
Second High:	Feb 13	65.0	Nov 29	57.9	Nov 23	46.4
Third High:	Dec 4	55.0	Dec 11	57.4	Feb 9	44.5
Fourth High:	Dec 31	53.5	Jan 3	55.3	Nov 8	43.8
Estimated Days > '06 Nat'l 24-Hr Std:		38.7		52.5		37.2
Measured Days > '06 Nat'l 24-Hr Std:		13		16		11
'06 Nat'l 24-Hr Std Design Value:		59		61		52
'06 Nat'l 24-Hr Std 98th Percentile:		55.0		57.4		44.5
National Annual Std Design Value:		17.2		17.1		17.0
National Annual Average:		17.6		16.8		16.5
State Ann'l Std Designation Value:		17		17		17
State Annual Average:		*		16.8		16.5
Year Coverage:		100		98		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient data available throughout the year to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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Air Resources Board

iADAM

Highest 4 Daily PM2.5 Measurements

Visalia-N Church Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Feb 13	65.0	Feb 5	71.0	Nov 20	68.2
Second High:	Nov 22	57.0	Dec 14	60.4	Jun 26	63.3
Third High:	Dec 5	50.0	Nov 29	59.7	Feb 12	62.1
Fourth High:	Feb 10	49.0	Nov 2	58.4	Nov 26	55.5
California:						
First High:	Dec 7	78.0	Nov 7	73.3	Jun 27	88.5
Second High:	Feb 13	68.0	Feb 5	72.4	Nov 25	82.2
Third High:	Feb 12	64.5	Jan 10	71.0	Jun 26	72.5
Fourth High:	Feb 11	61.8	Feb 6	70.7	Jul 10	72.5
Estimated Days > '06 Nat'l 24-Hr Std:		29.8		60.4		52.3
Measured Days > '06 Nat'l 24-Hr Std:		10		18		17
'06 Nat'l 24-Hr Std Design Value:		56		58		57
'06 Nat'l 24-Hr Std 98th Percentile:		50.0		59.7		62.1
National Annual Std Design Value:		18.2		19.3		19.7
National Annual Average:		18.8		20.4		19.8
State Ann'l Std Designation Value:		20		23		23
State Annual Average:		19.7		22.5		19.8
Year Coverage:		98		92		97

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in micrograms per cubic meter.
State exceedances are shown in yellow. National exceedances are shown in orange
An exceedance is not necessarily a violation
State and national statistics may differ for the following reasons:
State statistics are based on California approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods.
State and national statistics may therefore be based on different samplers.
State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient data available throughout the year to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | Carbon Monoxide | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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ATTACHMENT C

SOx, NOx and CO Concentration Data

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Air Resources Board

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Highest 4 Daily Maximum State 24-Hour Sulfur Dioxide Averages

Fresno-1st Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:			Jul 5	0.067	May 16	0.030
Second High:			Jun 15	0.032	May 14	0.028
Third High:			Jun 13	0.032	Jun 20	0.028
Fourth High:			Apr 28	0.030	Jun 19	0.027
Annual Average:				0.007		0.010
Year Coverage:				89		98

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in yellow . An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Nitrogen Dioxide | Hydrogen Sulfide

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Welcome to California Air Resources Board

iADAM

Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

Fresno-Drummond Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 24	0.072	Nov 7	0.067	Oct 22	0.076
Second High:	Dec 20	0.070	Jan 25	0.064	Oct 26	0.076
Third High:	Oct 21	0.067	May 7	0.063	Oct 24	0.075
Fourth High:	Oct 23	0.067	Aug 31	0.063	Oct 28	0.074
# Days Above State Standard:		0		0		0
Annual Average:		0.017		0.016		0.015
Year Coverage:		96		95		98

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Sulfur Dioxide | Hydrogen Sulfide

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Air Resources Board

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Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

Visalia-N Church Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Oct 24	0.063	Nov 7	0.071	Oct 28	0.077
Second High:	Dec 6	0.062	Sep 27	0.069	Oct 29	0.077
Third High:	Nov 7	0.061	Mar 13	0.063	Oct 27	0.076
Fourth High:	Dec 7	0.060	Oct 25	0.062	Oct 25	0.075
# Days Above State Standard:		0		0		0
Annual Average:		0.014		0.015		0.014
Year Coverage:		98		98		99

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period: 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Sulfur Dioxide | Hydrogen Sulfide

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iADAM

Highest 4 Daily Maximum Hourly Nitrogen Dioxide Measurements

Parlier

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
First High:	Dec 6	0.062	Nov 7	0.055	Oct 16	0.049
Second High:	Dec 7	0.055	Jan 24	0.050	Nov 19	0.045
Third High:	Feb 10	0.051	Jan 25	0.048	Oct 17	0.041
Fourth High:	Dec 4	0.051	Jan 9	0.046	Nov 18	0.040
# Days Above State Standard:		0		0		0
Annual Average:		0.011		0.011		0.009
Year Coverage:		98		99		94

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All concentrations are expressed in parts per million.
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period. A high Year Coverage does not mean that there was sufficient data for annual statistics to be considered valid.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Carbon Monoxide | Sulfur Dioxide | Hydrogen Sulfide

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Welcome to California AIR

Air Resources Board

iADAM

Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages

Fresno-Drummond Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 4	3.31	Jun 18	2.37	Nov 17	2.14
Second High:	Dec 4	2.61	Jan 21	2.14	Nov 17	1.90
Third High:	Dec 7	1.96	Jan 12	2.03	Oct 23	1.79
Fourth High:	Dec 20	1.93	Jan 16	2.03	Jan 2	1.78
California:						
First High:	Dec 4	3.31	Jun 18	2.37	Nov 17	2.14
Second High:	Dec 6	1.96	Jan 20	2.14	Nov 16	1.90
Third High:	Dec 20	1.93	Jan 12	2.03	Oct 22	1.79
Fourth High:	Dec 7	1.91	Jan 16	2.03	Jan 1	1.78
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		0		0		0
Year Coverage:		91		97		94

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period. 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

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Welcome to California Air Resources Board

iADAM

Highest 4 Daily Maximum 8-Hour Carbon Monoxide Averages

Fresno-1st Street

FAQs

Year:	2006		2007		2008	
	Date	Measurement	Date	Measurement	Date	Measurement
National:						
First High:	Dec 3	3.20	Dec 12	2.60	Feb 8	2.34
Second High:	Dec 8	3.19	Jan 9	2.53	Jan 20	2.08
Third High:	Dec 4	3.18	Nov 25	2.18	Jan 2	2.04
Fourth High:	Dec 7	2.79	Jan 9	2.13	Feb 8	1.96
California:						
First High:	Dec 2	3.20	Dec 11	2.60	Feb 8	2.34
Second High:	Dec 7	3.19	Jan 8	2.53	Jan 19	2.08
Third High:	Dec 3	3.18	Nov 24	2.18	Jan 2	2.04
Fourth High:	Dec 6	2.73	Dec 31	2.10	Dec 28	1.94
# Days Above Nat'l Standard:		0		0		0
# Days Above State Standard:		0		0		0
Year Coverage:		98		98		96

Go Backward One Year | New Top 4 Summary | Go Forward One Year

Notes: All averages are expressed in parts per million.
State exceedances are shown in yellow . National exceedances are shown in orange .
An exceedance is not necessarily a violation.
Year Coverage indicates the extent to which available monitoring data represent the time of the year when concentrations are expected to be highest. 0 means that data represent none of the high period; 100 means that data represent the entire high period.
* There was insufficient (or no) data available to determine the value.

Switch: Hourly Ozone | 8-Hour Ozone | PM10 | PM2.5 | Nitrogen Dioxide | Sulfur Dioxide | Hydrogen Sulfide

Go to: Data Statistics Home Page | Top 4 Summaries Start Page

ATTACHMENT D

Lead Concentration Data

View a Different Site
View a Different Substance
Order a Data CD

Annual Toxics Summary

Fresno-1st Street

Lead

nanograms per cubic meter

iADAM FAQs

Year	Months Present	Minimum	Median	Mean	90th Percentile	Maximum	Standard Deviation	Number of Observations	Detection Limit	Estimated Risk
2008	.....	*	*	*	*	*	*	0	*	*
2007	.....	1.7	6.3	*	12	26	5.68	16	1.5	*
2006	.....	*	*	*	*	*	*	0	*	*
2005	.....	*	*	*	*	*	*	0	*	*
2004	.....	*	*	*	*	*	*	0	*	*
2003	.....	1.5	*	*	*	13	3.90	7	3.0	*
2002	.....	1.5	7.0	6.52	9.4	17	3.49	29	3.0	0.08
2001	.....	2	6.0	6.64	11	16	3.93	32	4.0	0.08
2000	.....	2	6.0	6.42	11	15	3.64	29	4.0	0.08
1999	.....	2	5.0	*	10.2	17	3.97	25	4.0	*
1998	.....	2	7.0	9.17	17.5	52	10.1	26	4.0	0.1
1997	.....	2	6.0	7.61	13.1	22	4.80	30	4.0	0.09
1996	.....	2	6.0	6.79	13.2	29	6.13	29	4.0	0.08
1995	.....	2	6.0	7.77	13	31	6.28	31	4.0	0.09
1994	.....	2	7.0	*	13	18	4.07	25	4.0	*
1993	.....	2	12	14.0	30.2	32	9.08	29	4.0	0.2
1992	.....	*	*	*	*	*	*	0	*	*
1991	.....	6.0	22	*	62.6	80	20.4	25	4.0	*
1990	.....	0.5	22	*	69.5	120	29.0	26	1.0	
1989	.....	*	*	*	*	*	*	0	*	*

Graph It!

Toxics Statistics Home

Notes Values below the Limit of Detection (LoD) assumed to be ½ LoD.
Means and risks shown only for years with data in all 12 months
"*" means there was insufficient or no data available to determine the value

Data Descriptions Page

ATTACHMENT E

Project Emissions Calculations

- URBEMIS2007 For Windows 9.2.4 Construction and Area Output Files
- URBEMIS2007 For Windows 9.2.4 Cumulative Output Files
- Vehicular Emission Calculations and EMFAC2007 Output Files
- Greenhouse Gas Emission Calculations

URBEMIS2007 For Windows 9.2.4
Construction and Area Output Files

10/21/2009 2:48:25 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: M:\Client Files\AQIA's\Provost & Pritchard\Reedley Transportation Center\Transportation Center Construction.urb924

Project Name: Reedley Transprotation Center Construction

Project Location: Fresno County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009 TOTALS (tons/year unmitigated)	0.06	0.47	0.26	0.00	1.62	0.03	1.65	0.34	0.02	0.36	41.77
2009 TOTALS (tons/year mitigated)	0.06	0.47	0.26	0.00	0.15	0.03	0.18	0.03	0.02	0.06	41.77
Percent Reduction	0.00	0.00	0.00	0.00	90.72	0.00	89.28	90.72	0.00	84.70	0.00
2010 TOTALS (tons/year unmitigated)	0.61	1.54	1.17	0.00	0.47	0.11	0.58	0.10	0.10	0.20	166.09
2010 TOTALS (tons/year mitigated)	0.58	1.54	1.17	0.00	0.04	0.11	0.15	0.01	0.10	0.11	166.09
Percent Reduction	4.59	0.00	0.00	0.00	90.54	0.00	73.76	90.41	0.00	45.20	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

10/21/2009 2:48:25 PM

2009	0 06	0.47	0 26	0.00	1 62	0.03	1.65	0.34	0 02	0.36	41 77
Fine Grading 11/30/2009-01/11/2010	0 05	0.43	0.24	0.00	1 62	0.02	1.65	0 34	0.02	0 36	37 63
Fine Grading Dust	0 00	0 00	0.00	0 00	1 62	0.00	1.62	0.34	0.00	0.34	0 00
Fine Grading Off Road Diesel	0.05	0.43	0 22	0.00	0.00	0 02	0 02	0.00	0 02	0 02	36 09
Fine Grading On Road Diesel	0.00	0.00	0.00	0 00	0.00	0.00	0 00	0.00	0 00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0 00	0.00	0.00	0.00	1 54
Asphalt 12/28/2009-01/11/2010	0.01	0.04	0.02	0.00	0.00	0.00	0 00	0.00	0.00	0.00	4 14
Paving Off-Gas	0.00	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0.00	0 00
Paving Off Road Diesel	0.01	0.03	0.02	0.00	0.00	0.00	0.00	0 00	0 00	0 00	2 26
Paving On Road Diesel	0.00	0 01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1 47
Paving Worker Trips	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0 00	0 00	0.00	0 41

10/21/2009 2:48:25 PM

2010	0.61	1.54	1.17	0.00	0.47	0.11	0.58	0.10	0.10	0.20	166.09
Asphalt 12/28/2009-01/11/2010	0.02	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.00	0.00	7.25
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.99
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
Fine Grading 11/30/2009-01/11/2010	0.01	0.12	0.07	0.00	0.47	0.01	0.48	0.10	0.01	0.10	10.97
Fine Grading Dust	0.00	0.00	0.00	0.00	0.47	0.00	0.47	0.10	0.00	0.10	0.00
Fine Grading Off Road Diesel	0.01	0.12	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	10.53
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Building 01/11/2010-08/22/2010	0.30	1.35	1.06	0.00	0.00	0.10	0.10	0.00	0.09	0.09	147.54
Building Off Road Diesel	0.29	1.32	0.90	0.00	0.00	0.10	0.10	0.00	0.09	0.09	129.70
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52
Building Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.32
Coating 08/08/2010-09/05/2010	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
Architectural Coating	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33

Phase Assumptions

Phase: Fine Grading 11/30/2009 - 1/11/2010 - Default Fine Site Grading Description

Total Acres Disturbed: 27.05

Maximum Daily Acreage Disturbed: 6.76

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

10/21/2009 2:48:25 PM

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/28/2009 - 1/11/2010 - Default Paving Description

Acres to be Paved: 6.76

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 1/11/2010 - 8/22/2010 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 8/8/2010 - 9/5/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

10/21/2009 2:48:25 PM

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2009	0.06	0.47	0.26	0.00	0.15	0.03	0.18	0.03	0.02	0.06	41.77
Fine Grading 11/30/2009-01/11/2010	0.05	0.43	0.24	0.00	0.15	0.02	0.17	0.03	0.02	0.05	37.63
Fine Grading Dust	0.00	0.00	0.00	0.00	0.15	0.00	0.15	0.03	0.00	0.03	0.00
Fine Grading Off Road Diesel	0.05	0.43	0.22	0.00	0.00	0.02	0.02	0.00	0.02	0.02	36.09
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54
Asphalt 12/28/2009-01/11/2010	0.01	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.14
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.26
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

2010	0.58	1.54	1.17	0.00	0.04	0.11	0.15	0.01	0.10	0.11	166.09
Asphalt 12/28/2009-01/11/2010	0.02	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.00	0.00	7.25
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.05	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.96
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.57
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72
Fine Grading 11/30/2009-01/11/2010	0.01	0.12	0.07	0.00	0.04	0.01	0.05	0.01	0.01	0.01	10.97
Fine Grading Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.01	0.12	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	10.53
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45
Building 01/11/2010-08/22/2010	0.30	1.35	1.06	0.00	0.00	0.10	0.10	0.00	0.09	0.09	147.54
Building Off Road Diesel	0.29	1.32	0.90	0.00	0.00	0.10	0.10	0.00	0.09	0.09	129.70
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.52
Building Worker Trips	0.00	0.01	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.32
Coating 08/08/2010-09/05/2010	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
Architectural Coating	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 11/30/2009 - 1/11/2010 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

10/21/2009 2:48:25 PM

For Soil Stablizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

The following mitigation measures apply to Phase: Architectural Coating 8/8/2010 - 9/5/2010 - Default Architectural Coating Description

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: M:\Client Files\AQIA's\Provost & Pritchard\Reedley Transportation Center\Transportation Center.urb924

Project Name: Reedley Transprotation Center

Project Location: Fresno County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.05	0.03	0.32	0.00	0.00	0.00	41.01
TOTALS (tons/year, mitigated)	0.05	0.03	0.31	0.00	0.00	0.00	41.00
Percent Reduction	0.00	0.00	3.12	NaN	NaN	NaN	0.02

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.05	0.03	0.32	0.00	0.00	0.00	41.01

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.03	0.03	0.00	0.00	0.00	40.52
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.02	0.00	0.29	0.00	0.00	0.00	0.49
Consumer Products	0.00						
Architectural Coatings	0.03						
TOTALS (tons/year, unmitigated)	0.05	0.03	0.32	0.00	0.00	0.00	41.01

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.03	0.03	0.00	0.00	0.00	40.52
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.02	0.00	0.28	0.00	0.00	0.00	0.48
Consumer Products	0.00						
Architectural Coatings	0.03						
TOTALS (tons/year, mitigated)	0.05	0.03	0.31	0.00	0.00	0.00	41.00

Area Source Changes to Defaults

URBEMIS2007 For Windows 9.2.4
Cumulative Output Files

8/20/2009 10:12:40 AM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract number unkown

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.47	0.53	8.12	0.02	1.17	1.13	683.66

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	2.78	5.28	32.65	0.03	4.40	0.90	2,615.16

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	6.25	5.81	40.77	0.05	5.57	2.03	3,298.82

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.03	0.38	0 16	0.00	0 00	0.00	490.44
Hearth	1 38	0.14	7.29	0.02	1.17	1.13	192 14
Landscape	0.12	0.01	0.67	0.00	0.00	0.00	1 08
Consumer Products	1.50						
Architectural Coatings	0.44						
TOTALS (tons/year, unmitigated)	3 47	0 53	8 12	0 02	1.17	1.13	683 66

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	2 78	5.28	32.65	0.03	4 40	0 90	2,615.16
TOTALS (tons/year, unmitigated)	2 78	5.28	32.65	0.03	4.40	0.90	2,615 16

Operational Settings

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year 2011 Season: Annual

Emfac Version : Emfac2007 V2 3 Nov 1 2006

8/20/2009 10:12:40 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	56.00	9.57	dwelling units	168.00	1,607.76	13,745.87
					1,607.76	13,745.87

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

8/20/2009 10:12:40 AM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

8/20/2009 10:57:02 AM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 4490

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.18	0.03	0.44	0.00	0.06	0.06	36.62

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.15	0.28	1.75	0.00	0.24	0.05	140.10

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.33	0.31	2.19	0.00	0.30	0.11	176.72

8/20/2009 10:57:02 AM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00	26.27
Hearth	0.07	0.01	0.39	0.00	0.06	0.06	10.29
Landscape	0.01	0.00	0.04	0.00	0.00	0.00	0.06
Consumer Products	0.08						
Architectural Coatings	0.02						
TOTALS (tons/year, unmitigated)	0.18	0.03	0.44	0.00	0.06	0.06	36.62

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.15	0.28	1.75	0.00	0.24	0.05	140.10
TOTALS (tons/year, unmitigated)	0.15	0.28	1.75	0.00	0.24	0.05	140.10

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version : Emfac2007 V2.3 Nov 1 2006

8/20/2009 10:57:02 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	3.00	9.57	dwelling units	9.00	86.13	736.39
					86.13	736.39

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	54.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

8/20/2009 10:57:02 AM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

8/20/2009 10:15:07 AM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 4763

Project Location San Luis Obispo County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.10	0.02	0.22	0.00	0.03	0.03	24.98

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.12	0.16	1.32	0.00	0.16	0.03	83.63

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.22	0.18	1.54	0.00	0.19	0.06	108.61

8/20/2009 10:15:07 AM

Area Source Unmitigated Detail Report.

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.02	0.01	0.00	0.00	0.00	20.43
Hearth	0.02	0.00	0.16	0.00	0.03	0.03	4 47
Landscape	0 01	0.00	0.05	0.00	0.00	0.00	0.08
Consumer Products	0.06						
Architectural Coatings	0 01						
TOTALS (tons/year, unmitigated)	0.10	0.02	0 22	0 00	0.03	0 03	24.98

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0 12	0.16	1 32	0.00	0.16	0.03	83.63
TOTALS (tons/year, unmitigated)	0 12	0.16	1.32	0 00	0.16	0 03	83 63

Operational Settings

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year. 2011 Season Annual

Emfac Version Emfac2007 V2 3 Nov 1 2006

8/20/2009 10:15:07 AM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	2.33	9.57	dwelling units	7.00	66.99	511.27
					66.99	511.27

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	41.5	1.4	98.1	0.5
Light Truck < 3750 lbs	18.8	2.1	91.0	6.9
Light Truck 3751-5750 lbs	19.9	1.0	98.5	0.5
Med Truck 5751-8500 lbs	8.0	1.2	97.6	1.2
Lite-Heavy Truck 8501-10,000 lbs	2.1	0.0	71.4	28.6
Lite-Heavy Truck 10,001-14,000 lbs	1.2	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	5.2	61.5	38.5	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.7	5.9	82.3	11.8

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	13.0	5.0	5.0	13.0	5.0	5.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	13.0	5.0	5.0	13.0	5.0	5.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

8/20/2009 2:20:39 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name.

Project Name: Tract 5013

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report.

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.34	0.05	0.83	0.00	0.12	0.11	69.18

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.28	0.53	3.30	0.00	0.45	0.09	264.63

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.62	0.58	4.13	0.00	0.57	0.20	333.81

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.04	0.02	0.00	0.00	0.00	49.63
Hearth	0.14	0.01	0.74	0.00	0.12	0.11	19.44
Landscape	0.01	0.00	0.07	0.00	0.00	0.00	0.11
Consumer Products	0.15						
Architectural Coatings	0.04						
TOTALS (tons/year, unmitigated)	0.34	0.05	0.83	0.00	0.12	0.11	69.18

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.28	0.53	3.30	0.00	0.45	0.09	264.63
TOTALS (tons/year, unmitigated)	0.28	0.53	3.30	0.00	0.45	0.09	264.63

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version: Emfac2007 V2.3 Nov 1 2006

8/20/2009 2:20:40 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	5.67	9.57	dwelling units	17.00	162.69	1,390.95
					162.69	1,390.95

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16 8	7.1	7.9	14 7	6.6	6 6
Trip speeds (mph)	35.0	35.0	35 0	35.0	35.0	35 0
% of Trips - Residential	32.9	18 0	49 1			

% of Trips - Commercial (by land use)

8/20/2009 2:12:25 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5149

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.63	0.09	1.45	0.00	0.21	0.20	122.08

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.50	0.94	5.83	0.00	0.79	0.16	466.99

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	1.13	1.03	7.28	0.00	1.00	0.36	589.07

8/20/2009 2:12:25 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.07	0.03	0.00	0.00	0.00	87.58
Hearth	0.25	0.02	1.30	0.00	0.21	0.20	34.31
Landscape	0.02	0.00	0.12	0.00	0.00	0.00	0.19
Consumer Products	0.27						
Architectural Coatings	0.08						
TOTALS (tons/year, unmitigated)	0.63	0.09	1.45	0.00	0.21	0.20	122.08

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.50	0.94	5.83	0.00	0.79	0.16	466.99
TOTALS (tons/year, unmitigated)	0.50	0.94	5.83	0.00	0.79	0.16	466.99

Operational Settings

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version : Emfac2007 V2.3 Nov 1 2006

8/20/2009 2:12:25 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	10 00	9 57	dwelling units	30.00	287.10	2,454.62
					287.10	2,454 62

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1 2	98.6	0.2
Light Truck < 3750 lbs	12.1	2 5	90 9	6.6
Light Truck 3751-5750 lbs	21.1	0 9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2 4	0.0	75.0	25 0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0 0	44 4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1 3	7 7	15.4	76 9
Heavy-Heavy Truck 33 001-60,000 lbs	2 8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100 0
Urban Bus	0.0	0.0	0 0	0 0
Motorcycle	3 9	64.1	35 9	0 0
School Bus	0 1	0.0	0.0	100 0
Motor Home	1.0	0.0	90.0	10 0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10 8	7.3	7 5	9 5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

8/20/2009 2:09:19 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5263

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.32	0.05	0.77	0.00	0.11	0.11	65.11

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.26	0.50	3.11	0.00	0.42	0.09	249.06

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.58	0.55	3.88	0.00	0.53	0.20	314.17

8/20/2009 2:09:19 PM

Area Source Unmitigated Detail Report

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0 00	0.04	0 02	0 00	0.00	0 00	46 71
Hearth	0 13	0.01	0.69	0.00	0.11	0 11	18.30
Landscape	0 01	0.00	0.06	0.00	0.00	0.00	0.10
Consumer Products	0 14						
Architectural Coatings	0 04						
TOTALS (tons/year, unmitigated)	0 32	0 05	0.77	0 00	0.11	0.11	65 11

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.26	0.50	3.11	0.00	0.42	0.09	249.06
TOTALS (tons/year, unmitigated)	0 26	0 50	3 11	0.00	0 42	0.09	249.06

Operational Settings.

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version: Emfac2007 V2 3 Nov 1 2006

8/20/2009 2:09:19 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	5 33	9 57	dwelling units	16.00	153.12	1,309.13
					153.12	1,309.13

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0 2
Light Truck < 3750 lbs	12 1	2 5	90.9	6.6
Light Truck 3751-5750 lbs	21 1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99 2	0 0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75 0	25 0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76 9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0 0	0.0	0 0	0 0
Motorcycle	3.9	64.1	35.9	0 0
School Bus	0 1	0 0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7 4

8/20/2009 2:09:19 PM

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35 0	35 0	35 0	35.0	35.0	35 0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

8/20/2009 2:02:56 PM

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5353

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	2.13	0.32	4.98	0.01	0.72	0.69	419.14

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	1.70	3.24	20.02	0.02	2.70	0.55	1,603.34

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.83	3.56	25.00	0.03	3.42	1.24	2,022.48

8/20/2009 2:02:56 PM

Area Source Unmitigated Detail Report.

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.24	0.10	0 00	0 00	0.00	300.68
Hearth	0.85	0.08	4 47	0.01	0 72	0 69	117.80
Landscape	0.07	0.00	0.41	0.00	0.00	0 00	0 66
Consumer Products	0.92						
Architectural Coatings	0 27						
TOTALS (tons/year, unmitigated)	2.13	0.32	4.98	0.01	0.72	0.69	419.14

Area Source Changes to Defaults

Operational Unmitigated Detail Report

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	1.70	3.24	20 02	0 02	2 70	0.55	1,603 34
TOTALS (tons/year, unmitigated)	1 70	3 24	20.02	0.02	2 70	0 55	1,603.34

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year. 2011 Season Annual

Emfac Version Emfac2007 V2.3 Nov 1 2006

8/20/2009 2:02:56 PM

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	34 33	9.57	dwelling units	103.00	985 71	8,427 52
					985 71	8,427 52

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12 1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21 1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99 2	0 0
Lite-Heavy Truck 8501-10,000 lbs	2 4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0 9	0.0	44 4	55 6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100 0
Other Bus	0 1	0.0	0.0	100 0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0 0
School Bus	0 1	0.0	0.0	100.0
Motor Home	1.0	0.0	90 0	10 0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7 4	7 4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5373

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.08	0.01	0.19	0.00	0.03	0.03	16.28

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.07	0.13	0.78	0.00	0.10	0.02	62.27

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.15	0.14	0.97	0.00	0.13	0.05	78.55

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2 5	CO2
Natural Gas	0.00	0 01	0.00	0 00	0.00	0 00	11 68
Hearth	0 03	0.00	0.17	0 00	0.03	0 03	4 57
Landscape	0.00	0.00	0.02	0 00	0 00	0 00	0.03
Consumer Products	0.04						
Architectural Coatings	0.01						
TOTALS (tons/year, unmitigated)	0.08	0 01	0 19	0 00	0.03	0.03	16.28

Area Source Changes to Defaults

Operational Unmitigated Detail Report.

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.07	0.13	0 78	0.00	0 10	0 02	62.27
TOTALS (tons/year, unmitigated)	0 07	0.13	0 78	0.00	0.10	0.02	62.27

Operational Settings

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year 2011 Season Annual

Emfac Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	1 33	9 57	dwelling units	4.00	38.28	327.28
					38.28	327.28

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0 2
Light Truck < 3750 lbs	12.1	2.5	90 9	6 6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99 2	0 0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75 0	25 0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0 0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1 3	7.7	15.4	76 9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0 0	100.0
Other Bus	0.1	0 0	0 0	100 0
Urban Bus	0 0	0.0	0.0	0 0
Motorcycle	3.9	64.1	35.9	0 0
School Bus	0.1	0 0	0.0	100.0
Motor Home	1 0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9 5	7 4	7 4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2 4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5399

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0 95	0 15	2.22	0.01	0.32	0 31	187 20

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0 76	1 45	8.94	0.01	1 21	0.25	716 06

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	1 71	1 60	11 16	0.02	1 53	0 56	903 26

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.11	0.04	0.00	0.00	0.00	134.29
Hearth	0.38	0.04	2.00	0.01	0.32	0.31	52.61
Landscape	0.03	0.00	0.18	0.00	0.00	0.00	0.30
Consumer Products	0.41						
Architectural Coatings	0.12						
TOTALS (tons/year, unmitigated)	0.95	0.15	2.22	0.01	0.32	0.31	187.20

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.76	1.45	8.94	0.01	1.21	0.25	716.06
TOTALS (tons/year, unmitigated)	0.76	1.45	8.94	0.01	1.21	0.25	716.06

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version: Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	15.33	9.57	dwelling units	46.00	440.22	3,763.75
					440.22	3,763.75

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5417

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.41	0.52	7.98	0.02	1.15	1.11	671.45

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	2.73	5.19	32.07	0.03	4.32	0.89	2,568.46

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	6.14	5.71	40.05	0.05	5.47	2.00	3,239.91

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Area Source Unmitigated Detail Report.

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0 03	0.38	0.16	0 00	0.00	0.00	481 68
Hearth	1 36	0 13	7.16	0.02	1.15	1.11	188.71
Landscape	0.12	0.01	0 66	0.00	0.00	0 00	1 06
Consumer Products	1.47						
Architectural Coatings	0.43						
TOTALS (tons/year, unmitigated)	3.41	0.52	7.98	0.02	1 15	1.11	671 45

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	2.73	5 19	32.07	0 03	4 32	0 89	2,568 46
TOTALS (tons/year, unmitigated)	2.73	5 19	32.07	0.03	4 32	0.89	2,568 46

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year. 2011 Season: Annual

Emfac Version . Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No Units	Total Trips	Total VMT
Single family housing	55.00	9.57	dwelling units	165.00	1,579.05	13,500.40
					1,579.05	13,500.40

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7 1	7.9	14 7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35 0	35 0	35 0
% of Trips - Residential	32.9	18 0	49 1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name

Project Name: Tract 5452

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	4.32	0.66	10.10	0.03	1.46	1.40	850.51

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.46	6.57	40.62	0.03	5.48	1.12	3,253.39

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	7.78	7.23	50.72	0.06	6.94	2.52	4,103.90

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.04	0.48	0 20	0.00	0.00	0.00	610 13
Hearth	1.72	0.17	9.06	0.03	1 46	1 40	239.03
Landscape	0.15	0.01	0.84	0 00	0.00	0.00	1 35
Consumer Products	1 87						
Architectural Coatings	0 54						
TOTALS (tons/year, unmitigated)	4 32	0.66	10.10	0.03	1 46	1 40	850.51

Area Source Changes to Defaults

Operational Unmitigated Detail Report

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	3 46	6.57	40.62	0 03	5 48	1 12	3,253 39
TOTALS (tons/year, unmitigated)	3 46	6.57	40.62	0.03	5 48	1 12	3,253.39

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	69 67	9 57	dwelling units	209.00	2,000.13	17,100.51
					2,000.13	17,100.51

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1 2	98 6	0.2
Light Truck < 3750 lbs	12.1	2 5	90.9	6 6
Light Truck 3751-5750 lbs	21.1	0.9	98 6	0.5
Med Truck 5751-8500 lbs	11 9	0.8	99 2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2 4	0.0	75 0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55 6
Med-Heavy Truck 14 001-33,000 lbs	1.3	7 7	15.4	76 9
Heavy-Heavy Truck 33,001-60,000 lbs	2 8	0 0	0.0	100.0
Other Bus	0 1	0 0	0.0	100 0
Urban Bus	0.0	0.0	0 0	0.0
Motorcycle	3.9	64 1	35 9	0 0
School Bus	0 1	0 0	0 0	100 0
Motor Home	1.0	0.0	90.0	10 0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10 8	7.3	7 5	9.5	7 4	7 4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name. Tract 5475

Project Location. San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0 25	0.04	0.58	0 00	0.08	0.08	48 83

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0 20	0.38	2.33	0.00	0 31	0.06	186.80

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.45	0.42	2.91	0.00	0 39	0 14	235 63

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0 00	0.03	0 01	0 00	0.00	0.00	35.03
Hearth	0 10	0.01	0.52	0.00	0.08	0.08	13.72
Landscape	0 01	0.00	0 05	0.00	0.00	0.00	0 08
Consumer Products	0.11						
Architectural Coatings	0.03						
TOTALS (tons/year, unmitigated)	0.25	0.04	0 58	0 00	0.08	0.08	48.83

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.20	0.38	2.33	0.00	0.31	0.06	186.80
TOTALS (tons/year, unmitigated)	0.20	0.38	2.33	0 00	0.31	0.06	186 80

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version: Emfac2007 V2 3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	4 00	9.57	dwelling units	12 00	114.84	981 85
					114.84	981 85

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1 2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90 9	6 6
Light Truck 3751-5750 lbs	21 1	0 9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99 2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2 4	0 0	75 0	25 0
Lite-Heavy Truck 10,001-14,000 lbs	0 9	0.0	44 4	55 6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15 4	76.9
Heavy-Heavy Truck 33 001-60,000 lbs	2.8	0 0	0.0	100.0
Other Bus	0 1	0.0	0 0	100.0
Urban Bus	0 0	0.0	0.0	0.0
Motorcycle	3.9	64 1	35.9	0 0
School Bus	0.1	0.0	0 0	100 0
Motor Home	1 0	0.0	90 0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7 5	9.5	7 4	7 4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5535

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.39	0.06	0.92	0.00	0.13	0.13	77.32

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.31	0.60	3.69	0.00	0.50	0.10	295.76

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.70	0.66	4.61	0.00	0.63	0.23	373.08

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.04	0.02	0.00	0.00	0.00	55.47
Hearth	0.16	0.02	0.82	0.00	0.13	0.13	21.73
Landscape	0.01	0.00	0.08	0.00	0.00	0.00	0.12
Consumer Products	0.17						
Architectural Coatings	0.05						
TOTALS (tons/year, unmitigated)	0.39	0.06	0.92	0.00	0.13	0.13	77.32

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.31	0.60	3.69	0.00	0.50	0.10	295.76
TOTALS (tons/year, unmitigated)	0.31	0.60	3.69	0.00	0.50	0.10	295.76

Operational Settings

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version: Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	6.33	9.57	dwelling units	19.00	181.83	1,554.59
					181.83	1,554.59

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16 8	7 1	7.9	14.7	6 6	6.6
Trip speeds (mph)	35 0	35.0	35 0	35.0	35 0	35.0
% of Trips - Residential	32 9	18 0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name. Tract 5767

Project Location. San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2 3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2 5	CO2
TOTALS (tons/year, unmitigated)	4 04	0.62	9 48	0 03	1 36	1.31	797 60

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	3.24	6.16	38.10	0 03	5.14	1.05	3,051 02

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	7 28	6 78	47.58	0.06	6 50	2.36	3,848.62

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.03	0.45	0.19	0.00	0.00	0.00	572.18
Hearth	1.61	0.16	8.50	0.03	1.36	1.31	224.16
Landscape	0.14	0.01	0.79	0.00	0.00	0.00	1.26
Consumer Products	1.75						
Architectural Coatings	0.51						
TOTALS (tons/year, unmitigated)	4.04	0.62	9.48	0.03	1.36	1.31	797.60

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	3.24	6.16	38.10	0.03	5.14	1.05	3,051.02
TOTALS (tons/year, unmitigated)	3.24	6.16	38.10	0.03	5.14	1.05	3,051.02

Operational Settings

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year 2011 Season Annual

Emfac Version Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	65.33	9.57	dwelling units	196.00	1,875.72	16,036.84
					1,875.72	16,036.84

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7 1	7.9	14 7	6.6	6 6
Trip speeds (mph)	35.0	35.0	35 0	35.0	35 0	35 0
% of Trips - Residential	32.9	18.0	49 1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name

Project Name: Tract 5882

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year unmitigated)	0.23	0.04	0.53	0.00	0.08	0.07	44.76

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year unmitigated)	0.18	0.35	2.14	0.00	0.29	0.06	171.23

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year unmitigated)	0.41	0.39	2.67	0.00	0.37	0.13	215.99

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.03	0.01	0.00	0.00	0.00	32.11
Hearth	0.09	0.01	0.48	0.00	0.08	0.07	12.58
Landscape	0.01	0.00	0.04	0.00	0.00	0.00	0.07
Consumer Products	0.10						
Architectural Coatings	0.03						
TOTALS (tons/year, unmitigated)	0.23	0.04	0.53	0.00	0.08	0.07	44.76

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.18	0.35	2.14	0.00	0.29	0.06	171.23
TOTALS (tons/year, unmitigated)	0.18	0.35	2.14	0.00	0.29	0.06	171.23

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	3 67	9.57	dwelling units	11.00	105.27	900.03
					105 27	900.03

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42 4	1.2	98.6	0 2
Light Truck < 3750 lbs	12.1	2 5	90.9	6 6
Light Truck 3751-5750 lbs	21 1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11 9	0.8	99.2	0 0
Lite-Heavy Truck 8501-10,000 lbs	2 4	0.0	75 0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0 9	0.0	44 4	55.6
Med-Heavy Truck 14 001-33,000 lbs	1.3	7 7	15 4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0 0	0.0	100.0
Other Bus	0.1	0.0	0 0	100 0
Urban Bus	0 0	0 0	0.0	0.0
Motorcycle	3 9	64.1	35.9	0 0
School Bus	0.1	0.0	0 0	100 0
Motor Home	1 0	0 0	90.0	10 0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9 5	7 4	7 4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:

Project Name: Tract 5905

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.40	0.07	0.97	0 00	0 14	0.13	81.39

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.33	0.63	3 89	0.00	0.52	0.11	311.33

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0 73	0 70	4.86	0.00	0.66	0 24	392.72

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.05	0.02	0.00	0.00	0.00	58.39
Hearth	0.16	0.02	0.87	0.00	0.14	0.13	22.87
Landscape	0.01	0.00	0.08	0.00	0.00	0.00	0.13
Consumer Products	0.18						
Architectural Coatings	0.05						
TOTALS (tons/year, unmitigated)	0.40	0.07	0.97	0.00	0.14	0.13	81.39

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.33	0.63	3.89	0.00	0.52	0.11	311.33
TOTALS (tons/year, unmitigated)	0.33	0.63	3.89	0.00	0.52	0.11	311.33

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	6.67	9.57	dwelling units	20.00	191.40	1,636.41
					191.40	1,636.41

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	42.4	1.2	98.6	0.2
Light Truck < 3750 lbs	12.1	2.5	90.9	6.6
Light Truck 3751-5750 lbs	21.1	0.9	98.6	0.5
Med Truck 5751-8500 lbs	11.9	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	2.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.9	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	1.3	7.7	15.4	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	2.8	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	3.9	64.1	35.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Rural Trip Length (miles)	16 8	7.1	7 9	14 7	6 6	5.6
Trip speeds (mph)	35.0	35 0	35.0	35 0	35 0	35 0
% of Trips - Residential	32.9	18 0	49.1			

% of Trips - Commercial (by land use)

Vehicular Emission Calculations and EMFAC2007 Output Files

Reedley Transportation Center

Pre-Project Direct Exhuast Emissions

KCUSD School Buses On-Site Emissions - EMFAC2007 v2 3[a]

Based on:

Vehicles/year	28548
Miles/Roundtrip	0.25
Total miles travelled/year	7,137

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	1 04	12 97	10 93	1458 14	0 01	0 66	0 61
Lbs/Mile	2 28E-03	2 86E-02	2 41E-02	3 21E+00	3.09E-05	1.46E-03	1.35E-03
Lbs/Year	16	204	172	22,943	0	10 45	10
Tons/year	**0.01**	**0.10**	**0.09**	**11.47**	**0.00**	**0.01**	**0.00**

KCUSD Other Vehicles On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year	77818
Miles/Roundtrip	0.25
Total miles travelled/year	19,455

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0.18	0 53	3.97	676 37	0.01	0 04	0 04
Lbs/Mile	3 90E-04	1 17E-03	8 76E-03	1 50E+00	1 54E-05	8.38E-05	7.94E-05
Lbs/Year	3	8	63	10,674	0	0 60	1
Tons/year	**0.00**	**0.00**	**0.03**	**5.34**	**0.00**	**0.00**	**0.00**

Reedley Staff and Dial-a-ride Vehicles On-Site Emissions - EMFAC2007 v2.3[a]

Based on

Vehicles/year	50440
Miles/Roundtrip	0 25
Total miles travelled/year	12,610

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0 14	0 36	2 46	590 27	0 01	0 03	0 03
Lbs/Mile	3 11E-04	7 85E-04	5 41E-03	1 30E+00	1 32E-05	6 17E-05	5 73E-05
Lbs/Year	3 92	9.90	68 25	16,409 70	0 17	0 778	0 72
Tons/year	**0.00**	**0.00**	**0.03**	**8.20**	**0.00**	**0.00**	**0.00**

Garbage Trucks On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year	4160
Miles/Roundtrip	0.25
Total miles travelled/year	1,040

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	3.34	21 71	11 48	2580 32	0 03	1 27	1 17
Lbs/Mile	7 37E-03	4 79E-02	2 53E-02	5 69E+00	5 51E-05	2 80E-03	2 57E-03
Lbs/Year	92 88	603 57	319 18	71,733 53	0 70	35 251	32 44
Tons/year	**0.05**	**0.30**	**0.16**	**35.87**	**0.00**	**0.02**	**0.02**

[a] Emissions factors and emissions were based on EMFAC2007 v2.3 "Running" emissions only EMFAC2007 calculates emissions factors for TOG, CO, NOx, SOx and PM10. "Starting", "Diurnal", "Hot Soak" and "Resting Loss" emissions factors were not considered as these factors were significantly lower than the average "Running" factors used. The results are considered to be the most likely and the most conservative estimates of disposal related travel emissions.

Reedley Transportation Center
Pre-Project Indirect Exhuast Emissions

KCUSD School Buses On-Site Emissions - EMFAC2007 v2.3[a]

Based on

Total miles travelled/year: 799,544

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0.43	10.32	4 64	1361.70	0.01	0 34	0.32
Lbs/Mile	9 39E-04	2 27E-02	1 02E-02	3 00E+00	2.87E-05	7 54E-04	6 94E-04
Lbs/Year	751	18,187	8,186	2,400,259	23	602 84	555
Tons/year	**0.38**	**9.09**	**4.09**	**1,200.13**	**0.01**	**0.30**	**0.28**

KCUSD Other Vehicles On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year: 91000
Miles/Roundtrip: 1
Total miles travelled/year: 91,000

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0.06	0 39	2 72	372 76	0.00	0 02	0.01
Lbs/Mile	1 39E-04	8.66E-04	5.99E-03	8 22E-01	8 82E-06	3 31E-05	3 09E-05
Lbs/Year	13	79	545	74,783	1	3	3
Tons/year	**0.01**	**0.04**	**0.27**	**37.39**	**0.00**	**0.00**	**0.00**

Reedley Staff and Dial-a-ride Vehicles On-Site Emissions - EMFAC2007 v2 3[a]

Based on:

Vehicles/year	62920
Miles/Roundtrip	1
Total miles travelled/year	62,920

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0 05	0 26	2 46	326.45	0.00	0.01	0.01
Lbs/Mile	1 10E-04	5 71E-04	5 41E-03	7.20E-01	6 61E-06	2 43E-05	2 20E-05
Lbs/Year	6 94	35.93	340 54	45,283.60	0.42	1.53	1 39
Tons/year	**0.00**	**0.02**	**0.17**	**22.64**	**0.00**	**0.00**	**0.00**

Garbage Trucks On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year.	4160
Miles/Roundtrip	75
Total miles travelled/year	312,000

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0.95	16.89	5.24	1813.16	0.02	0.56	0.51
Lbs/Mile	2 09E-03	3.72E-02	1 15E-02	4 00E+00	3.75E-05	1.23E-03	1.13E-03
Lbs/Year	652 07	11,620 41	3,601 54	1,247,167 30	11.69	383.13	352 86
Tons/year	**0.33**	**5.81**	**1.80**	**623.58**	**0.01**	**0.19**	**0.18**

[a] Emissions factors and emissions were based on EMFAC2007 v2.3 "Running" emissions only. EMFAC2007 calculates emissions factors for TOG, CO, NOx, SOx and PM10. "Starting", "Diurnal", "Hot Soak" and "Resting Loss" emissions factors were not considered as these factors were significantly lower than the average "Running" factors used. The results are considered to be the most likely and the most conservative estimates of disposal-related travel emissions.

Reedley Transportation Center

Post-Project Direct Exhuast Emissions

KCUSD School Buses On-Site Emissions - EMFAC2007 v2.3[a]

Based on

Vehicles/year	46800
Miles/Roundtrip	0.25
Total miles travelled/year	11,700

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	1 04	12 97	10 93	1458 14	0 01	0.66	0 61
Lbs/Mile	2 28E-03	2 86E-02	2 41E-02	3 21E+00	3.09E-05	1 46E-03	1.35E-03
Lbs/Year	27	335	282	37,611	0	17 13	16
Tons/year	**0.01**	**0.17**	**0.14**	**18.81**	**0.00**	**0.01**	**0.01**

KCUSD Other Vehicles On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year	91000
Miles/Roundtrip	0.25
Total miles travelled/year	22,750

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0 18	0.53	3 97	678.37	0.01	0.04	0.04
Lbs/Mile	3.90E-04	1 17E-03	8 76E-03	1 50E+00	1 54E-05	8 38E-05	7 94E-05
Lbs/Year	5	14	103	17,498	0	0 98	1
Tons/year	**0 00**	**0.01**	**0.05**	**8.75**	**0.00**	**0.00**	**0 00**

Reedley Staff, Police Department and Dial-a-ride Vehicles On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year	62920
Miles/Roundtrip	0 25
Total miles travelled/year	15,730

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0 14	0 36	2 46	590 27	0 01	0 03	0 03
Lbs/Mile	3 11E-04	7.85E-04	5 41E-03	1 30E+00	1 32E-05	6 17E-05	5 73E-05
Lbs/Year	4 89	12.35	85 14	20,469 84	0 21	0 971	0.90
Tons/year	**0.00**	**0.01**	**0.04**	**10.23**	**0.00**	**0.00**	**0.00**

Garbage Trucks and H & S Trucking On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year	17160
Miles/Roundtrip	0 25
Total miles travelled/year	4,290

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	3 34	21 71	11 48	2580 32	0 03	1 27	1 17
Lbs/Mile	7 37E-03	4 79E-02	2 53E-02	5.69E+00	5 51E-05	2 80E-03	2 57E-03
Lbs/Year	115 86	752 91	398 15	89,482 03	0 87	43 973	40 47
Tons/year	**0.06**	**0.38**	**0.20**	**44.74**	**0.00**	**0.02**	**0.02**

[a] Emissions factors and emissions were based on EMFAC2007 v2.3 "Running" emissions only. EMFAC2007 calculates emissions factors for TOG, CO, NOx, SOx and PM10. "Starting", "Diurnal", "Hot Soak" and "Resting Loss" emissions factors were not considered as these factors were significantly lower than the average "Running" factors used. The results are considered to be the most likely and the most conservative estimates of disposal related travel emissions.

Reedley Transportation Center
Post-Project Indirect Exhuast Emissions

KCUSD School Buses On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Total miles travelled/year 1,310,728

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0.43	10.32	4.64	1361.70	0.01	0.34	0 32
Lbs/Mile	9 39E-04	2 27E-02	1 02E-02	3 00E+00	2 87E-05	7.54E-04	6 94E-04
Lbs/Year	1,231	29,816	13,420	3,934,850	38	988 26	910
Tons/year	**0.62**	**14.91**	**6.71**	**1,967.43**	**0.02**	**0.49**	**0.46**

KCUSD Other Vehicles On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year 91000
Miles/Roundtrip 4
Total miles travelled/year. 364,000

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0 06	0 39	2 72	372.76	0 00	0.02	0.01
Lbs/Mile	1 39E-04	8 66E-04	5 99E-03	8.22E-01	8.82E-06	3 31E-05	3.09E-05
Lbs/Year	51	315	2,180	299,133	3	12	11
Tons/year	**0.03**	**0.16**	**1.09**	**149.57**	**0.00**	**0.01**	**0.01**

Reedley Staff and Dial-a-ride Vehicles On-Site Emissions - EMFAC2007 v2 3[a]

Based on

Vehicles/year	62920
Miles/Roundtrip	4
Total miles travelled/year	251,680

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0.05	0 26	2 46	326.45	0.00	0.01	0 01
Lbs/Mile	1 10E-04	5.71E-04	5.41E-03	7 20E-01	6.61E-06	2.43E-05	2 20E-05
Lbs/Year	27.74	143 71	1,362 18	181,134 40	1 66	6 10	5 55
Tons/year	**0.01**	**0.07**	**0.68**	**90.57**	**0.00**	**0.00**	**0.00**

Garbage Trucks On-Site Emissions - EMFAC2007 v2.3[a]

Based on:

Vehicles/year	4160
Miles/Roundtrip	75
Total miles travelled/year	312,000

EMISSIONS	ROG	NOx	CO	CO2	SOX	PM10	PM2.5
Em. Factor (grams/mile)	0 95	16 89	5 24	1813 16	0.02	0.56	0 51
Lbs/Mile	2 09E-03	3 72E-02	1 15E-02	4 00E+00	3.75E-05	1.23E-03	1.13E-03
Lbs/Year	652 07	11,620.41	3,601.54	1,247,167.30	11 69	383 13	352 86
Tons/year	**0.33**	**5.81**	**1.80**	**623.58**	**0.01**	**0.19**	**0.18**

[a] Emissions factors and emissions were based on EMFAC2007 v2.3 "Running" emissions only. EMFAC2007 calculates emissions factors for TOG, CO, NOx, SOx and PM10. "Starting", "Diurnal", "Hot Soak" and "Resting Loss" emissions factors were not considered as these factors were significantly lower than the average "Running" factors used. The results are considered to be the most likely and the most conservative estimates of disposal-related travel emissions

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	5.955	0.000	0.000	5.955
15	0.000	0.000	0.000	1.036	0.000	0.000	1.036
35	0.000	0.000	0.000	0.426	0.000	0.000	0.426

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	42.457	0.000	0.000	42.457
15	0.000	0.000	0.000	10.927	0.000	0.000	10.927
35	0.000	0.000	0.000	4.644	0.000	0.000	4.644

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	64.591	0.000	0.000	64.591
15	0.000	0.000	0.000	12.972	0.000	0.000	12.972
35	0.000	0.000	0.000	10.318	0.000	0.000	10.318

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	4194.554	0.000	0.000	4194.554
15	0.000	0.000	0.000	1458.136	0.000	0.000	1458.136
35	0.000	0.000	0.000	1361.700	0.000	0.000	1361.700

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.040	0.000	0.000	0.040
15	0.000	0.000	0.000	0.014	0.000	0.000	0.014
35	0.000	0.000	0.000	0.013	0.000	0.000	0.013

Pollutant Name: PM10 Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.884	0.000	0.000	0.884
15	0.000	0.000	0.000	0.664	0.000	0.000	0.664
35	0.000	0.000	0.000	0.342	0.000	0.000	0.342

Pollutant Name: PM10 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.012	0.000	0.000	0.012
35	0.000	0.000	0.000	0.012	0.000	0.000	0.012

Pollutant Name: PM10 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.013	0.000	0.000	0.013
35	0.000	0.000	0.000	0.013	0.000	0.000	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	7.054	0.000	0.000	7.054
35	0.000	0.000	0.000	16.705	0.000	0.000	16.705

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	6.698	0.000	0.000	6.698
35	0.000	0.000	0.000	6.698	0.000	0.000	6.698

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.110	0.000	0.000	0.110
10	0.000	0.000	0.000	0.214	0.000	0.000	0.214
20	0.000	0.000	0.000	0.406	0.000	0.000	0.406
30	0.000	0.000	0.000	0.575	0.000	0.000	0.575
40	0.000	0.000	0.000	0.722	0.000	0.000	0.722
50	0.000	0.000	0.000	0.847	0.000	0.000	0.847
60	0.000	0.000	0.000	0.949	0.000	0.000	0.949
120	0.000	0.000	0.000	0.945	0.000	0.000	0.945
180	0.000	0.000	0.000	1.003	0.000	0.000	1.003
240	0.000	0.000	0.000	1.059	0.000	0.000	1.059
300	0.000	0.000	0.000	1.113	0.000	0.000	1.113
360	0.000	0.000	0.000	1.165	0.000	0.000	1.165
420	0.000	0.000	0.000	1.216	0.000	0.000	1.216
480	0.000	0.000	0.000	1.264	0.000	0.000	1.264
540	0.000	0.000	0.000	1.311	0.000	0.000	1.311
600	0.000	0.000	0.000	1.356	0.000	0.000	1.356
660	0.000	0.000	0.000	1.399	0.000	0.000	1.399
720	0.000	0.000	0.000	1.440	0.000	0.000	1.440

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	1.667	0.000	0.000	1.667
10	0.000	0.000	0.000	3.266	0.000	0.000	3.266
20	0.000	0.000	0.000	6.261	0.000	0.000	6.261
30	0.000	0.000	0.000	8.985	0.000	0.000	8.985
40	0.000	0.000	0.000	11.438	0.000	0.000	11.438
50	0.000	0.000	0.000	13.620	0.000	0.000	13.620
60	0.000	0.000	0.000	15.532	0.000	0.000	15.532
120	0.000	0.000	0.000	14.849	0.000	0.000	14.849
180	0.000	0.000	0.000	15.283	0.000	0.000	15.283
240	0.000	0.000	0.000	15.732	0.000	0.000	15.732
300	0.000	0.000	0.000	16.194	0.000	0.000	16.194
360	0.000	0.000	0.000	16.672	0.000	0.000	16.672
420	0.000	0.000	0.000	17.163	0.000	0.000	17.163
480	0.000	0.000	0.000	17.668	0.000	0.000	17.668
540	0.000	0.000	0.000	18.188	0.000	0.000	18.188
600	0.000	0.000	0.000	18.723	0.000	0.000	18.723

660	0.000	0.000	0.000	19.271	0.000	0.000	19.271
720	0.000	0.000	0.000	19.834	0.000	0.000	19.834

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.293	0.000	0.000	0.293
10	0.000	0.000	0.000	0.442	0.000	0.000	0.442
20	0.000	0.000	0.000	0.703	0.000	0.000	0.703
30	0.000	0.000	0.000	0.915	0.000	0.000	0.915
40	0.000	0.000	0.000	1.080	0.000	0.000	1.080
50	0.000	0.000	0.000	1.196	0.000	0.000	1.196
60	0.000	0.000	0.000	1.263	0.000	0.000	1.263
120	0.000	0.000	0.000	1.277	0.000	0.000	1.277
180	0.000	0.000	0.000	1.273	0.000	0.000	1.273
240	0.000	0.000	0.000	1.266	0.000	0.000	1.266
300	0.000	0.000	0.000	1.256	0.000	0.000	1.256
360	0.000	0.000	0.000	1.244	0.000	0.000	1.244
420	0.000	0.000	0.000	1.229	0.000	0.000	1.229
480	0.000	0.000	0.000	1.212	0.000	0.000	1.212
540	0.000	0.000	0.000	1.193	0.000	0.000	1.193
600	0.000	0.000	0.000	1.171	0.000	0.000	1.171
660	0.000	0.000	0.000	1.146	0.000	0.000	1.146
720	0.000	0.000	0.000	1.119	0.000	0.000	1.119

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	1.389	0.000	0.000	1.389
10	0.000	0.000	0.000	2.770	0.000	0.000	2.770
20	0.000	0.000	0.000	5.510	0.000	0.000	5.510
30	0.000	0.000	0.000	8.219	0.000	0.000	8.219
40	0.000	0.000	0.000	10.897	0.000	0.000	10.897
50	0.000	0.000	0.000	13.544	0.000	0.000	13.544
60	0.000	0.000	0.000	16.161	0.000	0.000	16.161
120	0.000	0.000	0.000	27.487	0.000	0.000	27.487
180	0.000	0.000	0.000	32.474	0.000	0.000	32.474
240	0.000	0.000	0.000	37.167	0.000	0.000	37.167
300	0.000	0.000	0.000	41.565	0.000	0.000	41.565
360	0.000	0.000	0.000	45.669	0.000	0.000	45.669
420	0.000	0.000	0.000	49.478	0.000	0.000	49.478
480	0.000	0.000	0.000	52.993	0.000	0.000	52.993
540	0.000	0.000	0.000	56.214	0.000	0.000	56.214
600	0.000	0.000	0.000	59.141	0.000	0.000	59.141
660	0.000	0.000	0.000	61.773	0.000	0.000	61.773
720	0.000	0.000	0.000	64.111	0.000	0.000	64.111

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000

40	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.001	0.000	0.000	0.001
180	0.000	0.000	0.000	0.001	0.000	0.000	0.001
240	0.000	0.000	0.000	0.001	0.000	0.000	0.001
300	0.000	0.000	0.000	0.001	0.000	0.000	0.001
360	0.000	0.000	0.000	0.001	0.000	0.000	0.001
420	0.000	0.000	0.000	0.001	0.000	0.000	0.001
480	0.000	0.000	0.000	0.001	0.000	0.000	0.001
540	0.000	0.000	0.000	0.001	0.000	0.000	0.001
600	0.000	0.000	0.000	0.001	0.000	0.000	0.001
660	0.000	0.000	0.000	0.001	0.000	0.000	0.001
720	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Pollutant Name: PM10 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.001
30	0.000	0.000	0.000	0.001	0.000	0.000	0.001
40	0.000	0.000	0.000	0.001	0.000	0.000	0.001
50	0.000	0.000	0.000	0.002	0.000	0.000	0.002
60	0.000	0.000	0.000	0.002	0.000	0.000	0.002
120	0.000	0.000	0.000	0.003	0.000	0.000	0.003
180	0.000	0.000	0.000	0.003	0.000	0.000	0.003
240	0.000	0.000	0.000	0.003	0.000	0.000	0.003
300	0.000	0.000	0.000	0.003	0.000	0.000	0.003
360	0.000	0.000	0.000	0.003	0.000	0.000	0.003
420	0.000	0.000	0.000	0.003	0.000	0.000	0.003
480	0.000	0.000	0.000	0.003	0.000	0.000	0.003
540	0.000	0.000	0.000	0.003	0.000	0.000	0.003
600	0.000	0.000	0.000	0.003	0.000	0.000	0.003
660	0.000	0.000	0.000	0.004	0.000	0.000	0.004
720	0.000	0.000	0.000	0.004	0.000	0.000	0.004

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time

min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.005	0.000	0.000	0.005
10	0.000	0.000	0.000	0.009	0.000	0.000	0.009
20	0.000	0.000	0.000	0.016	0.000	0.000	0.016
30	0.000	0.000	0.000	0.020	0.000	0.000	0.020
40	0.000	0.000	0.000	0.022	0.000	0.000	0.022

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.002	0.000	0.000	0.002

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp

degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%TRIP	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%VEH	0.000	0.000	0.000	1.000	0.000	0.000	1.000

Title : Transportation Center - School Buses
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.000	0.000	0.000	0.129	0.000	0.000	0.129
2	0.000	0.000	0.000	0.071	0.000	0.000	0.071
3	0.000	0.000	0.000	0.052	0.000	0.000	0.052
4	0.000	0.000	0.000	0.042	0.000	0.000	0.042
5	0.000	0.000	0.000	0.037	0.000	0.000	0.037
10	0.000	0.000	0.000	0.026	0.000	0.000	0.026
15	0.000	0.000	0.000	0.023	0.000	0.000	0.023
20	0.000	0.000	0.000	0.022	0.000	0.000	0.022
25	0.000	0.000	0.000	0.022	0.000	0.000	0.022
30	0.000	0.000	0.000	0.022	0.000	0.000	0.022

35	0.000	0.000	0.000	0.022	0.000	0.000	0.022
40	0.000	0.000	0.000	0.022	0.000	0.000	0.022
45	0.000	0.000	0.000	0.022	0.000	0.000	0.022
50	0.000	0.000	0.000	0.022	0.000	0.000	0.022
55	0.000	0.000	0.000	0.022	0.000	0.000	0.022
60	0.000	0.000	0.000	0.022	0.000	0.000	0.022

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	1.036	0.000	0.000	1.036
35	0.000	0.000	0.000	0.426	0.000	0.000	0.426

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	10.927	0.000	0.000	10.927
35	0.000	0.000	0.000	4.644	0.000	0.000	4.644

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	12.972	0.000	0.000	12.972
35	0.000	0.000	0.000	10.318	0.000	0.000	10.318

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL

15	0.000	0.000	0.000	1458.136	0.000	0.000	1458.136
35	0.000	0.000	0.000	1361.700	0.000	0.000	1361.700

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.014	0.000	0.000	0.014
35	0.000	0.000	0.000	0.013	0.000	0.000	0.013

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.611	0.000	0.000	0.611
35	0.000	0.000	0.000	0.315	0.000	0.000	0.315

Pollutant Name: PM2.5 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.003	0.000	0.000	0.003
35	0.000	0.000	0.000	0.003	0.000	0.000	0.003

Pollutant Name: PM2.5 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.005	0.000	0.000	0.005
35	0.000	0.000	0.000	0.005	0.000	0.000	0.005

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	7.054	0.000	0.000	7.054
35	0.000	0.000	0.000	16.705	0.000	0.000	16.705

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	6.698	0.000	0.000	6.698
35	0.000	0.000	0.000	6.698	0.000	0.000	6.698

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.110	0.000	0.000	0.110
10	0.000	0.000	0.000	0.214	0.000	0.000	0.214
20	0.000	0.000	0.000	0.406	0.000	0.000	0.406
30	0.000	0.000	0.000	0.575	0.000	0.000	0.575
40	0.000	0.000	0.000	0.722	0.000	0.000	0.722
50	0.000	0.000	0.000	0.847	0.000	0.000	0.847
60	0.000	0.000	0.000	0.949	0.000	0.000	0.949
120	0.000	0.000	0.000	0.945	0.000	0.000	0.945
180	0.000	0.000	0.000	1.003	0.000	0.000	1.003
240	0.000	0.000	0.000	1.059	0.000	0.000	1.059
300	0.000	0.000	0.000	1.113	0.000	0.000	1.113
360	0.000	0.000	0.000	1.165	0.000	0.000	1.165
420	0.000	0.000	0.000	1.216	0.000	0.000	1.216
480	0.000	0.000	0.000	1.264	0.000	0.000	1.264
540	0.000	0.000	0.000	1.311	0.000	0.000	1.311
600	0.000	0.000	0.000	1.356	0.000	0.000	1.356
660	0.000	0.000	0.000	1.399	0.000	0.000	1.399
720	0.000	0.000	0.000	1.440	0.000	0.000	1.440

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	1.667	0.000	0.000	1.667
10	0.000	0.000	0.000	3.266	0.000	0.000	3.266
20	0.000	0.000	0.000	6.261	0.000	0.000	6.261
30	0.000	0.000	0.000	8.985	0.000	0.000	8.985
40	0.000	0.000	0.000	11.438	0.000	0.000	11.438
50	0.000	0.000	0.000	13.620	0.000	0.000	13.620
60	0.000	0.000	0.000	15.532	0.000	0.000	15.532
120	0.000	0.000	0.000	14.849	0.000	0.000	14.849
180	0.000	0.000	0.000	15.283	0.000	0.000	15.283
240	0.000	0.000	0.000	15.732	0.000	0.000	15.732
300	0.000	0.000	0.000	16.194	0.000	0.000	16.194
360	0.000	0.000	0.000	16.672	0.000	0.000	16.672
420	0.000	0.000	0.000	17.163	0.000	0.000	17.163

480	0.000	0.000	0.000	17.668	0.000	0.000	17.668
540	0.000	0.000	0.000	18.188	0.000	0.000	18.188
600	0.000	0.000	0.000	18.723	0.000	0.000	18.723
660	0.000	0.000	0.000	19.271	0.000	0.000	19.271
720	0.000	0.000	0.000	19.834	0.000	0.000	19.834

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.293	0.000	0.000	0.293
10	0.000	0.000	0.000	0.442	0.000	0.000	0.442
20	0.000	0.000	0.000	0.703	0.000	0.000	0.703
30	0.000	0.000	0.000	0.915	0.000	0.000	0.915
40	0.000	0.000	0.000	1.080	0.000	0.000	1.080
50	0.000	0.000	0.000	1.196	0.000	0.000	1.196
60	0.000	0.000	0.000	1.263	0.000	0.000	1.263
120	0.000	0.000	0.000	1.277	0.000	0.000	1.277
180	0.000	0.000	0.000	1.273	0.000	0.000	1.273
240	0.000	0.000	0.000	1.266	0.000	0.000	1.266
300	0.000	0.000	0.000	1.256	0.000	0.000	1.256
360	0.000	0.000	0.000	1.244	0.000	0.000	1.244
420	0.000	0.000	0.000	1.229	0.000	0.000	1.229
480	0.000	0.000	0.000	1.212	0.000	0.000	1.212
540	0.000	0.000	0.000	1.193	0.000	0.000	1.193
600	0.000	0.000	0.000	1.171	0.000	0.000	1.171
660	0.000	0.000	0.000	1.146	0.000	0.000	1.146
720	0.000	0.000	0.000	1.119	0.000	0.000	1.119

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	1.389	0.000	0.000	1.389
10	0.000	0.000	0.000	2.770	0.000	0.000	2.770
20	0.000	0.000	0.000	5.510	0.000	0.000	5.510
30	0.000	0.000	0.000	8.219	0.000	0.000	8.219
40	0.000	0.000	0.000	10.897	0.000	0.000	10.897
50	0.000	0.000	0.000	13.544	0.000	0.000	13.544
60	0.000	0.000	0.000	16.161	0.000	0.000	16.161
120	0.000	0.000	0.000	27.487	0.000	0.000	27.487
180	0.000	0.000	0.000	32.474	0.000	0.000	32.474
240	0.000	0.000	0.000	37.167	0.000	0.000	37.167
300	0.000	0.000	0.000	41.565	0.000	0.000	41.565
360	0.000	0.000	0.000	45.669	0.000	0.000	45.669
420	0.000	0.000	0.000	49.478	0.000	0.000	49.478
480	0.000	0.000	0.000	52.993	0.000	0.000	52.993
540	0.000	0.000	0.000	56.214	0.000	0.000	56.214
600	0.000	0.000	0.000	59.141	0.000	0.000	59.141
660	0.000	0.000	0.000	61.773	0.000	0.000	61.773
720	0.000	0.000	0.000	64.111	0.000	0.000	64.111

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000

10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.001	0.000	0.000	0.001
180	0.000	0.000	0.000	0.001	0.000	0.000	0.001
240	0.000	0.000	0.000	0.001	0.000	0.000	0.001
300	0.000	0.000	0.000	0.001	0.000	0.000	0.001
360	0.000	0.000	0.000	0.001	0.000	0.000	0.001
420	0.000	0.000	0.000	0.001	0.000	0.000	0.001
480	0.000	0.000	0.000	0.001	0.000	0.000	0.001
540	0.000	0.000	0.000	0.001	0.000	0.000	0.001
600	0.000	0.000	0.000	0.001	0.000	0.000	0.001
660	0.000	0.000	0.000	0.001	0.000	0.000	0.001
720	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.001
30	0.000	0.000	0.000	0.001	0.000	0.000	0.001
40	0.000	0.000	0.000	0.001	0.000	0.000	0.001
50	0.000	0.000	0.000	0.002	0.000	0.000	0.002
60	0.000	0.000	0.000	0.002	0.000	0.000	0.002
120	0.000	0.000	0.000	0.003	0.000	0.000	0.003
180	0.000	0.000	0.000	0.003	0.000	0.000	0.003
240	0.000	0.000	0.000	0.003	0.000	0.000	0.003
300	0.000	0.000	0.000	0.003	0.000	0.000	0.003
360	0.000	0.000	0.000	0.003	0.000	0.000	0.003
420	0.000	0.000	0.000	0.003	0.000	0.000	0.003
480	0.000	0.000	0.000	0.003	0.000	0.000	0.003
540	0.000	0.000	0.000	0.003	0.000	0.000	0.003
600	0.000	0.000	0.000	0.003	0.000	0.000	0.003
660	0.000	0.000	0.000	0.003	0.000	0.000	0.003
720	0.000	0.000	0.000	0.003	0.000	0.000	0.003

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative

Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.005	0.000	0.000	0.005
10	0.000	0.000	0.000	0.009	0.000	0.000	0.009
20	0.000	0.000	0.000	0.016	0.000	0.000	0.016
30	0.000	0.000	0.000	0.020	0.000	0.000	0.020
40	0.000	0.000	0.000	0.022	0.000	0.000	0.022

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.002	0.000	0.000	0.002

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative

Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%TRIP	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%VEH	0.000	0.000	0.000	1.000	0.000	0.000	1.000

Title : Transportation Center - School Buses PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.000	0.000	0.000	0.129	0.000	0.000	0.129
2	0.000	0.000	0.000	0.071	0.000	0.000	0.071
3	0.000	0.000	0.000	0.052	0.000	0.000	0.052
4	0.000	0.000	0.000	0.042	0.000	0.000	0.042
5	0.000	0.000	0.000	0.037	0.000	0.000	0.037
10	0.000	0.000	0.000	0.026	0.000	0.000	0.026
15	0.000	0.000	0.000	0.023	0.000	0.000	0.023

20	0.000	0.000	0.000	0.022	0.000	0.000	0.022
25	0.000	0.000	0.000	0.022	0.000	0.000	0.022
30	0.000	0.000	0.000	0.022	0.000	0.000	0.022
35	0.000	0.000	0.000	0.022	0.000	0.000	0.022
40	0.000	0.000	0.000	0.022	0.000	0.000	0.022
45	0.000	0.000	0.000	0.022	0.000	0.000	0.022
50	0.000	0.000	0.000	0.022	0.000	0.000	0.022
55	0.000	0.000	0.000	0.022	0.000	0.000	0.022
60	0.000	0.000	0.000	0.022	0.000	0.000	0.022

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	3.394	0.000	0.000	0.000	0.564
15	0.136	0.185	0.272	0.000	0.000	0.000	0.177
35	0.047	0.067	0.095	0.000	0.000	0.000	0.063

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	20.800	0.000	0.000	0.000	3.455
15	3.357	4.524	4.512	0.000	0.000	0.000	3.974
35	2.350	3.103	2.905	0.000	0.000	0.000	2.717

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	4.190	0.000	0.000	0.000	0.696
15	0.319	0.602	0.973	0.000	0.000	0.000	0.531
35	0.232	0.436	0.756	0.000	0.000	0.000	0.393

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	859.928	0.000	0.000	0.000	142.856
15	565.132	692.988	966.232	0.000	0.000	0.000	678.369
35	310.489	384.311	523.347	0.000	0.000	0.000	372.759

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.009	0.000	0.000	0.000	0.001
15	0.005	0.007	0.009	0.000	0.000	0.000	0.007
35	0.003	0.004	0.005	0.000	0.000	0.000	0.004

Pollutant Name: PM10 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.041	0.000	0.000	0.000	0.007
15	0.027	0.049	0.049	0.000	0.000	0.000	0.038
35	0.010	0.019	0.019	0.000	0.000	0.000	0.015

Pollutant Name: PM10 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.008	0.008	0.009	0.000	0.000	0.000	0.008
35	0.008	0.008	0.009	0.000	0.000	0.000	0.008

Pollutant Name: PM10 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.013	0.013	0.013	0.000	0.000	0.000	0.013
35	0.013	0.013	0.013	0.000	0.000	0.000	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	15.509	12.482	8.892	0.000	0.000	0.000	13.354
35	28.193	22.690	16.754	0.000	0.000	0.000	24.369

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	28.243	29.056	19.840	0.000	0.000	0.000	24.603
35	28.243	29.056	19.840	0.000	0.000	0.000	24.603

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.069	0.078	0.139	0.000	0.000	0.000	0.087
10	0.136	0.152	0.271	0.000	0.000	0.000	0.171
20	0.259	0.289	0.516	0.000	0.000	0.000	0.326
30	0.369	0.413	0.737	0.000	0.000	0.000	0.465
40	0.467	0.523	0.934	0.000	0.000	0.000	0.589
50	0.553	0.618	1.105	0.000	0.000	0.000	0.697
60	0.626	0.700	1.252	0.000	0.000	0.000	0.790
120	0.805	0.879	1.500	0.000	0.000	0.000	0.984
180	0.711	0.794	1.454	0.000	0.000	0.000	0.903
240	0.753	0.840	1.538	0.000	0.000	0.000	0.956
300	0.793	0.885	1.621	0.000	0.000	0.000	1.007
360	0.832	0.929	1.702	0.000	0.000	0.000	1.057
420	0.870	0.972	1.781	0.000	0.000	0.000	1.106
480	0.908	1.014	1.857	0.000	0.000	0.000	1.154
540	0.944	1.054	1.932	0.000	0.000	0.000	1.200
600	0.980	1.094	2.005	0.000	0.000	0.000	1.245
660	1.014	1.132	2.076	0.000	0.000	0.000	1.289
720	1.047	1.170	2.145	0.000	0.000	0.000	1.331

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL

5	0.735	0.917	1.663	0.000	0.000	0.000	1.002
10	1.445	1.801	3.263	0.000	0.000	0.000	1.966
20	2.789	3.471	6.280	0.000	0.000	0.000	3.790
30	4.032	5.013	9.055	0.000	0.000	0.000	5.471
40	5.173	6.427	11.587	0.000	0.000	0.000	7.012
50	6.213	7.712	13.877	0.000	0.000	0.000	8.410
60	7.151	8.870	15.926	0.000	0.000	0.000	9.667
120	9.930	11.857	18.714	0.000	0.000	0.000	12.518
180	8.045	9.882	17.075	0.000	0.000	0.000	10.657
240	8.483	10.401	17.885	0.000	0.000	0.000	11.205
300	8.889	10.885	18.651	0.000	0.000	0.000	11.716
360	9.263	11.334	19.372	0.000	0.000	0.000	12.192
420	9.605	11.746	20.048	0.000	0.000	0.000	12.632
480	9.915	12.123	20.681	0.000	0.000	0.000	13.035
540	10.193	12.464	21.268	0.000	0.000	0.000	13.403
600	10.439	12.770	21.812	0.000	0.000	0.000	13.734
660	10.652	13.040	22.310	0.000	0.000	0.000	14.030
720	10.834	13.274	22.765	0.000	0.000	0.000	14.290

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.256	0.382	0.852	0.000	0.000	0.000	0.430
10	0.300	0.445	1.017	0.000	0.000	0.000	0.507
20	0.377	0.555	1.307	0.000	0.000	0.000	0.643
30	0.441	0.646	1.547	0.000	0.000	0.000	0.755
40	0.492	0.719	1.735	0.000	0.000	0.000	0.843
50	0.529	0.772	1.872	0.000	0.000	0.000	0.907
60	0.553	0.806	1.958	0.000	0.000	0.000	0.948
120	0.578	0.846	2.045	0.000	0.000	0.000	0.992
180	0.589	0.859	2.053	0.000	0.000	0.000	1.003
240	0.585	0.854	2.040	0.000	0.000	0.000	0.997
300	0.579	0.845	2.020	0.000	0.000	0.000	0.987
360	0.571	0.833	1.993	0.000	0.000	0.000	0.973
420	0.561	0.818	1.959	0.000	0.000	0.000	0.956
480	0.549	0.801	1.919	0.000	0.000	0.000	0.936
540	0.535	0.780	1.873	0.000	0.000	0.000	0.913
600	0.519	0.756	1.819	0.000	0.000	0.000	0.886
660	0.501	0.729	1.759	0.000	0.000	0.000	0.856
720	0.481	0.700	1.692	0.000	0.000	0.000	0.822

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.954	12.153	16.710	0.000	0.000	0.000	12.181
10	12.401	15.029	21.349	0.000	0.000	0.000	15.257
20	17.623	21.188	31.139	0.000	0.000	0.000	21.803
30	23.281	27.886	41.612	0.000	0.000	0.000	28.874
40	29.374	35.126	52.768	0.000	0.000	0.000	36.471
50	35.903	42.906	64.606	0.000	0.000	0.000	44.592
60	42.867	51.227	77.127	0.000	0.000	0.000	53.239
120	89.585	107.693	157.906	0.000	0.000	0.000	110.744
180	102.978	123.693	181.953	0.000	0.000	0.000	127.365
240	116.059	139.341	205.348	0.000	0.000	0.000	143.585
300	128.828	154.635	228.093	0.000	0.000	0.000	159.404
360	141.286	169.575	250.186	0.000	0.000	0.000	174.822
420	153.433	184.163	271.628	0.000	0.000	0.000	189.840
480	165.268	198.396	292.419	0.000	0.000	0.000	204.457
540	176.791	212.277	312.559	0.000	0.000	0.000	218.674

600	188.003	225.804	332.048	0.000	0.000	0.000	232.489
660	198.904	238.977	350.886	0.000	0.000	0.000	245.904
720	209.492	251.797	369.073	0.000	0.000	0.000	258.918

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.001	0.000	0.000	0.000	0.000
40	0.000	0.000	0.001	0.000	0.000	0.000	0.000
50	0.000	0.001	0.001	0.000	0.000	0.000	0.001
60	0.001	0.001	0.001	0.000	0.000	0.000	0.001
120	0.001	0.001	0.002	0.000	0.000	0.000	0.001
180	0.001	0.001	0.002	0.000	0.000	0.000	0.001
240	0.001	0.002	0.002	0.000	0.000	0.000	0.002
300	0.001	0.002	0.003	0.000	0.000	0.000	0.002
360	0.002	0.002	0.003	0.000	0.000	0.000	0.002
420	0.002	0.002	0.003	0.000	0.000	0.000	0.002
480	0.002	0.002	0.003	0.000	0.000	0.000	0.002
540	0.002	0.002	0.003	0.000	0.000	0.000	0.002
600	0.002	0.002	0.004	0.000	0.000	0.000	0.002
660	0.002	0.003	0.004	0.000	0.000	0.000	0.003
720	0.002	0.003	0.004	0.000	0.000	0.000	0.003

Pollutant Name: PM10 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.000	0.000	0.000	0.001
10	0.002	0.003	0.002	0.000	0.000	0.000	0.002
20	0.003	0.005	0.004	0.000	0.000	0.000	0.004
30	0.004	0.008	0.006	0.000	0.000	0.000	0.006
40	0.006	0.010	0.008	0.000	0.000	0.000	0.007
50	0.007	0.012	0.010	0.000	0.000	0.000	0.009
60	0.008	0.013	0.011	0.000	0.000	0.000	0.010
120	0.011	0.020	0.016	0.000	0.000	0.000	0.015
180	0.012	0.021	0.017	0.000	0.000	0.000	0.016
240	0.013	0.022	0.018	0.000	0.000	0.000	0.017
300	0.013	0.024	0.019	0.000	0.000	0.000	0.018
360	0.014	0.025	0.019	0.000	0.000	0.000	0.019
420	0.014	0.026	0.020	0.000	0.000	0.000	0.019
480	0.015	0.026	0.021	0.000	0.000	0.000	0.020
540	0.015	0.027	0.021	0.000	0.000	0.000	0.021
600	0.016	0.028	0.022	0.000	0.000	0.000	0.021
660	0.016	0.028	0.022	0.000	0.000	0.000	0.021
720	0.016	0.029	0.023	0.000	0.000	0.000	0.022

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual

Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.051	0.051	0.033	0.000	0.000	0.000	0.047
10	0.094	0.094	0.060	0.000	0.000	0.000	0.087
20	0.162	0.161	0.104	0.000	0.000	0.000	0.149
30	0.209	0.209	0.136	0.000	0.000	0.000	0.193
40	0.227	0.227	0.148	0.000	0.000	0.000	0.210

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.111	0.112	0.078	0.000	0.000	0.000	0.106

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual

Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.010	0.009	0.006	0.000	0.000	0.000	0.009

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.039	0.040	0.029	0.000	0.000	0.000	0.038

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin

Average

Table 6b: Multi-Day Resting Loss Emissions
(grams/hour)

Pollutant Name: Reactive Org Gases Temperature: All Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.003	0.003	0.002	0.000	0.000	0.000	0.003

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.469	0.365	0.166	0.000	0.000	0.000	1.000
%TRIP	0.447	0.331	0.222	0.000	0.000	0.000	1.000
%VEH	0.485	0.361	0.154	0.000	0.000	0.000	1.000

Title : Transportation Center - KCSD Other Vehicles
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions
(grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.015	0.419	0.320	0.000	0.000	0.000	0.213
2	0.020	0.216	0.166	0.000	0.000	0.000	0.116
3	0.025	0.150	0.117	0.000	0.000	0.000	0.086
4	0.028	0.119	0.093	0.000	0.000	0.000	0.072
5	0.031	0.100	0.080	0.000	0.000	0.000	0.064
10	0.036	0.067	0.055	0.000	0.000	0.000	0.050
15	0.038	0.060	0.050	0.000	0.000	0.000	0.048
20	0.039	0.059	0.049	0.000	0.000	0.000	0.048
25	0.040	0.061	0.051	0.000	0.000	0.000	0.049
30	0.040	0.061	0.051	0.000	0.000	0.000	0.049
35	0.040	0.061	0.051	0.000	0.000	0.000	0.049
40	0.040	0.061	0.051	0.000	0.000	0.000	0.050
45	0.040	0.061	0.051	0.000	0.000	0.000	0.050
50	0.040	0.061	0.051	0.000	0.000	0.000	0.050
55	0.040	0.061	0.051	0.000	0.000	0.000	0.049
60	0.039	0.061	0.051	0.000	0.000	0.000	0.049

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.136	0.185	0.272	0.000	0.000	0.000	0.177
35	0.047	0.067	0.095	0.000	0.000	0.000	0.063

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	3.357	4.524	4.512	0.000	0.000	0.000	3.974
35	2.350	3.103	2.905	0.000	0.000	0.000	2.717

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative

Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.319	0.602	0.973	0.000	0.000	0.000	0.531
35	0.232	0.436	0.756	0.000	0.000	0.000	0.393

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	565.132	692.988	966.232	0.000	0.000	0.000	678.369
35	310.489	384.311	523.347	0.000	0.000	0.000	372.759

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.005	0.007	0.009	0.000	0.000	0.000	0.007
35	0.003	0.004	0.005	0.000	0.000	0.000	0.004

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.025	0.045	0.046	0.000	0.000	0.000	0.036
35	0.009	0.017	0.018	0.000	0.000	0.000	0.014

Pollutant Name: PM2.5 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.002	0.002	0.002	0.000	0.000	0.000	0.002
35	0.002	0.002	0.002	0.000	0.000	0.000	0.002

Pollutant Name: PM2.5 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.005	0.005	0.005	0.000	0.000	0.000	0.005
35	0.005	0.005	0.005	0.000	0.000	0.000	0.005

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	15.509	12.482	8.892	0.000	0.000	0.000	13.354
35	28.193	22.690	16.754	0.000	0.000	0.000	24.369

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	28.243	29.056	19.840	0.000	0.000	0.000	24.603
35	28.243	29.056	19.840	0.000	0.000	0.000	24.603

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.069	0.078	0.139	0.000	0.000	0.000	0.087
10	0.136	0.152	0.271	0.000	0.000	0.000	0.171
20	0.259	0.289	0.516	0.000	0.000	0.000	0.326
30	0.369	0.413	0.737	0.000	0.000	0.000	0.465
40	0.467	0.523	0.934	0.000	0.000	0.000	0.589
50	0.553	0.618	1.105	0.000	0.000	0.000	0.697
60	0.626	0.700	1.252	0.000	0.000	0.000	0.790
120	0.805	0.879	1.500	0.000	0.000	0.000	0.984
180	0.711	0.794	1.454	0.000	0.000	0.000	0.903
240	0.753	0.840	1.538	0.000	0.000	0.000	0.956
300	0.793	0.885	1.621	0.000	0.000	0.000	1.007
360	0.832	0.929	1.702	0.000	0.000	0.000	1.057
420	0.870	0.972	1.781	0.000	0.000	0.000	1.106
480	0.908	1.014	1.857	0.000	0.000	0.000	1.154
540	0.944	1.054	1.932	0.000	0.000	0.000	1.200
600	0.980	1.094	2.005	0.000	0.000	0.000	1.245
660	1.014	1.132	2.076	0.000	0.000	0.000	1.289
720	1.047	1.170	2.145	0.000	0.000	0.000	1.331

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.735	0.917	1.663	0.000	0.000	0.000	1.002
10	1.445	1.801	3.263	0.000	0.000	0.000	1.966
20	2.789	3.471	6.280	0.000	0.000	0.000	3.790
30	4.032	5.013	9.055	0.000	0.000	0.000	5.471
40	5.173	6.427	11.587	0.000	0.000	0.000	7.012
50	6.213	7.712	13.877	0.000	0.000	0.000	8.410
60	7.151	8.870	15.926	0.000	0.000	0.000	9.667
120	9.930	11.857	18.714	0.000	0.000	0.000	12.518
180	8.045	9.882	17.075	0.000	0.000	0.000	10.657
240	8.483	10.401	17.885	0.000	0.000	0.000	11.205
300	8.889	10.885	18.651	0.000	0.000	0.000	11.716
360	9.263	11.334	19.372	0.000	0.000	0.000	12.192
420	9.605	11.746	20.048	0.000	0.000	0.000	12.632
480	9.915	12.123	20.681	0.000	0.000	0.000	13.035
540	10.193	12.464	21.268	0.000	0.000	0.000	13.403
600	10.439	12.770	21.812	0.000	0.000	0.000	13.734
660	10.652	13.040	22.310	0.000	0.000	0.000	14.030
720	10.834	13.274	22.765	0.000	0.000	0.000	14.290

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.256	0.382	0.852	0.000	0.000	0.000	0.430
10	0.300	0.445	1.017	0.000	0.000	0.000	0.507
20	0.377	0.555	1.307	0.000	0.000	0.000	0.643
30	0.441	0.646	1.547	0.000	0.000	0.000	0.755
40	0.492	0.719	1.735	0.000	0.000	0.000	0.843
50	0.529	0.772	1.872	0.000	0.000	0.000	0.907
60	0.553	0.806	1.958	0.000	0.000	0.000	0.948
120	0.578	0.846	2.045	0.000	0.000	0.000	0.992
180	0.589	0.859	2.053	0.000	0.000	0.000	1.003
240	0.585	0.854	2.040	0.000	0.000	0.000	0.997
300	0.579	0.845	2.020	0.000	0.000	0.000	0.987
360	0.571	0.833	1.993	0.000	0.000	0.000	0.973
420	0.561	0.818	1.959	0.000	0.000	0.000	0.956
480	0.549	0.801	1.919	0.000	0.000	0.000	0.936
540	0.535	0.780	1.873	0.000	0.000	0.000	0.913
600	0.519	0.756	1.819	0.000	0.000	0.000	0.886
660	0.501	0.729	1.759	0.000	0.000	0.000	0.856
720	0.481	0.700	1.692	0.000	0.000	0.000	0.822

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.954	12.153	16.710	0.000	0.000	0.000	12.181
10	12.401	15.029	21.349	0.000	0.000	0.000	15.257
20	17.623	21.188	31.139	0.000	0.000	0.000	21.803
30	23.281	27.886	41.612	0.000	0.000	0.000	28.874
40	29.374	35.126	52.768	0.000	0.000	0.000	36.471
50	35.903	42.906	64.606	0.000	0.000	0.000	44.592
60	42.867	51.227	77.127	0.000	0.000	0.000	53.239
120	89.585	107.693	157.906	0.000	0.000	0.000	110.744
180	102.978	123.693	181.953	0.000	0.000	0.000	127.365
240	116.059	139.341	205.348	0.000	0.000	0.000	143.585
300	128.828	154.635	228.093	0.000	0.000	0.000	159.404
360	141.286	169.575	250.186	0.000	0.000	0.000	174.822

420	153.433	184.163	271.628	0.000	0.000	0.000	189.840
480	165.268	198.396	292.419	0.000	0.000	0.000	204.457
540	176.791	212.277	312.559	0.000	0.000	0.000	218.674
600	188.003	225.804	332.048	0.000	0.000	0.000	232.489
660	198.904	238.977	350.886	0.000	0.000	0.000	245.904
720	209.492	251.797	369.073	0.000	0.000	0.000	258.918

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.001	0.000	0.000	0.000	0.000
40	0.000	0.000	0.001	0.000	0.000	0.000	0.000
50	0.000	0.001	0.001	0.000	0.000	0.000	0.001
60	0.001	0.001	0.001	0.000	0.000	0.000	0.001
120	0.001	0.001	0.002	0.000	0.000	0.000	0.001
180	0.001	0.001	0.002	0.000	0.000	0.000	0.001
240	0.001	0.002	0.002	0.000	0.000	0.000	0.002
300	0.001	0.002	0.003	0.000	0.000	0.000	0.002
360	0.002	0.002	0.003	0.000	0.000	0.000	0.002
420	0.002	0.002	0.003	0.000	0.000	0.000	0.002
480	0.002	0.002	0.003	0.000	0.000	0.000	0.002
540	0.002	0.002	0.003	0.000	0.000	0.000	0.002
600	0.002	0.002	0.004	0.000	0.000	0.000	0.002
660	0.002	0.003	0.004	0.000	0.000	0.000	0.003
720	0.002	0.003	0.004	0.000	0.000	0.000	0.003

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.000	0.000	0.000	0.001
10	0.001	0.003	0.002	0.000	0.000	0.000	0.002
20	0.003	0.005	0.004	0.000	0.000	0.000	0.004
30	0.004	0.007	0.006	0.000	0.000	0.000	0.005
40	0.005	0.009	0.007	0.000	0.000	0.000	0.007
50	0.006	0.011	0.009	0.000	0.000	0.000	0.008
60	0.007	0.012	0.010	0.000	0.000	0.000	0.010
120	0.010	0.018	0.015	0.000	0.000	0.000	0.014
180	0.011	0.020	0.016	0.000	0.000	0.000	0.015
240	0.012	0.021	0.016	0.000	0.000	0.000	0.016
300	0.012	0.022	0.017	0.000	0.000	0.000	0.017
360	0.013	0.023	0.018	0.000	0.000	0.000	0.017
420	0.013	0.024	0.019	0.000	0.000	0.000	0.018
480	0.014	0.024	0.019	0.000	0.000	0.000	0.019
540	0.014	0.025	0.020	0.000	0.000	0.000	0.019
600	0.015	0.026	0.020	0.000	0.000	0.000	0.020
660	0.015	0.026	0.021	0.000	0.000	0.000	0.020
720	0.015	0.027	0.021	0.000	0.000	0.000	0.020

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006

Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.051	0.051	0.033	0.000	0.000	0.000	0.047
10	0.094	0.094	0.060	0.000	0.000	0.000	0.087
20	0.162	0.161	0.104	0.000	0.000	0.000	0.149
30	0.209	0.209	0.136	0.000	0.000	0.000	0.193
40	0.227	0.227	0.148	0.000	0.000	0.000	0.210

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.111	0.112	0.078	0.000	0.000	0.000	0.106

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006

Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.010	0.009	0.006	0.000	0.000	0.000	0.009

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.039	0.040	0.029	0.000	0.000	0.000	0.038

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual

Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.003	0.003	0.002	0.000	0.000	0.000	0.003

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.469	0.365	0.166	0.000	0.000	0.000	1.000
%TRIP	0.447	0.331	0.222	0.000	0.000	0.000	1.000
%VEH	0.485	0.361	0.154	0.000	0.000	0.000	1.000

Title : Transportation Center - KCSD Other Vehicles PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions
(grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.015	0.419	0.320	0.000	0.000	0.000	0.213
2	0.020	0.216	0.166	0.000	0.000	0.000	0.116
3	0.025	0.150	0.117	0.000	0.000	0.000	0.086
4	0.028	0.119	0.093	0.000	0.000	0.000	0.072
5	0.031	0.100	0.080	0.000	0.000	0.000	0.064
10	0.036	0.067	0.055	0.000	0.000	0.000	0.050
15	0.038	0.060	0.050	0.000	0.000	0.000	0.048
20	0.039	0.059	0.049	0.000	0.000	0.000	0.048
25	0.040	0.061	0.051	0.000	0.000	0.000	0.049
30	0.040	0.061	0.051	0.000	0.000	0.000	0.049
35	0.040	0.061	0.051	0.000	0.000	0.000	0.049
40	0.040	0.061	0.051	0.000	0.000	0.000	0.050
45	0.040	0.061	0.051	0.000	0.000	0.000	0.050
50	0.040	0.061	0.051	0.000	0.000	0.000	0.050
55	0.040	0.061	0.051	0.000	0.000	0.000	0.049
60	0.039	0.061	0.051	0.000	0.000	0.000	0.049

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions
(grams/mile; grams/idle-hour)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.136	0.159	0.000	0.000	0.000	0.000	0.141
35	0.047	0.059	0.000	0.000	0.000	0.000	0.050

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000

15	3.357	4.155	0.000	0.000	0.000	0.000	3.534
35	2.350	2.825	0.000	0.000	0.000	0.000	2.455

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.319	0.487	0.000	0.000	0.000	0.000	0.356
35	0.232	0.357	0.000	0.000	0.000	0.000	0.259

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	565.132	678.444	0.000	0.000	0.000	0.000	590.271
35	310.489	382.434	0.000	0.000	0.000	0.000	326.451

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.005	0.007	0.000	0.000	0.000	0.000	0.006
35	0.003	0.004	0.000	0.000	0.000	0.000	0.003

Pollutant Name: PM10 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.027	0.032	0.000	0.000	0.000	0.000	0.028
35	0.010	0.013	0.000	0.000	0.000	0.000	0.011

Pollutant Name: PM10 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.008	0.008	0.000	0.000	0.000	0.000	0.008
35	0.008	0.008	0.000	0.000	0.000	0.000	0.008

Pollutant Name: PM10 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed

MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.013	0.013	0.000	0.000	0.000	0.000	0.013
35	0.013	0.013	0.000	0.000	0.000	0.000	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	15.509	12.503	0.000	0.000	0.000	0.000	14.875
35	28.193	22.730	0.000	0.000	0.000	0.000	27.041

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	28.243	29.088	0.000	0.000	0.000	0.000	29.009
35	28.243	29.088	0.000	0.000	0.000	0.000	29.009

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.069	0.063	0.000	0.000	0.000	0.000	0.068
10	0.136	0.124	0.000	0.000	0.000	0.000	0.133
20	0.259	0.236	0.000	0.000	0.000	0.000	0.254
30	0.369	0.337	0.000	0.000	0.000	0.000	0.362
40	0.467	0.426	0.000	0.000	0.000	0.000	0.459
50	0.553	0.505	0.000	0.000	0.000	0.000	0.543
60	0.626	0.572	0.000	0.000	0.000	0.000	0.614
120	0.805	0.716	0.000	0.000	0.000	0.000	0.786
180	0.711	0.649	0.000	0.000	0.000	0.000	0.698

240	0.753	0.687	0.000	0.000	0.000	0.000	0.738
300	0.793	0.724	0.000	0.000	0.000	0.000	0.778
360	0.832	0.760	0.000	0.000	0.000	0.000	0.817
420	0.870	0.795	0.000	0.000	0.000	0.000	0.854
480	0.908	0.829	0.000	0.000	0.000	0.000	0.891
540	0.944	0.863	0.000	0.000	0.000	0.000	0.927
600	0.980	0.895	0.000	0.000	0.000	0.000	0.961
660	1.014	0.927	0.000	0.000	0.000	0.000	0.995
720	1.047	0.958	0.000	0.000	0.000	0.000	1.028

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.735	0.813	0.000	0.000	0.000	0.000	0.752
10	1.445	1.595	0.000	0.000	0.000	0.000	1.478
20	2.789	3.074	0.000	0.000	0.000	0.000	2.851
30	4.032	4.438	0.000	0.000	0.000	0.000	4.119
40	5.173	5.689	0.000	0.000	0.000	0.000	5.284
50	6.213	6.826	0.000	0.000	0.000	0.000	6.345
60	7.151	7.849	0.000	0.000	0.000	0.000	7.301
120	9.930	10.378	0.000	0.000	0.000	0.000	10.027
180	8.045	8.722	0.000	0.000	0.000	0.000	8.191
240	8.483	9.178	0.000	0.000	0.000	0.000	8.632
300	8.889	9.603	0.000	0.000	0.000	0.000	9.043
360	9.263	9.997	0.000	0.000	0.000	0.000	9.421
420	9.605	10.360	0.000	0.000	0.000	0.000	9.767
480	9.915	10.693	0.000	0.000	0.000	0.000	10.082
540	10.193	10.994	0.000	0.000	0.000	0.000	10.365
600	10.439	11.264	0.000	0.000	0.000	0.000	10.616
660	10.652	11.503	0.000	0.000	0.000	0.000	10.836
720	10.834	11.711	0.000	0.000	0.000	0.000	11.023

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.256	0.246	0.000	0.000	0.000	0.000	0.254
10	0.300	0.286	0.000	0.000	0.000	0.000	0.297
20	0.377	0.358	0.000	0.000	0.000	0.000	0.373
30	0.441	0.417	0.000	0.000	0.000	0.000	0.436
40	0.492	0.463	0.000	0.000	0.000	0.000	0.486
50	0.529	0.498	0.000	0.000	0.000	0.000	0.522
60	0.553	0.520	0.000	0.000	0.000	0.000	0.546
120	0.578	0.546	0.000	0.000	0.000	0.000	0.571
180	0.589	0.554	0.000	0.000	0.000	0.000	0.581
240	0.585	0.551	0.000	0.000	0.000	0.000	0.577
300	0.579	0.545	0.000	0.000	0.000	0.000	0.571
360	0.571	0.537	0.000	0.000	0.000	0.000	0.564
420	0.561	0.528	0.000	0.000	0.000	0.000	0.554
480	0.549	0.516	0.000	0.000	0.000	0.000	0.542
540	0.535	0.503	0.000	0.000	0.000	0.000	0.528
600	0.519	0.488	0.000	0.000	0.000	0.000	0.512
660	0.501	0.471	0.000	0.000	0.000	0.000	0.494
720	0.481	0.451	0.000	0.000	0.000	0.000	0.475

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.954	11.685	0.000	0.000	0.000	0.000	10.326
10	12.401	14.403	0.000	0.000	0.000	0.000	12.832
20	17.623	20.233	0.000	0.000	0.000	0.000	18.185
30	23.281	26.586	0.000	0.000	0.000	0.000	23.992
40	29.374	33.462	0.000	0.000	0.000	0.000	30.254
50	35.903	40.862	0.000	0.000	0.000	0.000	36.971
60	42.867	48.786	0.000	0.000	0.000	0.000	44.142
120	89.585	102.839	0.000	0.000	0.000	0.000	92.439
180	102.978	118.076	0.000	0.000	0.000	0.000	106.228
240	116.059	132.985	0.000	0.000	0.000	0.000	119.703
300	128.828	147.566	0.000	0.000	0.000	0.000	132.863
360	141.286	161.818	0.000	0.000	0.000	0.000	145.707
420	153.433	175.742	0.000	0.000	0.000	0.000	158.236
480	165.268	189.337	0.000	0.000	0.000	0.000	170.450
540	176.791	202.604	0.000	0.000	0.000	0.000	182.349
600	188.003	215.543	0.000	0.000	0.000	0.000	193.932
660	198.904	228.153	0.000	0.000	0.000	0.000	205.201
720	209.492	240.434	0.000	0.000	0.000	0.000	216.154

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.001	0.000	0.000	0.000	0.000	0.000
60	0.001	0.001	0.000	0.000	0.000	0.000	0.001
120	0.001	0.001	0.000	0.000	0.000	0.000	0.001
180	0.001	0.001	0.000	0.000	0.000	0.000	0.001
240	0.001	0.001	0.000	0.000	0.000	0.000	0.001
300	0.001	0.002	0.000	0.000	0.000	0.000	0.001
360	0.002	0.002	0.000	0.000	0.000	0.000	0.002
420	0.002	0.002	0.000	0.000	0.000	0.000	0.002
480	0.002	0.002	0.000	0.000	0.000	0.000	0.002
540	0.002	0.002	0.000	0.000	0.000	0.000	0.002
600	0.002	0.002	0.000	0.000	0.000	0.000	0.002
660	0.002	0.002	0.000	0.000	0.000	0.000	0.002
720	0.002	0.003	0.000	0.000	0.000	0.000	0.002

Pollutant Name: PM10 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.000	0.000	0.000	0.000	0.001
10	0.002	0.002	0.000	0.000	0.000	0.000	0.002
20	0.003	0.003	0.000	0.000	0.000	0.000	0.003
30	0.004	0.004	0.000	0.000	0.000	0.000	0.004
40	0.006	0.005	0.000	0.000	0.000	0.000	0.005
50	0.007	0.006	0.000	0.000	0.000	0.000	0.007
60	0.008	0.007	0.000	0.000	0.000	0.000	0.008
120	0.011	0.011	0.000	0.000	0.000	0.000	0.011
180	0.012	0.012	0.000	0.000	0.000	0.000	0.012
240	0.013	0.013	0.000	0.000	0.000	0.000	0.013
300	0.013	0.013	0.000	0.000	0.000	0.000	0.013
360	0.014	0.014	0.000	0.000	0.000	0.000	0.014

420	0.014	0.014	0.000	0.000	0.000	0.000	0.014
480	0.015	0.015	0.000	0.000	0.000	0.000	0.015
540	0.015	0.015	0.000	0.000	0.000	0.000	0.015
600	0.016	0.016	0.000	0.000	0.000	0.000	0.016
660	0.016	0.016	0.000	0.000	0.000	0.000	0.016
720	0.016	0.016	0.000	0.000	0.000	0.000	0.016

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.051	0.047	0.000	0.000	0.000	0.000	0.050
10	0.094	0.088	0.000	0.000	0.000	0.000	0.093
20	0.162	0.151	0.000	0.000	0.000	0.000	0.159
30	0.209	0.196	0.000	0.000	0.000	0.000	0.206
40	0.227	0.214	0.000	0.000	0.000	0.000	0.224

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.111	0.105	0.000	0.000	0.000	0.000	0.110

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.010	0.009	0.000	0.000	0.000	0.000	0.009

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp

degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.039	0.038	0.000	0.000	0.000	0.000	0.039

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.003	0.003	0.000	0.000	0.000	0.000	0.003

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.778	0.222	0.000	0.000	0.000	0.000	1.000
%TRIP	0.785	0.215	0.000	0.000	0.000	0.000	1.000
%VEH	0.784	0.216	0.000	0.000	0.000	0.000	1.000

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.015	0.374	0.000	0.000	0.000	0.000	0.095
2	0.020	0.193	0.000	0.000	0.000	0.000	0.058
3	0.025	0.134	0.000	0.000	0.000	0.000	0.049
4	0.028	0.106	0.000	0.000	0.000	0.000	0.046
5	0.031	0.090	0.000	0.000	0.000	0.000	0.044
10	0.036	0.061	0.000	0.000	0.000	0.000	0.042
15	0.038	0.055	0.000	0.000	0.000	0.000	0.042
20	0.039	0.054	0.000	0.000	0.000	0.000	0.043
25	0.040	0.056	0.000	0.000	0.000	0.000	0.044
30	0.040	0.056	0.000	0.000	0.000	0.000	0.044
35	0.040	0.056	0.000	0.000	0.000	0.000	0.044
40	0.040	0.056	0.000	0.000	0.000	0.000	0.044
45	0.040	0.056	0.000	0.000	0.000	0.000	0.044
50	0.040	0.056	0.000	0.000	0.000	0.000	0.044
55	0.040	0.056	0.000	0.000	0.000	0.000	0.043
60	0.039	0.056	0.000	0.000	0.000	0.000	0.043

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions
(grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.136	0.159	0.000	0.000	0.000	0.000	0.141
35	0.047	0.059	0.000	0.000	0.000	0.000	0.050

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	3.357	4.155	0.000	0.000	0.000	0.000	3.534
35	2.350	2.825	0.000	0.000	0.000	0.000	2.455

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.319	0.487	0.000	0.000	0.000	0.000	0.356
35	0.232	0.357	0.000	0.000	0.000	0.000	0.259

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	565.132	678.444	0.000	0.000	0.000	0.000	590.271
35	310.489	382.434	0.000	0.000	0.000	0.000	326.451

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.005	0.007	0.000	0.000	0.000	0.000	0.006
35	0.003	0.004	0.000	0.000	0.000	0.000	0.003

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.025	0.029	0.000	0.000	0.000	0.000	0.026
35	0.009	0.012	0.000	0.000	0.000	0.000	0.010

Pollutant Name: PM2.5 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.002	0.002	0.000	0.000	0.000	0.000	0.002
35	0.002	0.002	0.000	0.000	0.000	0.000	0.002

Pollutant Name: PM2.5 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.005	0.005	0.000	0.000	0.000	0.000	0.005
35	0.005	0.005	0.000	0.000	0.000	0.000	0.005

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	15.509	12.503	0.000	0.000	0.000	0.000	14.875
35	28.193	22.730	0.000	0.000	0.000	0.000	27.041

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	28.243	29.088	0.000	0.000	0.000	0.000	29.009
35	28.243	29.088	0.000	0.000	0.000	0.000	29.009

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.069	0.063	0.000	0.000	0.000	0.000	0.068
10	0.136	0.124	0.000	0.000	0.000	0.000	0.133
20	0.259	0.236	0.000	0.000	0.000	0.000	0.254
30	0.369	0.337	0.000	0.000	0.000	0.000	0.362
40	0.467	0.426	0.000	0.000	0.000	0.000	0.459
50	0.553	0.505	0.000	0.000	0.000	0.000	0.543
60	0.626	0.572	0.000	0.000	0.000	0.000	0.614
120	0.805	0.716	0.000	0.000	0.000	0.000	0.786
180	0.711	0.649	0.000	0.000	0.000	0.000	0.698
240	0.753	0.687	0.000	0.000	0.000	0.000	0.738
300	0.793	0.724	0.000	0.000	0.000	0.000	0.778
360	0.832	0.760	0.000	0.000	0.000	0.000	0.817
420	0.870	0.795	0.000	0.000	0.000	0.000	0.854
480	0.908	0.829	0.000	0.000	0.000	0.000	0.891
540	0.944	0.863	0.000	0.000	0.000	0.000	0.927
600	0.980	0.895	0.000	0.000	0.000	0.000	0.961
660	1.014	0.927	0.000	0.000	0.000	0.000	0.995
720	1.047	0.958	0.000	0.000	0.000	0.000	1.028

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.735	0.813	0.000	0.000	0.000	0.000	0.752
10	1.445	1.595	0.000	0.000	0.000	0.000	1.478
20	2.789	3.074	0.000	0.000	0.000	0.000	2.851
30	4.032	4.438	0.000	0.000	0.000	0.000	4.119
40	5.173	5.689	0.000	0.000	0.000	0.000	5.284
50	6.213	6.826	0.000	0.000	0.000	0.000	6.345
60	7.151	7.849	0.000	0.000	0.000	0.000	7.301
120	9.930	10.378	0.000	0.000	0.000	0.000	10.027
180	8.045	8.722	0.000	0.000	0.000	0.000	8.191
240	8.483	9.178	0.000	0.000	0.000	0.000	8.632
300	8.889	9.603	0.000	0.000	0.000	0.000	9.043
360	9.263	9.997	0.000	0.000	0.000	0.000	9.421
420	9.605	10.360	0.000	0.000	0.000	0.000	9.767
480	9.915	10.693	0.000	0.000	0.000	0.000	10.082
540	10.193	10.994	0.000	0.000	0.000	0.000	10.365
600	10.439	11.264	0.000	0.000	0.000	0.000	10.616
660	10.652	11.503	0.000	0.000	0.000	0.000	10.836
720	10.834	11.711	0.000	0.000	0.000	0.000	11.023

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.256	0.246	0.000	0.000	0.000	0.000	0.254
10	0.300	0.286	0.000	0.000	0.000	0.000	0.297
20	0.377	0.358	0.000	0.000	0.000	0.000	0.373
30	0.441	0.417	0.000	0.000	0.000	0.000	0.436
40	0.492	0.463	0.000	0.000	0.000	0.000	0.486
50	0.529	0.498	0.000	0.000	0.000	0.000	0.522
60	0.553	0.520	0.000	0.000	0.000	0.000	0.546
120	0.578	0.546	0.000	0.000	0.000	0.000	0.571
180	0.589	0.554	0.000	0.000	0.000	0.000	0.581
240	0.585	0.551	0.000	0.000	0.000	0.000	0.577
300	0.579	0.545	0.000	0.000	0.000	0.000	0.571
360	0.571	0.537	0.000	0.000	0.000	0.000	0.564

420	0.561	0.528	0.000	0.000	0.000	0.000	0.554
480	0.549	0.516	0.000	0.000	0.000	0.000	0.542
540	0.535	0.503	0.000	0.000	0.000	0.000	0.528
600	0.519	0.488	0.000	0.000	0.000	0.000	0.512
660	0.501	0.471	0.000	0.000	0.000	0.000	0.494
720	0.481	0.451	0.000	0.000	0.000	0.000	0.475

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.954	11.685	0.000	0.000	0.000	0.000	10.326
10	12.401	14.403	0.000	0.000	0.000	0.000	12.832
20	17.623	20.233	0.000	0.000	0.000	0.000	18.185
30	23.281	26.586	0.000	0.000	0.000	0.000	23.992
40	29.374	33.462	0.000	0.000	0.000	0.000	30.254
50	35.903	40.862	0.000	0.000	0.000	0.000	36.971
60	42.867	48.786	0.000	0.000	0.000	0.000	44.142
120	89.585	102.839	0.000	0.000	0.000	0.000	92.439
180	102.978	118.076	0.000	0.000	0.000	0.000	106.228
240	116.059	132.985	0.000	0.000	0.000	0.000	119.703
300	128.828	147.566	0.000	0.000	0.000	0.000	132.863
360	141.286	161.818	0.000	0.000	0.000	0.000	145.707
420	153.433	175.742	0.000	0.000	0.000	0.000	158.236
480	165.268	189.337	0.000	0.000	0.000	0.000	170.450
540	176.791	202.604	0.000	0.000	0.000	0.000	182.349
600	188.003	215.543	0.000	0.000	0.000	0.000	193.932
660	198.904	228.153	0.000	0.000	0.000	0.000	205.201
720	209.492	240.434	0.000	0.000	0.000	0.000	216.154

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.001	0.000	0.000	0.000	0.000	0.000
60	0.001	0.001	0.000	0.000	0.000	0.000	0.001
120	0.001	0.001	0.000	0.000	0.000	0.000	0.001
180	0.001	0.001	0.000	0.000	0.000	0.000	0.001
240	0.001	0.001	0.000	0.000	0.000	0.000	0.001
300	0.001	0.002	0.000	0.000	0.000	0.000	0.001
360	0.002	0.002	0.000	0.000	0.000	0.000	0.002
420	0.002	0.002	0.000	0.000	0.000	0.000	0.002
480	0.002	0.002	0.000	0.000	0.000	0.000	0.002
540	0.002	0.002	0.000	0.000	0.000	0.000	0.002
600	0.002	0.002	0.000	0.000	0.000	0.000	0.002
660	0.002	0.002	0.000	0.000	0.000	0.000	0.002
720	0.002	0.003	0.000	0.000	0.000	0.000	0.002

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL

5	0.001	0.001	0.000	0.000	0.000	0.000	0.001
10	0.001	0.001	0.000	0.000	0.000	0.000	0.001
20	0.003	0.003	0.000	0.000	0.000	0.000	0.003
30	0.004	0.004	0.000	0.000	0.000	0.000	0.004
40	0.005	0.005	0.000	0.000	0.000	0.000	0.005
50	0.006	0.006	0.000	0.000	0.000	0.000	0.006
60	0.007	0.007	0.000	0.000	0.000	0.000	0.007
120	0.010	0.010	0.000	0.000	0.000	0.000	0.010
180	0.011	0.011	0.000	0.000	0.000	0.000	0.011
240	0.012	0.012	0.000	0.000	0.000	0.000	0.012
300	0.012	0.012	0.000	0.000	0.000	0.000	0.012
360	0.013	0.013	0.000	0.000	0.000	0.000	0.013
420	0.013	0.013	0.000	0.000	0.000	0.000	0.013
480	0.014	0.014	0.000	0.000	0.000	0.000	0.014
540	0.014	0.014	0.000	0.000	0.000	0.000	0.014
600	0.015	0.014	0.000	0.000	0.000	0.000	0.015
660	0.015	0.015	0.000	0.000	0.000	0.000	0.015
720	0.015	0.015	0.000	0.000	0.000	0.000	0.015

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.051	0.047	0.000	0.000	0.000	0.000	0.050
10	0.094	0.088	0.000	0.000	0.000	0.000	0.093
20	0.162	0.151	0.000	0.000	0.000	0.000	0.159
30	0.209	0.196	0.000	0.000	0.000	0.000	0.206
40	0.227	0.214	0.000	0.000	0.000	0.000	0.224

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected

Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.111	0.105	0.000	0.000	0.000	0.000	0.110

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.010	0.009	0.000	0.000	0.000	0.000	0.009

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual

Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.039	0.038	0.000	0.000	0.000	0.000	0.039

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.003	0.003	0.000	0.000	0.000	0.000	0.003

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.778	0.222	0.000	0.000	0.000	0.000	1.000
%TRIP	0.785	0.215	0.000	0.000	0.000	0.000	1.000
%VEH	0.784	0.216	0.000	0.000	0.000	0.000	1.000

Title : Transportation Center - Reedley Staff; Police Department; and Dial-a-Ride PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.015	0.374	0.000	0.000	0.000	0.000	0.095
2	0.020	0.193	0.000	0.000	0.000	0.000	0.058
3	0.025	0.134	0.000	0.000	0.000	0.000	0.049
4	0.028	0.106	0.000	0.000	0.000	0.000	0.046
5	0.031	0.090	0.000	0.000	0.000	0.000	0.044
10	0.036	0.061	0.000	0.000	0.000	0.000	0.042
15	0.038	0.055	0.000	0.000	0.000	0.000	0.042
20	0.039	0.054	0.000	0.000	0.000	0.000	0.043
25	0.040	0.056	0.000	0.000	0.000	0.000	0.044
30	0.040	0.056	0.000	0.000	0.000	0.000	0.044
35	0.040	0.056	0.000	0.000	0.000	0.000	0.044
40	0.040	0.056	0.000	0.000	0.000	0.000	0.044
45	0.040	0.056	0.000	0.000	0.000	0.000	0.044
50	0.040	0.056	0.000	0.000	0.000	0.000	0.044
55	0.040	0.056	0.000	0.000	0.000	0.000	0.043
60	0.039	0.056	0.000	0.000	0.000	0.000	0.043

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45

Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile; grams/idle-hour)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	12.644	0.000	0.000	12.644
15	0.000	0.000	0.000	3.341	0.000	0.000	3.341
35	0.000	0.000	0.000	0.948	0.000	0.000	0.948

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	50.738	0.000	0.000	50.738
15	0.000	0.000	0.000	11.481	0.000	0.000	11.481
35	0.000	0.000	0.000	5.236	0.000	0.000	5.236

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	107.715	0.000	0.000	107.715
15	0.000	0.000	0.000	21.711	0.000	0.000	21.711
35	0.000	0.000	0.000	16.894	0.000	0.000	16.894

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	6469.681	0.000	0.000	6469.681
15	0.000	0.000	0.000	2580.316	0.000	0.000	2580.316
35	0.000	0.000	0.000	1813.159	0.000	0.000	1813.159

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.062	0.000	0.000	0.062

15	0.000	0.000	0.000	0.025	0.000	0.000	0.025
35	0.000	0.000	0.000	0.017	0.000	0.000	0.017

Pollutant Name: PM10 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	1.903	0.000	0.000	1.903
15	0.000	0.000	0.000	1.268	0.000	0.000	1.268
35	0.000	0.000	0.000	0.557	0.000	0.000	0.557

Pollutant Name: PM10 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.036	0.000	0.000	0.036
35	0.000	0.000	0.000	0.036	0.000	0.000	0.036

Pollutant Name: PM10 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.028	0.000	0.000	0.028
35	0.000	0.000	0.000	0.028	0.000	0.000	0.028

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	6.672	0.000	0.000	6.672
35	0.000	0.000	0.000	15.826	0.000	0.000	15.826

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	3.883	0.000	0.000	3.883
35	0.000	0.000	0.000	5.515	0.000	0.000	5.515

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.185	0.000	0.000	0.185
10	0.000	0.000	0.000	0.360	0.000	0.000	0.360
20	0.000	0.000	0.000	0.682	0.000	0.000	0.682
30	0.000	0.000	0.000	0.967	0.000	0.000	0.967
40	0.000	0.000	0.000	1.215	0.000	0.000	1.215
50	0.000	0.000	0.000	1.425	0.000	0.000	1.425
60	0.000	0.000	0.000	1.597	0.000	0.000	1.597
120	0.000	0.000	0.000	1.572	0.000	0.000	1.572
180	0.000	0.000	0.000	1.668	0.000	0.000	1.668
240	0.000	0.000	0.000	1.761	0.000	0.000	1.761
300	0.000	0.000	0.000	1.851	0.000	0.000	1.851
360	0.000	0.000	0.000	1.938	0.000	0.000	1.938
420	0.000	0.000	0.000	2.022	0.000	0.000	2.022
480	0.000	0.000	0.000	2.102	0.000	0.000	2.102
540	0.000	0.000	0.000	2.180	0.000	0.000	2.180
600	0.000	0.000	0.000	2.255	0.000	0.000	2.255
660	0.000	0.000	0.000	2.326	0.000	0.000	2.326
720	0.000	0.000	0.000	2.395	0.000	0.000	2.395

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	2.821	0.000	0.000	2.821
10	0.000	0.000	0.000	5.527	0.000	0.000	5.527
20	0.000	0.000	0.000	10.595	0.000	0.000	10.595
30	0.000	0.000	0.000	15.205	0.000	0.000	15.205
40	0.000	0.000	0.000	19.357	0.000	0.000	19.357
50	0.000	0.000	0.000	23.050	0.000	0.000	23.050
60	0.000	0.000	0.000	26.284	0.000	0.000	26.284
120	0.000	0.000	0.000	24.596	0.000	0.000	24.596
180	0.000	0.000	0.000	25.315	0.000	0.000	25.315
240	0.000	0.000	0.000	26.058	0.000	0.000	26.058
300	0.000	0.000	0.000	26.824	0.000	0.000	26.824
360	0.000	0.000	0.000	27.614	0.000	0.000	27.614
420	0.000	0.000	0.000	28.428	0.000	0.000	28.428
480	0.000	0.000	0.000	29.266	0.000	0.000	29.266
540	0.000	0.000	0.000	30.127	0.000	0.000	30.127
600	0.000	0.000	0.000	31.012	0.000	0.000	31.012
660	0.000	0.000	0.000	31.921	0.000	0.000	31.921
720	0.000	0.000	0.000	32.853	0.000	0.000	32.853

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.558	0.000	0.000	0.558
10	0.000	0.000	0.000	0.840	0.000	0.000	0.840
20	0.000	0.000	0.000	1.337	0.000	0.000	1.337
30	0.000	0.000	0.000	1.741	0.000	0.000	1.741
40	0.000	0.000	0.000	2.054	0.000	0.000	2.054
50	0.000	0.000	0.000	2.275	0.000	0.000	2.275
60	0.000	0.000	0.000	2.403	0.000	0.000	2.403
120	0.000	0.000	0.000	2.430	0.000	0.000	2.430
180	0.000	0.000	0.000	2.421	0.000	0.000	2.421
240	0.000	0.000	0.000	2.408	0.000	0.000	2.408
300	0.000	0.000	0.000	2.389	0.000	0.000	2.389
360	0.000	0.000	0.000	2.366	0.000	0.000	2.366
420	0.000	0.000	0.000	2.339	0.000	0.000	2.339
480	0.000	0.000	0.000	2.306	0.000	0.000	2.306
540	0.000	0.000	0.000	2.269	0.000	0.000	2.269
600	0.000	0.000	0.000	2.227	0.000	0.000	2.227
660	0.000	0.000	0.000	2.180	0.000	0.000	2.180
720	0.000	0.000	0.000	2.129	0.000	0.000	2.129

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	1.098	0.000	0.000	1.098
10	0.000	0.000	0.000	2.191	0.000	0.000	2.191
20	0.000	0.000	0.000	4.357	0.000	0.000	4.357
30	0.000	0.000	0.000	6.500	0.000	0.000	6.500
40	0.000	0.000	0.000	8.618	0.000	0.000	8.618
50	0.000	0.000	0.000	10.711	0.000	0.000	10.711
60	0.000	0.000	0.000	12.780	0.000	0.000	12.780
120	0.000	0.000	0.000	21.737	0.000	0.000	21.737
180	0.000	0.000	0.000	25.681	0.000	0.000	25.681
240	0.000	0.000	0.000	29.392	0.000	0.000	29.392
300	0.000	0.000	0.000	32.870	0.000	0.000	32.870
360	0.000	0.000	0.000	36.115	0.000	0.000	36.115
420	0.000	0.000	0.000	39.128	0.000	0.000	39.128
480	0.000	0.000	0.000	41.908	0.000	0.000	41.908
540	0.000	0.000	0.000	44.455	0.000	0.000	44.455
600	0.000	0.000	0.000	46.769	0.000	0.000	46.769
660	0.000	0.000	0.000	48.851	0.000	0.000	48.851
720	0.000	0.000	0.000	50.700	0.000	0.000	50.700

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.001	0.000	0.000	0.001

120	0.000	0.000	0.000	0.001	0.000	0.000	0.001
180	0.000	0.000	0.000	0.001	0.000	0.000	0.001
240	0.000	0.000	0.000	0.001	0.000	0.000	0.001
300	0.000	0.000	0.000	0.001	0.000	0.000	0.001
360	0.000	0.000	0.000	0.001	0.000	0.000	0.001
420	0.000	0.000	0.000	0.001	0.000	0.000	0.001
480	0.000	0.000	0.000	0.001	0.000	0.000	0.001
540	0.000	0.000	0.000	0.001	0.000	0.000	0.001
600	0.000	0.000	0.000	0.001	0.000	0.000	0.001
660	0.000	0.000	0.000	0.001	0.000	0.000	0.001
720	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Pollutant Name: PM10 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.001
30	0.000	0.000	0.000	0.001	0.000	0.000	0.001
40	0.000	0.000	0.000	0.001	0.000	0.000	0.001
50	0.000	0.000	0.000	0.002	0.000	0.000	0.002
60	0.000	0.000	0.000	0.002	0.000	0.000	0.002
120	0.000	0.000	0.000	0.003	0.000	0.000	0.003
180	0.000	0.000	0.000	0.003	0.000	0.000	0.003
240	0.000	0.000	0.000	0.003	0.000	0.000	0.003
300	0.000	0.000	0.000	0.003	0.000	0.000	0.003
360	0.000	0.000	0.000	0.003	0.000	0.000	0.003
420	0.000	0.000	0.000	0.003	0.000	0.000	0.003
480	0.000	0.000	0.000	0.003	0.000	0.000	0.003
540	0.000	0.000	0.000	0.003	0.000	0.000	0.003
600	0.000	0.000	0.000	0.003	0.000	0.000	0.003
660	0.000	0.000	0.000	0.003	0.000	0.000	0.003
720	0.000	0.000	0.000	0.003	0.000	0.000	0.003

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
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Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.002	0.000	0.000	0.002

10	0.000	0.000	0.000	0.003	0.000	0.000	0.003
20	0.000	0.000	0.000	0.006	0.000	0.000	0.006
30	0.000	0.000	0.000	0.007	0.000	0.000	0.007
40	0.000	0.000	0.000	0.008	0.000	0.000	0.008

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%TRIP	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%VEH	0.000	0.000	0.000	1.000	0.000	0.000	1.000

Title : Transportation Center - Garbage Trucks and H & S Trucking
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.000	0.000	0.000	0.004	0.000	0.000	0.004
2	0.000	0.000	0.000	0.002	0.000	0.000	0.002
3	0.000	0.000	0.000	0.002	0.000	0.000	0.002
4	0.000	0.000	0.000	0.001	0.000	0.000	0.001
5	0.000	0.000	0.000	0.001	0.000	0.000	0.001
10	0.000	0.000	0.000	0.001	0.000	0.000	0.001
15	0.000	0.000	0.000	0.001	0.000	0.000	0.001
20	0.000	0.000	0.000	0.001	0.000	0.000	0.001
25	0.000	0.000	0.000	0.001	0.000	0.000	0.001
30	0.000	0.000	0.000	0.001	0.000	0.000	0.001
35	0.000	0.000	0.000	0.001	0.000	0.000	0.001
40	0.000	0.000	0.000	0.001	0.000	0.000	0.001
45	0.000	0.000	0.000	0.001	0.000	0.000	0.001

50	0.000	0.000	0.000	0.001	0.000	0.000	0.001
55	0.000	0.000	0.000	0.001	0.000	0.000	0.001
60	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
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Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	3.341	0.000	0.000	3.341
35	0.000	0.000	0.000	0.948	0.000	0.000	0.948

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	11.481	0.000	0.000	11.481
35	0.000	0.000	0.000	5.236	0.000	0.000	5.236

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	21.711	0.000	0.000	21.711
35	0.000	0.000	0.000	16.894	0.000	0.000	16.894

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	2580.316	0.000	0.000	2580.316
35	0.000	0.000	0.000	1813.159	0.000	0.000	1813.159

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.025	0.000	0.000	0.025
35	0.000	0.000	0.000	0.017	0.000	0.000	0.017

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	1.167	0.000	0.000	1.167
35	0.000	0.000	0.000	0.513	0.000	0.000	0.513

Pollutant Name: PM2.5 - Tire Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.009	0.000	0.000	0.009
35	0.000	0.000	0.000	0.009	0.000	0.000	0.009

Pollutant Name: PM2.5 - Brake Wear Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	0.012	0.000	0.000	0.012
35	0.000	0.000	0.000	0.012	0.000	0.000	0.012

Pollutant Name: Gasoline - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	6.672	0.000	0.000	6.672
35	0.000	0.000	0.000	15.826	0.000	0.000	15.826

Pollutant Name: Diesel - mi/gal Temperature: 65F Relative Humidity: 40%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
15	0.000	0.000	0.000	3.883	0.000	0.000	3.883
35	0.000	0.000	0.000	5.515	0.000	0.000	5.515

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
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Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.185	0.000	0.000	0.185
10	0.000	0.000	0.000	0.360	0.000	0.000	0.360
20	0.000	0.000	0.000	0.682	0.000	0.000	0.682
30	0.000	0.000	0.000	0.967	0.000	0.000	0.967
40	0.000	0.000	0.000	1.215	0.000	0.000	1.215
50	0.000	0.000	0.000	1.425	0.000	0.000	1.425
60	0.000	0.000	0.000	1.597	0.000	0.000	1.597
120	0.000	0.000	0.000	1.572	0.000	0.000	1.572
180	0.000	0.000	0.000	1.668	0.000	0.000	1.668
240	0.000	0.000	0.000	1.761	0.000	0.000	1.761
300	0.000	0.000	0.000	1.851	0.000	0.000	1.851
360	0.000	0.000	0.000	1.938	0.000	0.000	1.938
420	0.000	0.000	0.000	2.022	0.000	0.000	2.022
480	0.000	0.000	0.000	2.102	0.000	0.000	2.102
540	0.000	0.000	0.000	2.180	0.000	0.000	2.180
600	0.000	0.000	0.000	2.255	0.000	0.000	2.255
660	0.000	0.000	0.000	2.326	0.000	0.000	2.326
720	0.000	0.000	0.000	2.395	0.000	0.000	2.395

Pollutant Name: Carbon Monoxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	2.821	0.000	0.000	2.821
10	0.000	0.000	0.000	5.527	0.000	0.000	5.527
20	0.000	0.000	0.000	10.595	0.000	0.000	10.595
30	0.000	0.000	0.000	15.205	0.000	0.000	15.205
40	0.000	0.000	0.000	19.357	0.000	0.000	19.357
50	0.000	0.000	0.000	23.050	0.000	0.000	23.050
60	0.000	0.000	0.000	26.284	0.000	0.000	26.284
120	0.000	0.000	0.000	24.596	0.000	0.000	24.596
180	0.000	0.000	0.000	25.315	0.000	0.000	25.315
240	0.000	0.000	0.000	26.058	0.000	0.000	26.058
300	0.000	0.000	0.000	26.824	0.000	0.000	26.824
360	0.000	0.000	0.000	27.614	0.000	0.000	27.614
420	0.000	0.000	0.000	28.428	0.000	0.000	28.428
480	0.000	0.000	0.000	29.266	0.000	0.000	29.266
540	0.000	0.000	0.000	30.127	0.000	0.000	30.127
600	0.000	0.000	0.000	31.012	0.000	0.000	31.012

660	0.000	0.000	0.000	31.921	0.000	0.000	31.921
720	0.000	0.000	0.000	32.853	0.000	0.000	32.853

Pollutant Name: Oxides of Nitrogen Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.558	0.000	0.000	0.558
10	0.000	0.000	0.000	0.840	0.000	0.000	0.840
20	0.000	0.000	0.000	1.337	0.000	0.000	1.337
30	0.000	0.000	0.000	1.741	0.000	0.000	1.741
40	0.000	0.000	0.000	2.054	0.000	0.000	2.054
50	0.000	0.000	0.000	2.275	0.000	0.000	2.275
60	0.000	0.000	0.000	2.403	0.000	0.000	2.403
120	0.000	0.000	0.000	2.430	0.000	0.000	2.430
180	0.000	0.000	0.000	2.421	0.000	0.000	2.421
240	0.000	0.000	0.000	2.408	0.000	0.000	2.408
300	0.000	0.000	0.000	2.389	0.000	0.000	2.389
360	0.000	0.000	0.000	2.366	0.000	0.000	2.366
420	0.000	0.000	0.000	2.339	0.000	0.000	2.339
480	0.000	0.000	0.000	2.306	0.000	0.000	2.306
540	0.000	0.000	0.000	2.269	0.000	0.000	2.269
600	0.000	0.000	0.000	2.227	0.000	0.000	2.227
660	0.000	0.000	0.000	2.180	0.000	0.000	2.180
720	0.000	0.000	0.000	2.129	0.000	0.000	2.129

Pollutant Name: Carbon Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	1.098	0.000	0.000	1.098
10	0.000	0.000	0.000	2.191	0.000	0.000	2.191
20	0.000	0.000	0.000	4.357	0.000	0.000	4.357
30	0.000	0.000	0.000	6.500	0.000	0.000	6.500
40	0.000	0.000	0.000	8.618	0.000	0.000	8.618
50	0.000	0.000	0.000	10.711	0.000	0.000	10.711
60	0.000	0.000	0.000	12.780	0.000	0.000	12.780
120	0.000	0.000	0.000	21.737	0.000	0.000	21.737
180	0.000	0.000	0.000	25.681	0.000	0.000	25.681
240	0.000	0.000	0.000	29.392	0.000	0.000	29.392
300	0.000	0.000	0.000	32.870	0.000	0.000	32.870
360	0.000	0.000	0.000	36.115	0.000	0.000	36.115
420	0.000	0.000	0.000	39.128	0.000	0.000	39.128
480	0.000	0.000	0.000	41.908	0.000	0.000	41.908
540	0.000	0.000	0.000	44.455	0.000	0.000	44.455
600	0.000	0.000	0.000	46.769	0.000	0.000	46.769
660	0.000	0.000	0.000	48.851	0.000	0.000	48.851
720	0.000	0.000	0.000	50.700	0.000	0.000	50.700

Pollutant Name: Sulfur Dioxide Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	0.000	0.000	0.000	0.000	0.000	0.000

40	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.001	0.000	0.000	0.001
120	0.000	0.000	0.000	0.001	0.000	0.000	0.001
180	0.000	0.000	0.000	0.001	0.000	0.000	0.001
240	0.000	0.000	0.000	0.001	0.000	0.000	0.001
300	0.000	0.000	0.000	0.001	0.000	0.000	0.001
360	0.000	0.000	0.000	0.001	0.000	0.000	0.001
420	0.000	0.000	0.000	0.001	0.000	0.000	0.001
480	0.000	0.000	0.000	0.001	0.000	0.000	0.001
540	0.000	0.000	0.000	0.001	0.000	0.000	0.001
600	0.000	0.000	0.000	0.001	0.000	0.000	0.001
660	0.000	0.000	0.000	0.001	0.000	0.000	0.001
720	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Pollutant Name: PM2.5 Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.001
30	0.000	0.000	0.000	0.001	0.000	0.000	0.001
40	0.000	0.000	0.000	0.001	0.000	0.000	0.001
50	0.000	0.000	0.000	0.002	0.000	0.000	0.002
60	0.000	0.000	0.000	0.002	0.000	0.000	0.002
120	0.000	0.000	0.000	0.002	0.000	0.000	0.002
180	0.000	0.000	0.000	0.002	0.000	0.000	0.002
240	0.000	0.000	0.000	0.003	0.000	0.000	0.003
300	0.000	0.000	0.000	0.003	0.000	0.000	0.003
360	0.000	0.000	0.000	0.003	0.000	0.000	0.003
420	0.000	0.000	0.000	0.003	0.000	0.000	0.003
480	0.000	0.000	0.000	0.003	0.000	0.000	0.003
540	0.000	0.000	0.000	0.003	0.000	0.000	0.003
600	0.000	0.000	0.000	0.003	0.000	0.000	0.003
660	0.000	0.000	0.000	0.003	0.000	0.000	0.003
720	0.000	0.000	0.000	0.003	0.000	0.000	0.003

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time

min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.002	0.000	0.000	0.002
10	0.000	0.000	0.000	0.003	0.000	0.000	0.003
20	0.000	0.000	0.000	0.006	0.000	0.000	0.006
30	0.000	0.000	0.000	0.007	0.000	0.000	0.007
40	0.000	0.000	0.000	0.008	0.000	0.000	0.008

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp

degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****

Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%TRIP	0.000	0.000	0.000	1.000	0.000	0.000	1.000
%VEH	0.000	0.000	0.000	1.000	0.000	0.000	1.000

Title : Transportation Center - Garbage Trucks and H & S Trucking PM2.5
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/10/15 14:07:45
Scen Year: 2009 -- All model years in the range 1980 to 2009 selected
Season : Annual
Area : San Joaquin Valley
****
Year: 2009 -- Model Years 1980 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

San Joaquin Valley Basin Average Basin Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 65F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.000	0.000	0.000	0.004	0.000	0.000	0.004
2	0.000	0.000	0.000	0.002	0.000	0.000	0.002
3	0.000	0.000	0.000	0.002	0.000	0.000	0.002
4	0.000	0.000	0.000	0.001	0.000	0.000	0.001
5	0.000	0.000	0.000	0.001	0.000	0.000	0.001
10	0.000	0.000	0.000	0.001	0.000	0.000	0.001
15	0.000	0.000	0.000	0.001	0.000	0.000	0.001
20	0.000	0.000	0.000	0.001	0.000	0.000	0.001
25	0.000	0.000	0.000	0.001	0.000	0.000	0.001
30	0.000	0.000	0.000	0.001	0.000	0.000	0.001

35	0.000	0.000	0.000	0.001	0.000	0.000	0.001
40	0.000	0.000	0.000	0.001	0.000	0.000	0.001
45	0.000	0.000	0.000	0.001	0.000	0.000	0.001
50	0.000	0.000	0.000	0.001	0.000	0.000	0.001
55	0.000	0.000	0.000	0.001	0.000	0.000	0.001
60	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Greenhouse Gas Emission Calculations

Operational GHG Emissions

	Emissions metric tons	Covertion Factor to CO2e	CO2e Emissions metric tons
Electricty CO2 Emissions***	26	1	26
Electricty CH4 Emissions***	0.00	21	0.00
Electricty N2O Emissions***	0.00	310	0.0
Vehicle CO2e Emissions**	1,010	1	1,010
Natural Gas CO2e Emissions*	41	1	41
Total Operational GHG Emissions			**1,077**

*Emissions Calculated Using URBEMIS2007 v9.2 4

**Emissions Calculated using EMFAC2007

***Emissions have been mitigated by 85% to account for the 1 5 MW Solor Collection and Charging System

Construction GHG Emissions

	Emissions metric tons	Covertion Factor to CO2e	CO2e Emissions metric tons
Construction Emissions (2009)*	42	1	42
Construction Emissions (20010)*	166	1	166
Total Construction GHG Emissions			**208**

*Emissions Calculated Using URBEMIS2007 v9 2 4

Electricity Generation GHG Emissions

	Emission Factor* lbs/MWh	Electricity Useage** MWh	Conversion lbs/metric ton	Emissions metric tons
Electricty CO2 Emissions	879	441	2204.62	176
Electricty CH4 Emissions	0.0067	441	2204.62	0.00
Electricty N2O Emissions	0.0037	441	2204.62	0.00

*California Climate Action Registry General Reporting Protocol Version 3.0 April 2008

**CEQA & Climate Change CAPCOA White Paper January 2008

ATTACHMENT F

AERMOD Modeling Output Files

AAQA for Reedley (1)
All Values are in ug/m^3

	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM10 24 Hour	PM10 Annual	PM2.5 24 Hour	PM2.5 Annual
PAREA1	2 73E+02	5 95E+00	2.59E+02	7.84E+01	5.90E-01	2.45E-01	8 24E-02	1 29E-02	1 73E+00	2.71E-01	1 57E+00	2 45E-01
Annual Average Adjustment		8.93E+00						1.93E-02		4.06E-01		3.67E-01
Background	7 80E-02	2.10E-02	3.20E+00	2.10E+00	3.00E-02	1.50E-02	5.00E-03	2.00E-03	1.07E+02	4.30E+01	7.51E+01	1 87E+01
Facility Totals	2 73E+02	8.95E+00	2.62E+02	8.05E+01	6 20E-01	2.60E-01	8.74E-02	2 13E-02	1.09E+02	4 34E+01	7.67E+01	1 91E+01
AAQS	470	100	23000	10000	655	1300	105	80	50	20	35	12
	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Fail

District and EPA's Significance Level (ug/m^3)

NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM10 24 Hour	PM10 Annual	PM2.5 24 Hour	PM2.5 Annual
0	1	2000	500	0	25	5	1	10.4	NA	10.4	NA
								Pass	Pass	Pass	Pass

AAQA Emission (g/sec)

Device	NOx 1 Hour	NOx Annual	CO 1 Hour	CO 8 Hour	SOx 1 Hour	SOx 3 Hour	SOx 24 Hour	SOx Annual	PM10 24 Hour	PM10 Annual	PM2.5 24 Hour	PM2.5 Annual
AREA1	1 77E-01	1 77E-01	1 26E-01	1 26E-01	2 88E-04	2.88E-04	2 88E-04	2 88E-04	6 04E-03	6 04E-03	5 46E-03	5 46E-03

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.2.0
** Lakes Environmental Software Inc.
** Date: 10/15/2009
** File: C:\Lakes\Reedley\ReedAA.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\BFD\BFD.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 3 8 24 PERIOD
   POLLUTID OTHER
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION PAREA1 AREAPOLY 283269.347 4051469.037 0.0
** Source Parameters **
```

```
   SRCPARAM PAREA1 6.791E-06 1.000 11
   AREAVERT PAREA1 283269.347 4051469.037 282902.881 4051469.037
   AREAVERT PAREA1 282904.752 4051063.004 283323.713 4051062.730
   AREAVERT PAREA1 283295.960 4051123.472 283271.241 4051183.274
   AREAVERT PAREA1 283257.242 4051239.900 283250.269 4051298.349
   AREAVERT PAREA1 283247.380 4051350.114 283246.677 4051406.966
   AREAVERT PAREA1 283250.884 4051442.678
   SRCGROUP PAREA1 PAREA1
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "FENCEGRD" "Receptors generated from Fenceline Grid"
   DISCCART    283280.97   4051443.13    0.00    0.00
   DISCCART    283277.21   4051418.03    0.00    0.00
   DISCCART    283305.70   4051439.42    0.00    0.00
   DISCCART    283301.94   4051414.32    0.00    0.00
   DISCCART    283330.42   4051435.72    0.00    0.00
   DISCCART    283326.66   4051410.62    0.00    0.00
   DISCCART    283355.15   4051432.02    0.00    0.00
   DISCCART    283351.39   4051406.92    0.00    0.00
   DISCCART    283276.65   4051374.42    0.00    0.00
   DISCCART    283276.23   4051350.99    0.00    0.00
   DISCCART    283301.64   4051373.97    0.00    0.00
   DISCCART    283301.22   4051350.54    0.00    0.00
   DISCCART    283326.64   4051373.53    0.00    0.00
   DISCCART    283326.22   4051350.10    0.00    0.00
   DISCCART    283351.63   4051373.08    0.00    0.00
   DISCCART    283351.21   4051349.65    0.00    0.00
   DISCCART    283279.88   4051314.94    0.00    0.00
```

DISCCART	283304.77	4051317.35	0.00	0.00
DISCCART	283329.65	4051319.76	0.00	0.00
DISCCART	283354.53	4051322.17	0.00	0.00
DISCCART	283283.24	4051278.87	0.00	0.00
DISCCART	283308.13	4051281.18	0.00	0.00
DISCCART	283333.02	4051283.50	0.00	0.00
DISCCART	283357.92	4051285.81	0.00	0.00
DISCCART	283288.58	4051245.69	0.00	0.00
DISCCART	283296.95	4051208.87	0.00	0.00
DISCCART	283312.96	4051251.23	0.00	0.00
DISCCART	283321.33	4051214.41	0.00	0.00
DISCCART	283337.34	4051256.77	0.00	0.00
DISCCART	283345.71	4051219.95	0.00	0.00
DISCCART	283361.72	4051262.31	0.00	0.00
DISCCART	283370.08	4051225.49	0.00	0.00
DISCCART	283309.05	4051169.16	0.00	0.00
DISCCART	283332.97	4051176.41	0.00	0.00
DISCCART	283356.90	4051183.66	0.00	0.00
DISCCART	283380.82	4051190.91	0.00	0.00
DISCCART	283322.35	4051138.22	0.00	0.00
DISCCART	283345.36	4051148.00	0.00	0.00
DISCCART	283368.37	4051157.78	0.00	0.00
DISCCART	283391.38	4051167.57	0.00	0.00
DISCCART	283337.90	4051103.45	0.00	0.00
DISCCART	283360.56	4051114.02	0.00	0.00
DISCCART	283383.21	4051124.59	0.00	0.00
DISCCART	283405.87	4051135.16	0.00	0.00
DISCCART	283354.83	4051069.58	0.00	0.00
DISCCART	283376.84	4051081.44	0.00	0.00
DISCCART	283398.85	4051093.29	0.00	0.00
DISCCART	283420.86	4051105.15	0.00	0.00
DISCCART	283343.55	4051038.82	0.00	0.00
DISCCART	283308.69	4051032.73	0.00	0.00
DISCCART	283284.57	4051032.73	0.00	0.00
DISCCART	283260.44	4051032.73	0.00	0.00

DISCCART	283236.31	4051032.73	0.00	0.00
DISCCART	283212.19	4051032.73	0.00	0.00
DISCCART	283188.06	4051032.73	0.00	0.00
DISCCART	283163.93	4051032.73	0.00	0.00
DISCCART	283139.81	4051032.73	0.00	0.00
DISCCART	283115.68	4051032.73	0.00	0.00
DISCCART	283091.55	4051032.73	0.00	0.00
DISCCART	283067.43	4051032.73	0.00	0.00
DISCCART	283043.30	4051032.73	0.00	0.00
DISCCART	283019.17	4051032.73	0.00	0.00
DISCCART	282995.05	4051032.73	0.00	0.00
DISCCART	282970.92	4051032.73	0.00	0.00
DISCCART	282946.79	4051032.73	0.00	0.00
DISCCART	282922.67	4051032.73	0.00	0.00
DISCCART	282898.54	4051032.73	0.00	0.00
DISCCART	283347.13	4051015.85	0.00	0.00
DISCCART	283376.11	4051048.54	0.00	0.00
DISCCART	283308.69	4051007.73	0.00	0.00
DISCCART	283284.57	4051007.73	0.00	0.00
DISCCART	283260.44	4051007.73	0.00	0.00
DISCCART	283236.31	4051007.73	0.00	0.00
DISCCART	283212.19	4051007.73	0.00	0.00
DISCCART	283188.06	4051007.73	0.00	0.00
DISCCART	283163.93	4051007.73	0.00	0.00
DISCCART	283139.81	4051007.73	0.00	0.00
DISCCART	283115.68	4051007.73	0.00	0.00
DISCCART	283091.55	4051007.73	0.00	0.00
DISCCART	283067.43	4051007.73	0.00	0.00
DISCCART	283043.30	4051007.73	0.00	0.00
DISCCART	283019.17	4051007.73	0.00	0.00
DISCCART	282995.05	4051007.73	0.00	0.00
DISCCART	282970.92	4051007.73	0.00	0.00
DISCCART	282946.79	4051007.73	0.00	0.00
DISCCART	282922.67	4051007.73	0.00	0.00

DISCCART	282898.54	4051007.73	0.00	0.00
DISCCART	283348.92	4050991.87	0.00	0.00
DISCCART	283381.11	4051010.14	0.00	0.00
DISCCART	283397.62	4051037.78	0.00	0.00
DISCCART	283308.69	4050982.73	0.00	0.00
DISCCART	283284.57	4050982.73	0.00	0.00
DISCCART	283260.44	4050982.73	0.00	0.00
DISCCART	283236.31	4050982.73	0.00	0.00
DISCCART	283212.19	4050982.73	0.00	0.00
DISCCART	283188.06	4050982.73	0.00	0.00
DISCCART	283163.93	4050982.73	0.00	0.00
DISCCART	283139.81	4050982.73	0.00	0.00
DISCCART	283115.68	4050982.73	0.00	0.00
DISCCART	283091.55	4050982.73	0.00	0.00
DISCCART	283067.43	4050982.73	0.00	0.00
DISCCART	283043.30	4050982.73	0.00	0.00
DISCCART	283019.17	4050982.73	0.00	0.00
DISCCART	282995.05	4050982.73	0.00	0.00
DISCCART	282970.92	4050982.73	0.00	0.00
DISCCART	282946.79	4050982.73	0.00	0.00
DISCCART	282922.67	4050982.73	0.00	0.00
DISCCART	282898.54	4050982.73	0.00	0.00
DISCCART	283349.99	4050967.48	0.00	0.00
DISCCART	283384.33	4050986.97	0.00	0.00
DISCCART	283419.11	4051026.19	0.00	0.00
DISCCART	283419.99	4051065.67	0.00	0.00
DISCCART	283308.69	4050957.73	0.00	0.00
DISCCART	283284.57	4050957.73	0.00	0.00
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DISCCART	283163.93	4050957.73	0.00	0.00
DISCCART	283139.81	4050957.73	0.00	0.00
DISCCART	283115.68	4050957.73	0.00	0.00

DISCCART	283091.55	4050957.73	0.00	0.00
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DISCCART	282995.05	4050957.73	0.00	0.00
DISCCART	282970.92	4050957.73	0.00	0.00
DISCCART	282946.79	4050957.73	0.00	0.00
DISCCART	282922.67	4050957.73	0.00	0.00
DISCCART	282898.54	4050957.73	0.00	0.00
DISCCART	282873.54	4051057.65	0.00	0.00
DISCCART	282873.47	4051082.17	0.00	0.00
DISCCART	282873.39	4051106.68	0.00	0.00
DISCCART	282873.32	4051131.19	0.00	0.00
DISCCART	282873.24	4051155.70	0.00	0.00
DISCCART	282873.17	4051180.22	0.00	0.00
DISCCART	282873.10	4051204.73	0.00	0.00
DISCCART	282873.02	4051229.24	0.00	0.00
DISCCART	282872.95	4051253.75	0.00	0.00
DISCCART	282872.87	4051278.27	0.00	0.00
DISCCART	282872.80	4051302.78	0.00	0.00
DISCCART	282872.72	4051327.29	0.00	0.00
DISCCART	282872.65	4051351.80	0.00	0.00
DISCCART	282872.58	4051376.31	0.00	0.00
DISCCART	282872.50	4051400.83	0.00	0.00
DISCCART	282872.43	4051425.34	0.00	0.00
DISCCART	282872.35	4051449.85	0.00	0.00
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DISCCART	282855.89	4051039.95	0.00	0.00
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DISCCART	282848.17	4051180.14	0.00	0.00
DISCCART	282848.10	4051204.65	0.00	0.00

DISCCART	282848.02	4051229.17	0.00	0.00
DISCCART	282847.95	4051253.68	0.00	0.00
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DISCCART	282822.43	4051425.19	0.00	0.00
DISCCART	282822.35	4051449.70	0.00	0.00
DISCCART	282822.28	4051474.21	0.00	0.00
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DISCCART	282797.58	4051376.09	0.00	0.00
DISCCART	282797.50	4051400.60	0.00	0.00
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DISCCART	282797.35	4051449.63	0.00	0.00
DISCCART	282797.28	4051474.14	0.00	0.00
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DISCCART	283157.80	4051500.31	0.00	0.00
DISCCART	283181.49	4051500.38	0.00	0.00
DISCCART	283205.18	4051500.46	0.00	0.00
DISCCART	283228.87	4051500.54	0.00	0.00
DISCCART	283252.57	4051500.62	0.00	0.00
DISCCART	283276.26	4051500.70	0.00	0.00
DISCCART	282879.46	4051517.06	0.00	0.00
DISCCART	282920.81	4051524.52	0.00	0.00

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DISCCART	283062.95	4051524.99	0.00	0.00
DISCCART	283086.64	4051525.07	0.00	0.00
DISCCART	283110.34	4051525.15	0.00	0.00
DISCCART	283134.03	4051525.23	0.00	0.00
DISCCART	283157.72	4051525.31	0.00	0.00
DISCCART	283181.41	4051525.38	0.00	0.00
DISCCART	283205.10	4051525.46	0.00	0.00
DISCCART	283228.79	4051525.54	0.00	0.00
DISCCART	283252.48	4051525.62	0.00	0.00
DISCCART	283276.17	4051525.70	0.00	0.00
DISCCART	282879.38	4051542.06	0.00	0.00
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DISCCART	282944.41	4051549.60	0.00	0.00
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DISCCART	283015.49	4051549.83	0.00	0.00
DISCCART	283039.18	4051549.91	0.00	0.00
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DISCCART	283110.25	4051550.15	0.00	0.00
DISCCART	283133.94	4051550.23	0.00	0.00
DISCCART	283157.63	4051550.31	0.00	0.00
DISCCART	283181.33	4051550.38	0.00	0.00
DISCCART	283205.02	4051550.46	0.00	0.00
DISCCART	283228.71	4051550.54	0.00	0.00
DISCCART	283252.40	4051550.62	0.00	0.00
DISCCART	283276.09	4051550.70	0.00	0.00
DISCCART	282879.30	4051567.06	0.00	0.00
DISCCART	282844.00	4051552.30	0.00	0.00

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   DISCCART    282819.08   4051527.23    0.00    0.00
   DISCCART    282920.64   4051574.52    0.00    0.00
   DISCCART    282944.33   4051574.60    0.00    0.00
   DISCCART    282968.02   4051574.68    0.00    0.00
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   DISCCART    283062.79   4051574.99    0.00    0.00
   DISCCART    283086.48   4051575.07    0.00    0.00
   DISCCART    283110.17   4051575.15    0.00    0.00
   DISCCART    283133.86   4051575.23    0.00    0.00
   DISCCART    283157.55   4051575.31    0.00    0.00
   DISCCART    283181.24   4051575.38    0.00    0.00
   DISCCART    283204.93   4051575.46    0.00    0.00
   DISCCART    283228.63   4051575.54    0.00    0.00
   DISCCART    283252.32   4051575.62    0.00    0.00
   DISCCART    283276.01   4051575.70    0.00    0.00
   DISCCART    283297.67   4051474.37    0.00    0.00
   DISCCART    283318.46   4051464.40    0.00    0.00
   DISCCART    283305.80   4051507.85    0.00    0.00
   DISCCART    283340.82   4051479.47    0.00    0.00
   DISCCART    283329.42   4051518.57    0.00    0.00
   DISCCART    283302.76   4051534.64    0.00    0.00
   DISCCART    283361.66   4051470.37    0.00    0.00
   DISCCART    283363.82   4051504.89    0.00    0.00
   DISCCART    283350.08   4051531.08    0.00    0.00
   DISCCART    283320.45   4051548.93    0.00    0.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
```

```
ME STARTING
   SURFFILE C:\Lakes\MET\Fresno\2004-2008.SFC
   PROFFILE C:\Lakes\MET\Fresno\2004-2008.PFL
   SURFDATA 93193 2004 FRESNO/AIR_TERMINAL
   UAIRDATA 23230 2004 OAKLAND/WSO_AP
   PROFBASE 101 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 3 1ST
   RECTABLE 8 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 PAREA1 1ST REEDAA.AD\01H1G001.PLT
   PLOTFILE 3 PAREA1 1ST REEDAA.AD\03H1G001.PLT
   PLOTFILE 8 PAREA1 1ST REEDAA.AD\08H1G001.PLT
   PLOTFILE 24 PAREA1 1ST REEDAA.AD\24H1G001.PLT
   PLOTFILE PERIOD PAREA1 REEDAA.AD\PE00G001.PLT
OU FINISHED
**********************************
*** SETUP Finishes Successfully ***
**********************************

 *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                ***        10/15/09
                                     ***
                               ***        09:49:26
**MODELOPTs:
                                          PAGE   1
CONC                        DEFAULT ELEV

                                       ***     MODEL SETUP OPTIONS SUMMARY
     ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

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**Model Is Setup For Calculation of Average CONCentration Values.

  --  DEPOSITION LOGIC  --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO GAS DRY DEPOSITION Data Provided.

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:
           1. Stack-tip Downwash.
           2. Model Accounts for ELEVated Terrain Effects.
           3. Use Calms Processing Routine.
           4. Use Missing Data Processing Routine.
           5. No Exponential Decay

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates  4 Short Term Average(s) of:   1-HR   3-HR   8-HR  24-HR
    and Calculates PERIOD Averages

**This Run Includes:     1 Source(s);      1 Source Group(s); and     286
Receptor(s)

**The Model Assumes A Pollutant Type of:  OTHER

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor
(RECTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm
Hours
                                                                m for Missing
Hours
                                                                b for Both
Calm and Missing Hours

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   101.00 ;  Decay
Coef. =    0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;
Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     1.2 MB of RAM.

1 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                              ***        10/15/09
                                   ***
                              ***        09:49:26
**MODELOPTs:
                                         PAGE   2
CONC                        DFAULT ELEV


                                                *** AREAPOLY SOURCE DATA ***

             NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER
     INIT.   URBAN  EMISSION RATE
   SOURCE     PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF
VERTS.     SZ     SOURCE  SCALAR VARY
     ID       CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)
```

```
   (METERS)                  BY
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -

  PAREA1        0   0.67910E-05  283269.3 4051469.0     0.0      1.00      11
      0.00      NO
 *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                ***         10/15/09
                                       ***
                                ***        09:49:26
**MODELOPTs:
                                           PAGE    3
CONC                            DFAULT ELEV



                                           *** SOURCE IDs DEFINING SOURCE
GROUPS ***

GROUP ID                                                  SOURCE IDs


 PAREA1     PAREA1   ,
 *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                ***         10/15/09
                                       ***
                                ***        09:49:26
**MODELOPTs:
                                           PAGE    4
CONC                            DFAULT ELEV



                                            *** DISCRETE CARTESIAN RECEPTORS
***
                                          (X-COORD, Y-COORD, ZELEV, ZHILL,
ZFLAG)
                                                        (METERS)

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    ( 282898.5, 4051032.8,        0.0,        0.0,        0.0);          (
283347.1, 4051015.8,        0.0,        0.0,        0.0);
    ( 283376.1, 4051048.5,        0.0,        0.0,        0.0);          (
283308.7, 4051007.8,        0.0,        0.0,        0.0);
    ( 283284.6, 4051007.8,        0.0,        0.0,        0.0);          (
283260.4, 4051007.8,        0.0,        0.0,        0.0);
    ( 283236.3, 4051007.8,        0.0,        0.0,        0.0);          (
283212.2, 4051007.8,        0.0,        0.0,        0.0);
    ( 283188.1, 4051007.8,        0.0,        0.0,        0.0);          (
283163.9, 4051007.8,        0.0,        0.0,        0.0);
    ( 283139.8, 4051007.8,        0.0,        0.0,        0.0);          (
283115.7, 4051007.8,        0.0,        0.0,        0.0);
    ( 283091.6, 4051007.8,        0.0,        0.0,        0.0);          (
283067.4, 4051007.8,        0.0,        0.0,        0.0);
    ( 283043.3, 4051007.8,        0.0,        0.0,        0.0);          (
283019.2, 4051007.8,        0.0,        0.0,        0.0);
    ( 282995.1, 4051007.8,        0.0,        0.0,        0.0);          (
282970.9, 4051007.8,        0.0,        0.0,        0.0);
    ( 282946.8, 4051007.8,        0.0,        0.0,        0.0);          (
282922.7, 4051007.8,        0.0,        0.0,        0.0);
    ( 282898.5, 4051007.8,        0.0,        0.0,        0.0);          (
283348.9, 4050991.8,        0.0,        0.0,        0.0);
    ( 283381.1, 4051010.2,        0.0,        0.0,        0.0);          (
283397.6, 4051037.8,        0.0,        0.0,        0.0);
```


**MODELOPTs:

CONC DEFAULT ELEV

*** *** DISCRETE CARTESIAN RECEPTORS

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

```
     ( 283308.7, 4050982.8,        0.0,        0.0,        0.0);         (
283284.6, 4050982.8,        0.0,        0.0,        0.0);
     ( 283260.4, 4050982.8,        0.0,        0.0,        0.0);         (
283236.3, 4050982.8,        0.0,        0.0,        0.0);
     ( 283212.2, 4050982.8,        0.0,        0.0,        0.0);         (
283188.1, 4050982.8,        0.0,        0.0,        0.0);
     ( 283163.9, 4050982.8,        0.0,        0.0,        0.0);         (
283139.8, 4050982.8,        0.0,        0.0,        0.0);
     ( 283115.7, 4050982.8,        0.0,        0.0,        0.0);         (
283091.6, 4050982.8,        0.0,        0.0,        0.0);
     ( 283067.4, 4050982.8,        0.0,        0.0,        0.0);         (
283043.3, 4050982.8,        0.0,        0.0,        0.0);
     ( 283019.2, 4050982.8,        0.0,        0.0,        0.0);         (
282995.1, 4050982.8,        0.0,        0.0,        0.0);
     ( 282970.9, 4050982.8,        0.0,        0.0,        0.0);         (
282946.8, 4050982.8,        0.0,        0.0,        0.0);
     ( 282922.7, 4050982.8,        0.0,        0.0,        0.0);         (
282898.5, 4050982.8,        0.0,        0.0,        0.0);
     ( 283350.0, 4050967.5,        0.0,        0.0,        0.0);         (
283384.3, 4050987.0,        0.0,        0.0,        0.0);
     ( 283419.1, 4051026.2,        0.0,        0.0,        0.0);         (
283420.0, 4051065.8,        0.0,        0.0,        0.0);
     ( 283308.7, 4050957.8,        0.0,        0.0,        0.0);         (
283284.6, 4050957.8,        0.0,        0.0,        0.0);
     ( 283260.4, 4050957.8,        0.0,        0.0,        0.0);         (
283236.3, 4050957.8,        0.0,        0.0,        0.0);
     ( 283212.2, 4050957.8,        0.0,        0.0,        0.0);         (
283188.1, 4050957.8,        0.0,        0.0,        0.0);
     ( 283163.9, 4050957.8,        0.0,        0.0,        0.0);         (
283139.8, 4050957.8,        0.0,        0.0,        0.0);
     ( 283115.7, 4050957.8,        0.0,        0.0,        0.0);         (
283091.6, 4050957.8,        0.0,        0.0,        0.0);
     ( 283067.4, 4050957.8,        0.0,        0.0,        0.0);         (
283043.3, 4050957.8,        0.0,        0.0,        0.0);
     ( 283019.2, 4050957.8,        0.0,        0.0,        0.0);         (
282995.1, 4050957.8,        0.0,        0.0,        0.0);
     ( 282970.9, 4050957.8,        0.0,        0.0,        0.0);         (
282946.8, 4050957.8,        0.0,        0.0,        0.0);
     ( 282922.7, 4050957.8,        0.0,        0.0,        0.0);         (
282898.5, 4050957.8,        0.0,        0.0,        0.0);
     ( 282873.5, 4051057.8,        0.0,        0.0,        0.0);         (
282873.5, 4051082.2,        0.0,        0.0,        0.0);
     ( 282873.4, 4051106.8,        0.0,        0.0,        0.0);         (
282873.3, 4051131.2,        0.0,        0.0,        0.0);
     ( 282873.2, 4051155.8,        0.0,        0.0,        0.0);         (
282873.2, 4051180.2,        0.0,        0.0,        0.0);
     ( 282873.1, 4051204.8,        0.0,        0.0,        0.0);         (
282873.0, 4051229.2,        0.0,        0.0,        0.0);
     ( 282872.9, 4051253.8,        0.0,        0.0,        0.0);         (
282872.9, 4051278.2,        0.0,        0.0,        0.0);
     ( 282872.8, 4051302.8,        0.0,        0.0,        0.0);         (
282872.7, 4051327.2,        0.0,        0.0,        0.0);
     ( 282872.7, 4051351.8,        0.0,        0.0,        0.0);         (
282872.6, 4051376.2,        0.0,        0.0,        0.0);
     ( 282872.5, 4051400.8,        0.0,        0.0,        0.0);         (
282872.4, 4051425.2,        0.0,        0.0,        0.0);
     ( 282872.3, 4051449.8,        0.0,        0.0,        0.0);         (
282872.3, 4051474.2,        0.0,        0.0,        0.0);
     ( 282855.9, 4051040.0,        0.0,        0.0,        0.0);         (
282848.5, 4051082.0,        0.0,        0.0,        0.0);
```

```
    ( 282848.4, 4051106.5,        0.0,        0.0,        0.0);          (
282848.3, 4051131.0,        0.0,        0.0,        0.0);
    ( 282848.2, 4051155.8,        0.0,        0.0,        0.0);          (
282848.2, 4051180.2,        0.0,        0.0,        0.0);
    ( 282848.1, 4051204.8,        0.0,        0.0,        0.0);          (
282848.0, 4051229.2,        0.0,        0.0,        0.0);
    ( 282847.9, 4051253.8,        0.0,        0.0,        0.0);          (
282847.9, 4051278.2,        0.0,        0.0,        0.0);
    ( 282847.8, 4051302.8,        0.0,        0.0,        0.0);          (
282847.7, 4051327.2,        0.0,        0.0,        0.0);
    ( 282847.7, 4051351.8,        0.0,        0.0,        0.0);          (
282847.6, 4051376.2,        0.0,        0.0,        0.0);
    ( 282847.5, 4051400.8,        0.0,        0.0,        0.0);          (
282847.4, 4051425.2,        0.0,        0.0,        0.0);
    ( 282847.3, 4051449.8,        0.0,        0.0,        0.0);          (
282847.3, 4051474.2,        0.0,        0.0,        0.0);
    ( 282830.9, 4051039.8,        0.0,        0.0,        0.0);          (
282863.2, 4050997.2,        0.0,        0.0,        0.0);
    ( 282823.5, 4051082.0,        0.0,        0.0,        0.0);          (
282823.4, 4051106.5,        0.0,        0.0,        0.0);
    ( 282823.3, 4051131.0,        0.0,        0.0,        0.0);          (
282823.2, 4051155.5,        0.0,        0.0,        0.0);
    ( 282823.2, 4051180.0,        0.0,        0.0,        0.0);          (
282823.1, 4051204.5,        0.0,        0.0,        0.0);
    ( 282823.0, 4051229.0,        0.0,        0.0,        0.0);          (
282822.9, 4051253.5,        0.0,        0.0,        0.0);
    ( 282822.9, 4051278.0,        0.0,        0.0,        0.0);          (
282822.8, 4051302.8,        0.0,        0.0,        0.0);
    ( 282822.7, 4051327.2,        0.0,        0.0,        0.0);          (
282822.7, 4051351.8,        0.0,        0.0,        0.0);
7 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***        10/15/09
                                      ***
                                 ***        09:49:26
**MODELOPTs:
                                            PAGE    6
CONC                        DFAULT ELEV


                                                 *** DISCRETE CARTESIAN RECEPTORS
***
                                               (X-COORD, Y-COORD, ZELEV, ZHILL,
ZFLAG)
                                                                (METERS)

    ( 282822.6, 4051376.2,        0.0,        0.0,        0.0);          (
282822.5, 4051400.8,        0.0,        0.0,        0.0);
    ( 282822.4, 4051425.2,        0.0,        0.0,        0.0);          (
282822.3, 4051449.8,        0.0,        0.0,        0.0);
    ( 282822.3, 4051474.2,        0.0,        0.0,        0.0);          (
282805.9, 4051039.8,        0.0,        0.0,        0.0);
    ( 282820.6, 4051004.5,        0.0,        0.0,        0.0);          (
282845.6, 4050979.5,        0.0,        0.0,        0.0);
    ( 282798.5, 4051082.0,        0.0,        0.0,        0.0);          (
282798.4, 4051106.5,        0.0,        0.0,        0.0);
    ( 282798.3, 4051131.0,        0.0,        0.0,        0.0);          (
282798.2, 4051155.5,        0.0,        0.0,        0.0);
    ( 282798.2, 4051180.0,        0.0,        0.0,        0.0);          (
282798.1, 4051204.5,        0.0,        0.0,        0.0);
    ( 282798.0, 4051229.0,        0.0,        0.0,        0.0);          (
282797.9, 4051253.5,        0.0,        0.0,        0.0);
    ( 282797.9, 4051278.0,        0.0,        0.0,        0.0);          (
282797.8, 4051302.5,        0.0,        0.0,        0.0);
    ( 282797.7, 4051327.0,        0.0,        0.0,        0.0);          (
282797.7, 4051351.5,        0.0,        0.0,        0.0);
    ( 282797.6, 4051376.0,        0.0,        0.0,        0.0);          (
282797.5, 4051400.5,        0.0,        0.0,        0.0);
    ( 282797.4, 4051425.0,        0.0,        0.0,        0.0);          (
```

```
282797.3, 4051449.8,        0.0,        0.0,        0.0);
     ( 282797.3, 4051474.2,        0.0,        0.0,        0.0);        (
282897.2, 4051499.5,        0.0,        0.0,        0.0);
     ( 282920.9, 4051499.5,        0.0,        0.0,        0.0);        (
282944.6, 4051499.5,        0.0,        0.0,        0.0);
     ( 282968.3, 4051499.8,        0.0,        0.0,        0.0);        (
282992.0, 4051499.8,        0.0,        0.0,        0.0);
     ( 283015.7, 4051499.8,        0.0,        0.0,        0.0);        (
283039.3, 4051500.0,        0.0,        0.0,        0.0);
     ( 283063.0, 4051500.0,        0.0,        0.0,        0.0);        (
283086.7, 4051500.0,        0.0,        0.0,        0.0);
     ( 283110.4, 4051500.2,        0.0,        0.0,        0.0);        (
283134.1, 4051500.2,        0.0,        0.0,        0.0);
     ( 283157.8, 4051500.2,        0.0,        0.0,        0.0);        (
283181.5, 4051500.5,        0.0,        0.0,        0.0);
     ( 283205.2, 4051500.5,        0.0,        0.0,        0.0);        (
283228.9, 4051500.5,        0.0,        0.0,        0.0);
     ( 283252.6, 4051500.5,        0.0,        0.0,        0.0);        (
283276.2, 4051500.8,        0.0,        0.0,        0.0);
     ( 282879.5, 4051517.0,        0.0,        0.0,        0.0);        (
282920.8, 4051524.5,        0.0,        0.0,        0.0);
     ( 282944.5, 4051524.5,        0.0,        0.0,        0.0);        (
282968.2, 4051524.8,        0.0,        0.0,        0.0);
     ( 282991.9, 4051524.8,        0.0,        0.0,        0.0);        (
283015.6, 4051524.8,        0.0,        0.0,        0.0);
     ( 283039.2, 4051525.0,        0.0,        0.0,        0.0);        (
283062.9, 4051525.0,        0.0,        0.0,        0.0);
     ( 283086.6, 4051525.0,        0.0,        0.0,        0.0);        (
283110.3, 4051525.2,        0.0,        0.0,        0.0);
     ( 283134.0, 4051525.2,        0.0,        0.0,        0.0);        (
283157.7, 4051525.2,        0.0,        0.0,        0.0);
     ( 283181.4, 4051525.5,        0.0,        0.0,        0.0);        (
283205.1, 4051525.5,        0.0,        0.0,        0.0);
     ( 283228.8, 4051525.5,        0.0,        0.0,        0.0);        (
283252.5, 4051525.5,        0.0,        0.0,        0.0);
     ( 283276.2, 4051525.8,        0.0,        0.0,        0.0);        (
282879.4, 4051542.0,        0.0,        0.0,        0.0);
     ( 282836.8, 4051509.5,        0.0,        0.0,        0.0);        (
282920.7, 4051549.5,        0.0,        0.0,        0.0);
     ( 282944.4, 4051549.5,        0.0,        0.0,        0.0);        (
282968.1, 4051549.8,        0.0,        0.0,        0.0);
     ( 282991.8, 4051549.8,        0.0,        0.0,        0.0);        (
283015.5, 4051549.8,        0.0,        0.0,        0.0);
     ( 283039.2, 4051550.0,        0.0,        0.0,        0.0);        (
283062.9, 4051550.0,        0.0,        0.0,        0.0);
     ( 283086.6, 4051550.0,        0.0,        0.0,        0.0);        (
283110.2, 4051550.2,        0.0,        0.0,        0.0);
     ( 283133.9, 4051550.2,        0.0,        0.0,        0.0);        (
283157.6, 4051550.2,        0.0,        0.0,        0.0);
     ( 283181.3, 4051550.5,        0.0,        0.0,        0.0);        (
283205.0, 4051550.5,        0.0,        0.0,        0.0);
     ( 283228.7, 4051550.5,        0.0,        0.0,        0.0);        (
283252.4, 4051550.5,        0.0,        0.0,        0.0);
     ( 283276.1, 4051550.8,        0.0,        0.0,        0.0);        (
282879.3, 4051567.0,        0.0,        0.0,        0.0);
     ( 282844.0, 4051552.2,        0.0,        0.0,        0.0);        (
282819.1, 4051527.2,        0.0,        0.0,        0.0);
     ( 282920.6, 4051574.5,        0.0,        0.0,        0.0);        (
282944.3, 4051574.5,        0.0,        0.0,        0.0);
     ( 282968.0, 4051574.8,        0.0,        0.0,        0.0);        (
282991.7, 4051574.8,        0.0,        0.0,        0.0);
     ( 283015.4, 4051574.8,        0.0,        0.0,        0.0);        (
283039.1, 4051575.0,        0.0,        0.0,        0.0);
     ( 283062.8, 4051575.0,        0.0,        0.0,        0.0);        (
283086.5, 4051575.0,        0.0,        0.0,        0.0);
     ( 283110.2, 4051575.2,        0.0,        0.0,        0.0);        (
283133.9, 4051575.2,        0.0,        0.0,        0.0);
```

*** DISCRETE CARTESIAN RECEPTORS
***
(X-COORD, Y-COORD, ZELEV, ZHILL,
ZFLAG)
(METERS)

```
    ( 283157.6, 4051575.2,       0.0,       0.0,       0.0);         (
283181.2, 4051575.5,       0.0,       0.0,       0.0);
    ( 283204.9, 4051575.5,       0.0,       0.0,       0.0);         (
283228.6, 4051575.5,       0.0,       0.0,       0.0);
    ( 283252.3, 4051575.5,       0.0,       0.0,       0.0);         (
283276.0, 4051575.8,       0.0,       0.0,       0.0);
    ( 283297.7, 4051474.2,       0.0,       0.0,       0.0);         (
283318.5, 4051464.5,       0.0,       0.0,       0.0);
    ( 283305.8, 4051507.8,       0.0,       0.0,       0.0);         (
283340.8, 4051479.5,       0.0,       0.0,       0.0);
    ( 283329.4, 4051518.5,       0.0,       0.0,       0.0);         (
283302.8, 4051534.8,       0.0,       0.0,       0.0);
    ( 283361.7, 4051470.2,       0.0,       0.0,       0.0);         (
283363.8, 4051505.0,       0.0,       0.0,       0.0);
    ( 283350.1, 4051531.0,       0.0,       0.0,       0.0);         (
283320.4, 4051549.0,       0.0,       0.0,       0.0);
```


*** METEOROLOGICAL DAYS SELECTED
FOR PROCESSING ***
(1=YES; 0=NO)

```
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1
1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 0
0 0 0
AND END DATE: 9999
99 99 24

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND
ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

**MODELOPTs:

CONC DFAULT ELEV

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Lakes\MET\Fresno\2004-2008.SFC
Met Version: 06341
Profile file: C:\Lakes\MET\Fresno\2004-2008.PFL

Surface format:
(3(I2,1X),I3,1X,I2,1X,F6.1,1X,3(F6.3,1X),2(F5.0,1X),F8.1,1X,F6.3,1X,2(F6.2,1X),F7.2,1X,F5.0,3(1X,F6.1))
Profile format:
(4(I2,1X),F6.1,1X,I1,1X,F5.0,1X,F7.2,1X,F7.2,1X,F6.1,1X,F7.2)

Surface station no.: 93193 Upper air station no.: 23230
Name: FRESNO/AIR_TERMINAL Name: OAKLAND/WSO_AP
Year: 2004 Year: 2004

First 24 hours of scalar data

YR	MO	DY	JDY	HR	HO	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	ZO	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
04	01	01	1	01	-35.9	0.633	-9.000	-9.000	-999.	1158.	637.3	0.59	3.20	1.00	4.60	101.	10.0	280.9	2.0
04	01	01	1	02	-19.0	0.334	-9.000	-9.000	-999.	534.	177.9	0.59	3.20	1.00	2.60	98.	10.0	280.9	2.0
04	01	01	1	03	-27.5	0.486	-9.000	-9.000	-999.	779.	377.7	0.59	3.20	1.00	3.60	104.	10.0	282.0	2.0
04	01	01	1	04	-6.8	0.120	-9.000	-9.000	-999.	322.	22.8	0.59	3.20	1.00	1.50	123.	10.0	282.0	2.0
04	01	01	1	05	-22.2	0.394	-9.000	-9.000	-999.	568.	248.4	0.52	3.40	1.00	3.10	153.	10.0	283.1	2.0
04	01	01	1	06	-14.2	0.254	-9.000	-9.000	-999.	305.	103.6	0.59	3.20	1.00	2.10	132.	10.0	284.2	2.0
04	01	01	1	07	-35.5	0.633	-9.000	-9.000	-999.	1158.	645.2	0.59	3.20	1.00	4.60	105.	10.0	284.2	2.0
04	01	01	1	08	-26.7	0.487	-9.000	-9.000	-999.	800.	390.3	0.59	3.20	0.65	3.60	123.	10.0	282.0	2.0
04	01	01	1	09	-5.0	0.577	-9.000	-9.000	-999.	1006.	3438.4	0.59	3.20	0.35	4.10	107.	10.0	282.0	2.0
04	01	01	1	10	15.9	0.656	0.402	0.005	148.	1219.	-1605.7	0.59	3.20	0.25	4.60	101.	10.0	282.0	2.0
04	01	01	1	11	30.2	1.300	0.624	0.005	290.	3407.	-6561.6	0.93	4.60	0.23	7.70	84.	10.0	282.0	2.0
04	01	01	1	12	36.3	1.093	0.775	0.007	463.	2706.	-3248.6	0.59	3.20	0.21	7.70	96.	10.0	283.1	2.0
04	01	01	1	13	38.0	-9.000	-9.000	-9.000	593.	-999.	-99999.0	0.72	3.76	0.22	3.10	999.	10.0	285.4	2.0
04	01	01	1	14	31.5	-9.000	-9.000	-9.000	675.	-999.	-99999.0	0.72	3.76	0.23	2.60	999.	10.0	285.4	2.0

```
04 01 01   1 15   17.6  0.963  0.704  0.008  716. 2174.  -4595.2  0.93   4.60
 0.27    5.70   82.   10.0  282.0    2.0
04 01 01   1 16   -3.4  0.876 -9.000 -9.000 -999. 1901.   8888.0  0.59   3.20
 0.34    6.20   94.   10.0  281.4    2.0
04 01 01   1 17  -54.2  1.007 -9.000 -9.000 -999. 2316.   1703.8  0.59   3.20
 0.61    7.20   91.   10.0  280.9    2.0
04 01 01   1 18  -64.0  1.150 -9.000 -9.000 -999. 2821.   2145.9  0.59   3.20
 1.00    8.20  107.   10.0  280.9    2.0
04 01 01   1 19  -53.1  0.935 -9.000 -9.000 -999. 2149.   1392.4  0.59   3.20
 1.00    6.70  124.   10.0  280.9    2.0
04 01 01   1 20  -62.8  0.933 -9.000 -9.000 -999. 2076.   1169.1  0.59   3.20
 1.00    6.70  117.   10.0  282.0    2.0
04 01 01   1 21  -47.3  0.702 -9.000 -9.000 -999. 1417.    662.2  0.59   3.20
 1.00    5.10  110.   10.0  282.0    2.0
04 01 01   1 22  -42.6  0.552 -9.000 -9.000 -999.  973.    357.7  0.59   3.20
 1.00    4.10  132.   10.0  281.4    2.0
04 01 01   1 23  -23.3  0.411 -9.000 -9.000 -999.  624.    270.4  0.59   3.20
 1.00    3.10  120.   10.0  282.0    2.0
04 01 01   1 24   -5.7  0.102 -9.000 -9.000 -999.  245.     16.7  0.52   3.40
 1.00    1.50  150.   10.0  282.0    2.0


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
04 01 01 01   10.0 1  101.    4.60   281.0   99.0  -99.00  -99.00

F indicates top of profile (=1) or below (=0)
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                                 ***        10/15/09
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                                ***        09:49:26
**MODELOPTs:
                                           PAGE  10
CONC                          DFAULT ELEV


                                *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP: PAREA1   ***
                                  INCLUDING SOURCE(S):      PAREA1  ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                            ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

      X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
 Y-COORD (M)        CONC
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -
        283280.97    4051443.25       14.78588                      283277.22
  4051418.00       20.87472
        283305.69    4051439.50        9.19178                      283301.94
  4051414.25       13.66803
        283330.41    4051435.75        6.99341                      283326.66
  4051410.50       10.09015
        283355.16    4051432.00        5.78343                      283351.38
  4051407.00        8.02226
        283276.66    4051374.50       27.88916                      283276.22
  4051351.00       31.39135
        283301.62    4051374.00       19.04714                      283301.22
  4051350.50       21.91705
        283326.62    4051373.50       14.02335                      283326.22
  4051350.00       16.41318
        283351.62    4051373.00       10.85628                      283351.22
  4051349.75       12.80547
        283279.88    4051315.00       34.01966                      283304.78
  4051317.25       24.43079
        283329.66    4051319.75       18.54650                      283354.53
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4051322.25        14.53361
      283283.25     4051278.75        36.50304                        283308.12
4051281.25        26.87681
      283333.03     4051283.50        20.88010                        283357.91
4051285.75        16.69492
      283288.59     4051245.75        37.67365                        283296.94
4051208.75        38.23980
      283312.97     4051251.25        28.14813                        283321.34
4051214.50        28.96890
      283337.34     4051256.75        22.07158                        283345.72
4051220.00        23.08121
      283361.72     4051262.25        17.72506                        283370.09
4051225.50        18.82731
      283309.06     4051169.25        38.17299                        283332.97
4051176.50        29.18228
      283356.91     4051183.75        23.47551                        283380.81
4051191.00        19.34401
      283322.34     4051138.25        37.21556                        283345.38
4051148.00        28.58829
      283368.38     4051157.75        23.17138                        283391.38
4051167.50        19.23096
      283337.91     4051103.50        36.13663                        283360.56
4051114.00        27.92846
      283383.22     4051124.50        22.79434                        283405.88
4051135.25        19.05883
      283354.84     4051069.50        33.70709                        283376.84
4051081.50        26.69910
      283398.84     4051093.25        22.09567                        283420.88
4051105.25        18.66562
      283343.56     4051038.75        36.45089                        283308.69
4051032.75        41.33798
      283284.56     4051032.75        43.06446                        283260.44
4051032.75        44.05919
      283236.31     4051032.75        44.61283                        283212.19
4051032.75        44.80323
      283188.06     4051032.75        44.68817                        283163.94
4051032.75        44.28849
      283139.81     4051032.75        43.60425                        283115.69
4051032.75        42.62910
      283091.56     4051032.75        41.35032                        283067.44
4051032.75        39.72641
      283043.31     4051032.75        37.69976                        283019.16
4051032.75        35.19293
      282995.06     4051032.75        32.10312                        282970.91
4051032.75        28.24141
      282946.78     4051032.75        23.44995                        282922.66
4051032.75        18.13163
      282898.53     4051032.75        14.77281                        283347.12
4051015.75        30.94365
      283376.12     4051048.50        27.92311                        283308.69
4051007.75        32.75948
      283284.56     4051007.75        33.62902                        283260.44
4051007.75        34.02229
      283236.31     4051007.75        34.11081                        283212.19
4051007.75        33.92775
      283188.06     4051007.75        33.51278                        283163.94
4051007.75        32.87812
      283139.81     4051007.75        32.01719                        283115.69
4051007.75        30.93029
      283091.56     4051007.75        29.60151                        283067.44
4051007.75        27.99677
*** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                    ***        10/15/09
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**MODELOPTs:
                                              PAGE  11
CONC                          DFAULT ELEV
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*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
283043.31	4051007.75	26.08872	283019.16	4051007.75	23.85015
282995.06	4051007.75	21.26909	282970.91	4051007.75	18.33900
282946.78	4051007.75	15.25680	282922.66	4051007.75	12.67441
282898.53	4051007.75	11.04021	283348.91	4050991.75	26.72471
283381.12	4051010.25	24.94064	283397.62	4051037.75	23.68638
283308.69	4050982.75	27.28230	283284.56	4050982.75	27.72273
283260.44	4050982.75	27.81499	283236.31	4050982.75	27.66463
283212.19	4050982.75	27.29317	283188.06	4050982.75	26.72364
283163.94	4050982.75	25.96887	283139.81	4050982.75	25.02570
283115.69	4050982.75	23.90272	283091.56	4050982.75	22.59608
283067.44	4050982.75	21.08611	283043.31	4050982.75	19.36667
283019.16	4050982.75	17.45005	282995.06	4050982.75	15.37501
282970.91	4050982.75	13.22154	282946.78	4050982.75	11.25281
282922.66	4050982.75	9.76442	282898.53	4050982.75	8.72850
283350.00	4050967.50	23.36706	283384.34	4050987.00	22.73441
283419.12	4051026.25	20.56614	283420.00	4051065.75	20.22897
283308.69	4050957.75	23.28293	283284.56	4050957.75	23.46063
283260.44	4050957.75	23.38115	283236.31	4050957.75	23.09599
283212.19	4050957.75	22.61927	283188.06	4050957.75	21.97372
283163.94	4050957.75	21.17352	283139.81	4050957.75	20.22096
283115.69	4050957.75	19.12538	283091.56	4050957.75	17.89132
283067.44	4050957.75	16.51631	283043.31	4050957.75	15.01029
283019.16	4050957.75	13.40415	282995.06	4050957.75	11.76646
282970.91	4050957.75	10.20832	282946.78	4050957.75	8.90329
282922.66	4050957.75	7.91864	282898.53	4050957.75	7.17613
282873.53	4051057.75	18.72931	282873.47	4051082.25	25.31713
282873.38	4051106.75	30.13693	282873.31	4051131.25	33.51359

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      282873.25    4051155.75       35.88475                        282873.16
4051180.25        37.57080
      282873.09    4051204.75       38.83172                        282873.03
4051229.25        39.75555
      282872.94    4051253.75       40.37437                        282872.88
4051278.25        40.75471
      282872.81    4051302.75       40.90498                        282872.72
4051327.25        40.77998
      282872.66    4051351.75       40.35765                        282872.59
4051376.25        39.57544
      282872.50    4051400.75       38.26110                        282872.44
4051425.25        36.07007
      282872.34    4051449.75       32.31912                        282872.28
4051474.25        25.77528
      282855.88    4051040.00       13.49122                        282848.47
4051082.00        20.21900
      282848.38    4051106.50       23.47087                        282848.31
4051131.00        26.16879
      282848.25    4051155.75       28.29257                        282848.16
4051180.25        29.86805
      282848.09    4051204.75       31.07513                        282848.03
4051229.25        31.98458
      282847.94    4051253.75       32.61791                        282847.88
4051278.25        33.02541
      282847.81    4051302.75       33.21661                        282847.72
4051327.25        33.15139
1 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***        10/15/09
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                                 ***        09:49:26
**MODELOPTs:
                                            PAGE  12
CONC                          DFAULT ELEV

                                 *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP: PAREA1   ***
                                     INCLUDING SOURCE(S):      PAREA1   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                     ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

      X-COORD (M)    Y-COORD (M)        CONC                        X-COORD (M)
 Y-COORD (M)         CONC
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
      282847.66    4051351.75       32.80934                        282847.59
 4051376.25        32.11594
      282847.50    4051400.75       30.93226                        282847.44
 4051425.25        29.03194
      282847.34    4051449.75       26.05413                        282847.28
 4051474.25        21.83521
      282830.88    4051039.75       12.28164                        282863.25
 4050997.25         8.89464
      282823.47    4051082.00       17.21599                        282823.38
 4051106.50        19.58158
      282823.31    4051131.00       21.64325                        282823.25
 4051155.50        23.40977
      282823.16    4051180.00       24.83158                        282823.09
 4051204.50        25.95610
      282823.03    4051229.00       26.82575                        282822.94
 4051253.50        27.45481
      282822.88    4051278.00       27.87468                        282822.81
 4051302.75        28.08642
      282822.72    4051327.25       28.05424                        282822.66
 4051351.75        27.76762
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      282822.59    4051376.25       27.15827                          282822.50
4051400.75        26.10372
      282822.44    4051425.25       24.46853                          282822.34
4051449.75        22.10122
      282822.28    4051474.25       19.08100                          282805.88
4051039.75        11.29571
      282820.59    4051004.50        8.64404                          282845.59
4050979.50         7.38138
      282798.47    4051082.00       15.12173                          282798.38
4051106.50        16.96075
      282798.31    4051131.00       18.55735                          282798.25
4051155.50        19.99986
      282798.16    4051180.00       21.22716                          282798.09
4051204.50        22.23812
      282798.03    4051229.00       23.04617                          282797.94
4051253.50        23.65434
      282797.88    4051278.00       24.06996                          282797.81
4051302.50        24.27877
      282797.72    4051327.00       24.26716                          282797.66
4051351.50        24.03345
      282797.59    4051376.00       23.51304                          282797.50
4051400.50        22.58726
      282797.44    4051425.00       21.18390                          282797.34
4051449.75        19.27278
      282797.28    4051474.25       16.97610                          282897.19
4051499.50        20.87081
      282920.88    4051499.50       20.95175                          282944.59
4051499.50        20.70994
      282968.28    4051499.75       20.20897                          282991.97
4051499.75        19.63300
      283015.66    4051499.75       18.92223                          283039.34
4051500.00        18.01086
      283063.03    4051500.00       17.04903                          283086.72
4051500.00        15.94358
      283110.41    4051500.25       14.61344                          283134.12
4051500.25        13.19571
      283157.81    4051500.25       11.58913                          283181.50
4051500.50         9.72402
      283205.19    4051500.50        7.78222                          283228.88
4051500.50         5.85319
      283252.56    4051500.50        4.39424                          283276.25
4051500.75         3.65289
      282879.47    4051517.00       16.77649                          282920.81
4051524.50        15.43254
      282944.50    4051524.50       15.03956                          282968.19
4051524.75        14.48917
      282991.88    4051524.75       13.88464                          283015.56
4051524.75        13.19759
      283039.25    4051525.00       12.38673                          283062.94
4051525.00        11.52489
      283086.62    4051525.00       10.56541                          283110.34
4051525.25         9.47999
      283134.03    4051525.25        8.35067                          283157.72
4051525.25         7.13883
      283181.41    4051525.50        5.87528                          283205.09
4051525.50         4.71447
      283228.78    4051525.50        3.74653                          283252.47
4051525.50         3.11177
      283276.16    4051525.75        2.75109                          282879.38
4051542.00        13.31387
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**MODELOPTs:
                                              PAGE  13
CONC                        DFAULT ELEV
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*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR
POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3
**

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
282836.81	4051509.50	16.16257	282920.72	4051549.50	12.04430
282944.41	4051549.50	11.60355	282968.09	4051549.75	11.05885
282991.81	4051549.75	10.47524	283015.50	4051549.75	9.83388
283039.19	4051550.00	9.10552	283062.88	4051550.00	8.34129
283086.56	4051550.00	7.52611	283110.25	4051550.25	6.65325
283133.94	4051550.25	5.77672	283157.62	4051550.25	4.89709
283181.34	4051550.50	4.05871	283205.03	4051550.50	3.34700
283228.72	4051550.50	2.78774	283252.41	4051550.50	2.42652
283276.09	4051550.75	2.20378	282879.31	4051567.00	10.85237
282844.00	4051552.25	12.07105	282819.09	4051527.25	13.70400
282920.62	4051574.50	9.67180	282944.34	4051574.50	9.22117
282968.03	4051574.75	8.70286	282991.72	4051574.75	8.16448
283015.41	4051574.75	7.58294	283039.09	4051575.00	6.93921
283062.78	4051575.00	6.28027	283086.47	4051575.00	5.60785
283110.16	4051575.25	4.92207	283133.88	4051575.25	4.25531
283157.56	4051575.25	3.62131	283181.25	4051575.50	3.05178
283204.94	4051575.50	2.58100	283228.62	4051575.50	2.21529
283252.31	4051575.50	1.98027	283276.00	4051575.75	1.82687
283297.66	4051474.25	4.82468	283318.47	4051464.50	4.85206
283305.81	4051507.75	2.89890	283340.81	4051479.50	3.34592
283329.41	4051518.50	2.39280	283302.75	4051534.75	2.28875
283361.66	4051470.25	3.35750	283363.81	4051505.00	2.36450
283350.09	4051531.00	2.02843	283320.44	4051549.00	1.93744

*** AERMOD - VERSION 07026 *** *** C:\Lakes\BFD\BFD.isc
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**MODELOPTs:
PAGE 14
CONC DFAULT ELEV

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR
POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3
**

X-COORD (M) (M)	Y-COORD (M) Y-COORD (M)	CONC CONC	(YYMMDDHH) (YYMMDDHH)	X-COORD
283280.97	4051443.25	486.81241	(06012003)	
283277.22	4051418.00	508.71835	(06012003)	
283305.69	4051439.50	426.15561	(06012003)	
283301.94	4051414.25	444.89371	(06012003)	
283330.41	4051435.75	385.25986	(06012003)	
283326.66	4051410.50	401.24628	(06012003)	
283355.16	4051432.00	354.71964	(06012003)	
283351.38	4051407.00	368.54300	(06012003)	
283276.66	4051374.50	509.19589	(06012003)	
283276.22	4051351.00	511.94800	(06012003)	
283301.62	4051374.00	446.03888	(06012003)	
283301.22	4051350.50	448.04788	(06012003)	
283326.62	4051373.50	402.34726	(06012003)	
283326.22	4051350.00	403.91052	(06012003)	
283351.62	4051373.00	369.46552	(06012003)	
283351.22	4051349.75	370.81555	(06012003)	
283279.88	4051315.00	507.83139	(06012003)	
283304.78	4051317.25	445.40048	(06012003)	
283329.66	4051319.75	402.10623	(06012003)	
283354.53	4051322.25	369.42197	(06012003)	
283283.25	4051278.75	514.95502	(07022102)	
283308.12	4051281.25	447.70609	(05010606)	
283333.03	4051283.50	403.60434	(08012822)	
283357.91	4051285.75	370.79114	(06012003)	
283288.59	4051245.75	514.72443	(05010606)	
283296.94	4051208.75	516.67706	(07013105)	
283312.97	4051251.25	449.55640	(07022102)	
283321.34	4051214.50	451.38986	(08012822)	
283337.34	4051256.75	404.22821	(06012003)	
283345.72	4051220.00	407.00256	(06012003)	
283361.72	4051262.25	371.48068	(06012003)	
283370.09	4051225.50	373.40735	(06012003)	
283309.06	4051169.25	524.19965	(06012003)	
283332.97	4051176.50	457.13190	(06012003)	
283356.91	4051183.75	411.31693	(08012822)	
283380.81	4051191.00	377.07449	(06012003)	
283322.34	4051138.25	531.90399	(06012003)	
283345.38	4051148.00	463.86728	(06012003)	
283368.38	4051157.75	416.18176	(06012003)	
283391.38	4051167.50	379.92709	(06012003)	
283337.91	4051103.50	532.77631	(05022402)	
283360.56	4051114.00	467.32315	(08012822)	
283383.22	4051124.50	421.60751	(06012003)	
283405.88	4051135.25	386.16486	(06012003)	
283354.84	4051069.50	536.87732	(05010606)	
283376.84	4051081.50	466.58231	(08022521)	
283398.84	4051093.25	416.34891	(05022402)	
283420.88	4051105.25	378.32547	(06012003)	
283343.56	4051038.75	615.83893	(06022022)	
283308.69	4051032.75	627.71271	(06022022)	
283284.56	4051032.75	621.05432	(06022022)	
283260.44	4051032.75	609.77789	(06022022)	
283236.31	4051032.75	863.71082	(08040401)	
283212.19	4051032.75	1239.65869	(08040401)	
283188.06	4051032.75	1640.32056	(08040401)	

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283163.94   4051032.75      1895.30762  (08040401)
        283139.81   4051032.75      1973.95959  (08040401)
283115.69   4051032.75      1984.55286  (08040401)
        283091.56   4051032.75      1985.11780  (08040401)
283067.44   4051032.75      2034.51648  (08041724)
        283043.31   4051032.75      2050.04785  (08041724)
283019.16   4051032.75      2051.73877  (08041724)
        282995.06   4051032.75      2051.78052  (08041724)
282970.91   4051032.75      2051.71753  (08041724)
        282946.78   4051032.75      2051.66553  (08041724)
282922.66   4051032.75      2051.67358  (08041724)
        282898.53   4051032.75      2046.86682  (08041724)
283347.12   4051015.75       573.93085  (06022022)
        283376.12   4051048.50       500.68417  (07121020)
283308.69   4051007.75       547.18719  (06022022)
        283284.56   4051007.75       536.93292  (06022022)
283260.44   4051007.75       556.20392  (08040401)
        283236.31   4051007.75       824.77209  (08040401)
283212.19   4051007.75      1166.72241  (08040401)
        283188.06   4051007.75      1550.02881  (08040401)
283163.94   4051007.75      1825.90344  (08040401)
        283139.81   4051007.75      1929.49829  (08040401)
283115.69   4051007.75      1947.78516  (08040401)
        283091.56   4051007.75      1949.18591  (08040401)
283067.44   4051007.75      1968.96387  (08041724)
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                  ***        10/15/09
                                        ***
                                 ***        09:49:26
**MODELOPTs:
                                            PAGE  15
CONC                             DFAULT ELEV


                                 *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                     INCLUDING SOURCE(S):     PAREA1   ,

                                              *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                          ** CONC OF OTHER    IN MICROGRAMS/M**3
                           **

    X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)                X-COORD
(M)  Y-COORD (M)           CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        283043.31   4051007.75      2000.36230  (08041724)
283019.16   4051007.75      2005.35193  (08041724)
        282995.06   4051007.75      2005.70886  (08041724)
282970.91   4051007.75      2005.63489  (08041724)
        282946.78   4051007.75      2005.53931  (08041724)
282922.66   4051007.75      2005.44983  (08041724)
        282898.53   4051007.75      2004.91345  (08041724)
283348.91   4050991.75       518.66797  (06022022)
        283381.12   4051010.25       504.84293  (07011419)
283397.62   4051037.75       459.44415  (07011520)
        283308.69   4050982.75       487.04349  (06022022)
283284.56   4050982.75       486.36740  (06022005)
        283260.44   4050982.75       498.97583  (08040401)
283236.31   4050982.75       747.48120  (08040401)
        283212.19   4050982.75      1058.63330  (08040401)
283188.06   4050982.75      1421.52576  (08040401)
        283163.94   4050982.75      1711.27917  (08040401)
283139.81   4050982.75      1840.20374  (08040401)
        283115.69   4050982.75      1869.00830  (08040401)
283091.56   4050982.75      1872.03503  (08040401)
        283067.44   4050982.75      1872.09729  (08040401)
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283043.31   4050982.75     1907.58777  (08041724)
       283019.16   4050982.75     1919.51880  (08041724)
282995.06   4050982.75     1920.93909  (08041724)
       282970.91   4050982.75     1920.95215  (08041724)
282946.78   4050982.75     1920.84534  (08041724)
       282922.66   4050982.75     1920.74487  (08041724)
282898.53   4050982.75     1920.59631  (08041724)
       283350.00   4050967.50      472.60681  (06022022)
283384.34   4050987.00      478.97742  (08021407)
       283419.12   4051026.25      427.35754  (07121020)
283420.00   4051065.75      405.71887  (05022402)
       283308.69   4050957.75      449.12579  (06012020)
283284.56   4050957.75      448.66101  (06012020)
       283260.44   4050957.75      447.24637  (06012020)
283236.31   4050957.75      665.89746  (08040401)
       283212.19   4050957.75      949.56329  (08040401)
283188.06   4050957.75     1290.51880  (08040401)
       283163.94   4050957.75     1587.59485  (08040401)
283139.81   4050957.75     1740.67542  (08040401)
       283115.69   4050957.75     1782.66614  (08040401)
283091.56   4050957.75     1788.44141  (08040401)
       283067.44   4050957.75     1788.76367  (08040401)
283043.31   4050957.75     1803.98999  (08041724)
       283019.16   4050957.75     1827.74524  (08041724)
282995.06   4050957.75     1831.77014  (08041724)
       282970.91   4050957.75     1832.10767  (08041724)
282946.78   4050957.75     1832.02747  (08041724)
       282922.66   4050957.75     1831.94153  (08041724)
282898.53   4050957.75     1831.83472  (08041724)
       282873.53   4051057.75     1608.54370  (08041724)
282873.47   4051082.25     1518.62671  (08041724)
       282873.38   4051106.75     1424.75574  (08041724)
282873.31   4051131.25     1327.80542  (08041724)
       282873.25   4051155.75     1226.81812  (08041724)
282873.16   4051180.25     1120.76184  (08041724)
       282873.09   4051204.75     1010.93585  (08041724)
282873.03   4051229.25      986.08405  (04101007)
       282872.94   4051253.75      984.28931  (04101007)
282872.88   4051278.25      983.64398  (04101007)
       282872.81   4051302.75      983.21942  (04101007)
282872.72   4051327.25      979.48438  (04101007)
       282872.66   4051351.75      963.51471  (04101007)
282872.59   4051376.25      917.97003  (04101007)
       282872.50   4051400.75      820.71014  (04101007)
282872.44   4051425.25      742.92053  (06120504)
       282872.34   4051449.75      751.09363  (06120504)
282872.28   4051474.25      749.82861  (06120504)
       282855.88   4051040.00     1357.21790  (08041724)
282848.47   4051082.00     1084.07776  (08041724)
       282848.38   4051106.50      990.06970  (08041724)
282848.31   4051131.00      892.96747  (08041724)
       282848.25   4051155.75      873.52930  (04101007)
282848.16   4051180.25      868.57941  (04101007)
       282848.09   4051204.75      865.05994  (04101007)
282848.03   4051229.25      862.65967  (04101007)
       282847.94   4051253.75      861.13049  (04101007)
282847.88   4051278.25      860.44812  (04101007)
       282847.81   4051302.75      859.16718  (04101007)
282847.72   4051327.25      852.60907  (04101007)
1 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***        10/15/09
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**MODELOPTS:
                                            PAGE  16
CONC                          DFAULT ELEV

                                 *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
```

VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M) (M)	Y-COORD (M) Y-COORD (M)	CONC CONC	(YYMMDDHH) (YYMMDDHH)	X-COORD
282847.66	4051351.75	830.54816	(04101007)	
282847.59	4051376.25	776.16534	(04101007)	
282847.50	4051400.75	669.95587	(04101007)	
282847.44	4051425.25	644.63232	(06122924)	
282847.34	4051449.75	660.78772	(06120504)	
282847.28	4051474.25	667.36188	(06120504)	
282830.88	4051039.75	967.53101	(08041724)	
282863.25	4050997.25	1628.36292	(08041724)	
282823.47	4051082.00	807.76141	(04101007)	
282823.38	4051106.50	801.31311	(04101007)	
282823.31	4051131.00	794.05469	(04101007)	
282823.25	4051155.50	788.23193	(04101007)	
282823.16	4051180.00	783.72931	(04101007)	
282823.09	4051204.50	780.53326	(04101007)	
282823.03	4051229.00	778.39349	(04101007)	
282822.94	4051253.50	777.05432	(04101007)	
282822.88	4051278.00	776.18079	(04101007)	
282822.81	4051302.75	773.61664	(04101007)	
282822.72	4051327.25	763.59668	(04101007)	
282822.66	4051351.75	735.13562	(04101007)	
282822.59	4051376.25	672.39819	(04101007)	
282822.50	4051400.75	580.77972	(06122905)	
282822.44	4051425.25	572.42596	(07012604)	
282822.34	4051449.75	587.41479	(06120504)	
282822.28	4051474.25	601.53497	(06120504)	
282805.88	4051039.75	735.69879	(05050521)	
282820.59	4051004.50	944.23529	(08041724)	
282845.59	4050979.50	1391.19482	(08041724)	
282798.47	4051082.00	741.76837	(04101007)	
282798.38	4051106.50	735.85748	(04101007)	
282798.31	4051131.00	729.19574	(04101007)	
282798.25	4051155.50	723.87012	(04101007)	
282798.16	4051180.00	719.78760	(04101007)	
282798.09	4051204.50	716.91571	(04101007)	
282798.03	4051229.00	715.02142	(04101007)	
282797.94	4051253.50	713.78522	(04101007)	
282797.88	4051278.00	712.48993	(04101007)	
282797.81	4051302.50	708.23230	(04101007)	
282797.72	4051327.00	694.37262	(04101007)	
282797.66	4051351.50	659.66016	(04101007)	
282797.59	4051376.00	589.50677	(04101007)	
282797.50	4051400.50	539.39166	(06122905)	
282797.44	4051425.00	533.91565	(06122905)	
282797.34	4051449.75	525.37897	(06122905)	
282797.28	4051474.25	543.61548	(06120504)	
282897.19	4051499.50	780.31610	(08012104)	
282920.88	4051499.50	772.79291	(06020923)	
282944.59	4051499.50	756.52875	(06020923)	
282968.28	4051499.75	746.79541	(08011923)	
282991.97	4051499.75	746.14203	(08011923)	
283015.66	4051499.75	742.81818	(08011923)	
283039.34	4051500.00	729.46979	(08011923)	
283063.03	4051500.00	714.65533	(06020320)	
283086.72	4051500.00	713.90460	(06020320)	
283110.41	4051500.25	706.77307	(06020320)	
283134.12	4051500.25	703.93475	(07021619)	

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       283157.81   4051500.25      703.06189  (07021619)
283181.50   4051500.50      689.09644  (07021619)
       283205.19   4051500.50      602.19617  (07021619)
283228.88   4051500.50      455.87418  (07010205)
       283252.56   4051500.50      456.63202  (07010205)
283276.25   4051500.75      455.70258  (06021205)
       282879.47   4051517.00      717.88843  (06020923)
282920.81   4051524.50      673.76367  (06020923)
       282944.50   4051524.50      669.03326  (08011923)
282968.19   4051524.75      667.95343  (08011923)
       282991.88   4051524.75      665.83844  (08011923)
283015.56   4051524.75      657.72833  (08011923)
       283039.25   4051525.00      640.92188  (06020320)
283062.94   4051525.00      640.68860  (06020320)
       283086.62   4051525.00      638.46313  (06020320)
283110.34   4051525.25      632.50464  (07021619)
       283134.03   4051525.25      632.41290  (07021619)
283157.72   4051525.25      630.30365  (07021619)
       283181.41   4051525.50      607.82501  (07021619)
283205.09   4051525.50      500.07306  (07021619)
       283228.78   4051525.50      398.04156  (07010205)
283252.47   4051525.50      399.77316  (07010205)
       283276.16   4051525.75      397.69720  (07010205)
282879.38   4051542.00      644.63928  (06020923)
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                ***        10/15/09
                                      ***
                                ***        09:49:26
**MODELOPTs:
                                           PAGE  17
CONC                          DFAULT ELEV


                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                     INCLUDING SOURCE(S):      PAREA1   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                            ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD
(M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       282836.81   4051509.50      635.90045  (06120504)
282920.72   4051549.50      611.06335  (07012503)
       282944.41   4051549.50      610.80389  (08011923)
282968.09   4051549.75      608.93616  (08011923)
       282991.81   4051549.75      603.56689  (08011923)
283015.50   4051549.75      587.49878  (08011923)
       283039.19   4051550.00      585.87958  (06020320)
283062.88   4051550.00      585.10492  (06020320)
       283086.56   4051550.00      579.81812  (06020320)
283110.25   4051550.25      578.73743  (07021619)
       283133.94   4051550.25      578.45062  (07021619)
283157.62   4051550.25      574.17389  (07021619)
       283181.34   4051550.50      540.91400  (07021619)
283205.03   4051550.50      415.57388  (07021619)
       283228.72   4051550.50      357.85938  (07010205)
283252.41   4051550.50      360.79776  (07010205)
       283276.09   4051550.75      361.41714  (07010205)
282879.31   4051567.00      581.70245  (06020923)
       282844.00   4051552.25      623.51147  (06020923)
282819.09   4051527.25      592.72467  (06120504)
       282920.62   4051574.50      565.85266  (08011923)
282944.34   4051574.50      564.98291  (07012503)
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        282968.03   4051574.75       561.01025  (08011923)
282991.72   4051574.75       549.89642  (07012503)
        283015.41   4051574.75       543.41058  (06020320)
283039.09   4051575.00       542.76288  (06020320)
        283062.78   4051575.00       540.72900  (06020320)
283086.47   4051575.00       537.00043  (07021619)
        283110.16   4051575.25       536.59772  (07021619)
283133.88   4051575.25       535.88574  (07021619)
        283157.56   4051575.25       528.22015  (07021619)
283181.25   4051575.50       482.82510  (07021619)
        283204.94   4051575.50       344.94785  (07021619)
283228.62   4051575.50       326.08783  (07010205)
        283252.31   4051575.50       330.60168  (07010205)
283276.00   4051575.75       332.54443  (07010205)
        283297.66   4051474.25       435.26740  (07121021)
283318.47   4051464.50       381.36542  (07120905)
        283305.81   4051507.75       427.41562  (07120905)
283340.81   4051479.50       349.80478  (07120905)
        283329.41   4051518.50       385.58136  (07120905)
283302.75   4051534.75       377.95694  (06021205)
        283361.66   4051470.25       321.26929  (07120905)
283363.81   4051505.00       326.36166  (07120905)
        283350.09   4051531.00       354.48438  (07120905)
283320.44   4051549.00       351.85028  (06021205)
 *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                 ***          10/15/09
                                      ***
                                 ***         09:49:26
**MODELOPTs:
                                             PAGE  18
CONC                          DFAULT ELEV


                                 *** THE   1ST HIGHEST  3-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                     INCLUDING SOURCE(S):      PAREA1   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                          ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

     X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)                X-COORD
(M)  Y-COORD (M)        CONC      (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        283280.97   4051443.25       413.15799  (05010406)
283277.22   4051418.00       420.92361  (05010406)
        283305.69   4051439.50       352.03043  (05010406)
283301.94   4051414.25       358.07724  (05010406)
        283330.41   4051435.75       310.55722  (05010406)
283326.66   4051410.50       314.89075  (05010406)
        283355.16   4051432.00       278.81073  (05010406)
283351.38   4051407.00       281.93774  (05010406)
        283276.66   4051374.50       433.84018  (05011521)
283276.22   4051351.00       454.69449  (05011521)
        283301.62   4051374.00       367.33105  (05011521)
283301.22   4051350.50       388.69357  (05011521)
        283326.62   4051373.50       320.33322  (05011521)
283326.22   4051350.00       342.15372  (05011521)
        283351.62   4051373.00       283.54785  (05011521)
283351.22   4051349.75       305.48434  (05011521)
        283279.88   4051315.00       461.21457  (05011521)
283304.78   4051317.25       398.12405  (05011521)
        283329.66   4051319.75       352.83057  (05011521)
283354.53   4051322.25       316.51288  (05011521)
        283283.25   4051278.75       468.50122  (07121021)
283308.12   4051281.25       397.97934  (05011521)
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        283333.03   4051283.50       354.01163  (05011521)
283357.91   4051285.75       319.57816  (05011521)
        283288.59   4051245.75       486.14172  (07121021)
283296.94   4051208.75       489.59485  (07121021)
        283312.97   4051251.25       411.22827  (07121021)
283321.34   4051214.50       419.09937  (07121021)
        283337.34   4051256.75       354.09732  (07121021)
283345.72   4051220.00       367.28915  (07121021)
        283361.72   4051262.25       314.31473  (05011521)
283370.09   4051225.50       323.21127  (07121021)
        283309.06   4051169.25       486.30655  (08090421)
283332.97   4051176.50       410.66678  (08090421)
        283356.91   4051183.75       359.65536  (07121021)
283380.81   4051191.00       320.79218  (07121021)
        283322.34   4051138.25       492.95410  (08090421)
283345.38   4051148.00       414.30618  (08090421)
        283368.38   4051157.75       360.20105  (08090421)
283391.38   4051167.50       318.72134  (08090421)
        283337.91   4051103.50       502.61621  (08090421)
283360.56   4051114.00       422.35410  (08090421)
        283383.22   4051124.50       367.10812  (08090421)
283405.88   4051135.25       324.19928  (08090421)
        283354.84   4051069.50       499.56540  (08090421)
283376.84   4051081.50       425.99966  (08090421)
        283398.84   4051093.25       372.06406  (08090421)
283420.88   4051105.25       329.36465  (08090421)
        283343.56   4051038.75       570.78937  (05101121)
283308.69   4051032.75       585.87567  (08032221)
        283284.56   4051032.75       578.09302  (08032221)
283260.44   4051032.75       577.47070  (05063003)
        283236.31   4051032.75       576.85620  (05090206)
283212.19   4051032.75       576.51392  (05090206)
        283188.06   4051032.75       622.16986c (08040403)
283163.94   4051032.75       720.35577c (08040403)
        283139.81   4051032.75       758.68823c (08040403)
283115.69   4051032.75       773.52533c (08040403)
        283091.56   4051032.75       784.52515c (08040403)
283067.44   4051032.75       794.96954c (08040403)
        283043.31   4051032.75       805.04736c (08040403)
283019.16   4051032.75       814.83917c (08040403)
        282995.06   4051032.75       824.27850c (08040403)
282970.91   4051032.75       833.49805c (08040403)
        282946.78   4051032.75       842.41412c (08040403)
282922.66   4051032.75       851.11395c (08040403)
        282898.53   4051032.75       822.10822c (08040403)
283347.12   4051015.75       507.08340  (08032221)
        283376.12   4051048.50       459.24905  (08102024)
283308.69   4051007.75       504.36337  (08032221)
        283284.56   4051007.75       494.50937  (08032221)
283260.44   4051007.75       507.37448  (05090206)
        283236.31   4051007.75       509.27670  (05090206)
283212.19   4051007.75       508.45557  (05090206)
        283188.06   4051007.75       560.97003c (08040403)
283163.94   4051007.75       665.41541c (08040403)
        283139.81   4051007.75       711.52264c (08040403)
283115.69   4051007.75       728.42657c (08040403)
        283091.56   4051007.75       739.10468c (08040403)
283067.44   4051007.75       748.91748c (08040403)
1 *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                 ***          10/15/09
                                     ***
                                 ***          09:49:26
**MODELOPTs:
                                              PAGE  19
CONC                          DFAULT ELEV


                                 *** THE   1ST HIGHEST  3-HR AVERAGE CONCENTRATION
 VALUES FOR SOURCE GROUP:  PAREA1    ***
```

INCLUDING SOURCE(S): PAREA1 ,

POINTS *** *** DISCRETE CARTESIAN RECEPTOR

** ** CONC OF OTHER IN MICROGRAMS/M**3

X-COORD (M) (M)	Y-COORD (M) Y-COORD (M)	CONC CONC	(YYMMDDHH) (YYMMDDHH)	X-COORD
283043.31	4051007.75	758.45581c	(08040403)	
283019.16	4051007.75	767.76422c	(08040403)	
282995.06	4051007.75	776.81104c	(08040403)	
282970.91	4051007.75	785.67438c	(08040403)	
282946.78	4051007.75	794.31769c	(08040403)	
282922.66	4051007.75	802.75336c	(08040403)	
282898.53	4051007.75	787.55670c	(08040403)	
283348.91	4050991.75	464.52274	(08032221)	
283381.12	4051010.25	449.55417	(05101121)	
283397.62	4051037.75	412.62500	(08102024)	
283308.69	4050982.75	444.65225	(08032221)	
283284.56	4050982.75	448.73471	(05090206)	
283260.44	4050982.75	460.77609	(05090206)	
283236.31	4050982.75	461.89767	(05090206)	
283212.19	4050982.75	460.34464	(05090206)	
283188.06	4050982.75	496.18723c	(08040403)	
283163.94	4050982.75	604.53442c	(08040403)	
283139.81	4050982.75	658.54315c	(08040403)	
283115.69	4050982.75	678.50934c	(08040403)	
283091.56	4050982.75	689.31592c	(08040403)	
283067.44	4050982.75	698.67090c	(08040403)	
283043.31	4050982.75	707.66748c	(08040403)	
283019.16	4050982.75	716.47333c	(08040403)	
282995.06	4050982.75	725.09106c	(08040403)	
282970.91	4050982.75	733.55768c	(08040403)	
282946.78	4050982.75	741.85907c	(08040403)	
282922.66	4050982.75	750.00171c	(08040403)	
282898.53	4050982.75	743.95697c	(08040403)	
283350.00	4050967.50	424.30667	(08032221)	
283384.34	4050987.00	417.67599	(05101121)	
283419.12	4051026.25	375.65698	(08102024)	
283420.00	4051065.75	357.50549	(08090421)	
283308.69	4050957.75	396.33936	(08032221)	
283284.56	4050957.75	416.08975	(05090206)	
283260.44	4050957.75	425.17422	(05090206)	
283236.31	4050957.75	425.41220	(05090206)	
283212.19	4050957.75	422.89883	(05090206)	
283188.06	4050957.75	437.74414c	(08040403)	
283163.94	4050957.75	546.08496c	(08040403)	
283139.81	4050957.75	607.31024c	(08040403)	
283115.69	4050957.75	631.20605c	(08040403)	
283091.56	4050957.75	642.55396c	(08040403)	
283067.44	4050957.75	651.64191c	(08040403)	
283043.31	4050957.75	660.23584c	(08040403)	
283019.16	4050957.75	668.58319c	(08040403)	
282995.06	4050957.75	676.75122c	(08040403)	
282970.91	4050957.75	684.81512c	(08040403)	
282946.78	4050957.75	692.75317c	(08040403)	
282922.66	4050957.75	700.57513c	(08040403)	
282898.53	4050957.75	699.55298c	(08040403)	
282873.53	4051057.75	641.19684	(05030724)	
282873.47	4051082.25	641.38202	(05030724)	
282873.38	4051106.75	640.48480	(05030724)	
282873.31	4051131.25	636.06714	(05030724)	
282873.25	4051155.75	624.63019	(05030724)	
282873.16	4051180.25	610.79657	(07022806)	
282873.09	4051204.75	609.12665	(07022806)	

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282873.03   4051229.25      608.15002  (07022806)
       282872.94   4051253.75      607.84937  (07022806)
282872.88   4051278.25      608.34985  (07022806)
       282872.81   4051302.75      613.44189  (08021724)
282872.72   4051327.25      624.88452  (08021724)
       282872.66   4051351.75      635.97650  (08021724)
282872.59   4051376.25      647.80511  (08021724)
       282872.50   4051400.75      658.13989  (08021724)
282872.44   4051425.25      663.21674  (08021724)
       282872.34   4051449.75      635.78107  (08021724)
282872.28   4051474.25      611.43280  (08042606)
       282855.88   4051040.00      583.82098  (05030724)
282848.47   4051082.00      563.93524  (05030724)
       282848.38   4051106.50      559.93341  (05030724)
282848.31   4051131.00      549.96832  (05030724)
       282848.25   4051155.75      543.60187  (07022806)
282848.16   4051180.25      541.36768  (07022806)
       282848.09   4051204.75      539.91901  (07022806)
282848.03   4051229.25      539.16083  (07022806)
       282847.94   4051253.75      539.09552  (07022806)
282847.88   4051278.25      539.11432  (07022806)
       282847.81   4051302.75      537.04468  (06010724)
282847.72   4051327.25      543.51715  (08021724)
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***         10/15/09
                                        ***
                                 ***        09:49:26
**MODELOPTs:
                                            PAGE  20
CONC                        DFAULT ELEV


                                 *** THE   1ST HIGHEST  3-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                     INCLUDING SOURCE(S):      PAREA1   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                             ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD
(M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       282847.66   4051351.75      555.61102  (08021724)
282847.59   4051376.25      566.68939  (08021724)
       282847.50   4051400.75      577.74139  (08021724)
282847.44   4051425.25      584.01947  (08021724)
       282847.34   4051449.75      556.06775  (08021724)
282847.28   4051474.25      536.58752  (05102724)
       282830.88   4051039.75      525.10663  (05030724)
282863.25   4050997.25      542.78766c (08041724)
       282823.47   4051082.00      506.60168  (05030724)
282823.38   4051106.50      499.03207  (07022806)
       282823.31   4051131.00      495.57083  (07022806)
282823.25   4051155.50      492.91873  (07022806)
       282823.16   4051180.00      490.95303  (07022806)
282823.09   4051204.50      489.72397  (07022806)
       282823.03   4051229.00      489.19409  (07022806)
282822.94   4051253.50      489.18542  (07022806)
       282822.88   4051278.00      488.04517  (07022806)
282822.81   4051302.75      482.41196  (06010724)
       282822.72   4051327.25      488.12149  (06010724)
282822.66   4051351.75      493.72525  (08021724)
       282822.59   4051376.25      504.93442  (08021724)
282822.50   4051400.75      515.67798  (08021724)
       282822.44   4051425.25      522.87091  (08021724)
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282822.34   4051449.75      494.84610  (05102724)
       282822.28   4051474.25      489.30005  (05102724)
282805.88   4051039.75      480.24515  (05030724)
       282820.59   4051004.50      500.79514  (05030724)
282845.59   4050979.50      463.73160c (08041724)
       282798.47   4051082.00      463.33041  (07022806)
282798.38   4051106.50      459.37418  (07022806)
       282798.31   4051131.00      456.24866  (07022806)
282798.25   4051155.50      453.88046  (07022806)
       282798.16   4051180.00      452.16763  (07022806)
282798.09   4051204.50      451.16980  (07022806)
       282798.03   4051229.00      450.83755  (07022806)
282797.94   4051253.50      450.53857  (07022806)
       282797.88   4051278.00      447.40686  (07022806)
282797.81   4051302.50      438.64340  (06010724)
       282797.72   4051327.00      445.93774  (06010724)
282797.66   4051351.50      450.29361  (06010724)
       282797.59   4051376.00      456.94739  (06091203)
282797.50   4051400.50      466.25668  (08021724)
       282797.44   4051425.00      473.18698  (08021724)
282797.34   4051449.75      452.03397  (05102724)
       282797.28   4051474.25      450.47495  (05102724)
282897.19   4051499.50      636.56860  (08042606)
       282920.88   4051499.50      616.61700  (08042606)
282944.59   4051499.50      594.20599  (08042606)
       282968.28   4051499.75      571.61713  (05010121)
282991.97   4051499.75      548.20020  (05010121)
       283015.66   4051499.75      523.88593  (08042606)
283039.34   4051500.00      498.07791  (08042606)
       283063.03   4051500.00      475.01810  (08120521)
283086.72   4051500.00      456.24313  (08120521)
       283110.41   4051500.25      429.54932  (08120521)
283134.12   4051500.25      402.37805  (08120521)
       283157.81   4051500.25      375.83084  (08120521)
283181.50   4051500.50      352.57022c (06122418)
       283205.19   4051500.50      331.44382c (06122418)
283228.88   4051500.50      297.26697  (06100303)
       283252.56   4051500.50      297.61728  (06100303)
283276.25   4051500.75      255.14561  (05010406)
       282879.47   4051517.00      555.02997  (08042606)
282920.81   4051524.50      513.21600  (08042606)
       282944.50   4051524.50      491.91174  (08042606)
282968.19   4051524.75      469.47720  (08042606)
       282991.88   4051524.75      447.37576  (08042606)
283015.56   4051524.75      424.42490  (08042606)
       283039.25   4051525.00      419.81250  (08120521)
283062.94   4051525.00      406.65292  (08120521)
       283086.62   4051525.00      384.84641  (08120521)
283110.34   4051525.25      358.97842  (08120521)
       283134.03   4051525.25      334.19363  (08120521)
283157.72   4051525.25      309.40427  (08120521)
       283181.41   4051525.50      302.11261c (06122418)
283205.09   4051525.50      274.45670c (06122418)
       283228.78   4051525.50      237.14461  (08120521)
283252.47   4051525.50      220.83977  (06100303)
       283276.16   4051525.75      203.02960  (05010406)
282879.38   4051542.00      485.61707  (08042606)
] *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                 ***          10/15/09
                                        ***
                                 ***          09:49:26
**MODELOPTs:
                                              PAGE  21
CONC                        DFAULT ELEV


                                 *** THE   1ST HIGHEST  3-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                INCLUDING SOURCE(S):      PAREA1   ,
```

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)

282836.81 4051509.50 485.43301 (08042606)
282920.72 4051549.50 435.98148 (08042606)
282944.41 4051549.50 415.60840 (08042606)
282968.09 4051549.75 394.12476 (08042606)
282991.81 4051549.75 381.03198c (05122724)
283015.50 4051549.75 376.80249 (08120521)
283039.19 4051550.00 371.24515 (08120521)
283062.88 4051550.00 354.85086 (08120521)
283086.56 4051550.00 332.30191 (08120521)
283110.25 4051550.25 308.37015 (08120521)
283133.94 4051550.25 285.55423 (08120521)
283157.62 4051550.25 266.37894c (06122418)
283181.34 4051550.50 263.03607c (06122418)
283205.03 4051550.50 229.74312c (06122418)
283228.72 4051550.50 208.72734 (08120521)
283252.41 4051550.50 198.58789 (08120521)
283276.09 4051550.75 167.85175 (05010406)
282879.31 4051567.00 423.28458 (08042606)
282844.00 4051552.25 434.71268 (08042606)
282819.09 4051527.25 439.82028 (08042606)
282920.62 4051574.50 374.12082 (08042606)
282944.34 4051574.50 354.77231c (05122724)
282968.03 4051574.75 353.42270c (05122724)
282991.72 4051574.75 349.94824c (05122724)
283015.41 4051574.75 341.50845c (05122724)
283039.09 4051575.00 330.37686 (08120521)
283062.78 4051575.00 312.55917 (08120521)
283086.47 4051575.00 290.97293 (08120521)
283110.16 4051575.25 269.08401 (08120521)
283133.88 4051575.25 247.81819 (08120521)
283157.56 4051575.25 237.39195c (06122418)
283181.25 4051575.50 230.21266c (06122418)
283204.94 4051575.50 196.48442c (05021424)
283228.62 4051575.50 191.10323 (08120521)
283252.31 4051575.50 184.22882 (08120521)
283276.00 4051575.75 146.78572 (08120521)
283297.66 4051474.25 310.17307 (06100303)
283318.47 4051464.50 297.03421 (05010406)
283305.81 4051507.75 228.55153 (05010406)
283340.81 4051479.50 230.76378 (06100303)
283329.41 4051518.50 200.71556 (05010406)
283302.75 4051534.75 196.72902 (05010406)
283361.66 4051470.25 225.99287 (05010406)
283363.81 4051505.00 197.93909 (06100303)
283350.09 4051531.00 181.50592 (05010406)
283320.44 4051549.00 181.24046 (05010406)

**MODELOPTs:
CONC DFAULT ELEV

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

POINTS *** *** DISCRETE CARTESIAN RECEPTOR

** ** CONC OF OTHER IN MICROGRAMS/M**3

(M) X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
283280.97	4051443.25	304.29596c	(05010408)	283277.22	4051418.00	312.64038c	(05010408)
283305.69	4051439.50	257.78165c	(05010408)	283301.94	4051414.25	264.93182c	(05010408)
283330.41	4051435.75	227.56606c	(05010408)	283326.66	4051410.50	232.34494c	(05010408)
283355.16	4051432.00	204.60928c	(05010408)	283351.38	4051407.00	207.37003c	(05010408)
283276.66	4051374.50	314.05170c	(05010408)	283276.22	4051351.00	315.36258c	(05010408)
283301.62	4051374.00	264.77927c	(05010408)	283301.22	4051350.50	264.53281c	(05010408)
283326.62	4051373.50	230.90623c	(05010408)	283326.22	4051350.00	231.54356c	(05011524)
283351.62	4051373.00	204.77847c	(05010408)	283351.22	4051349.75	207.90703c	(05011524)
283279.88	4051315.00	308.51248c	(05011524)	283304.78	4051317.25	266.24860c	(05011524)
283329.66	4051319.75	236.54256c	(05011524)	283354.53	4051322.25	213.16389c	(05011524)
283283.25	4051278.75	325.63541c	(07121024)	283308.12	4051281.25	266.40283c	(05011524)
283333.03	4051283.50	237.30440c	(05011524)	283357.91	4051285.75	214.83214c	(05011524)
283288.59	4051245.75	341.62149c	(07121024)	283296.94	4051208.75	349.49146c	(08010924)
283312.97	4051251.25	282.93188c	(07121024)	283321.34	4051214.50	292.89697c	(07121024)
283337.34	4051256.75	238.51714c	(07121024)	283345.72	4051220.00	251.87605c	(07121024)
283361.72	4051262.25	212.14140c	(05011524)	283370.09	4051225.50	217.31116c	(07121024)
283309.06	4051169.25	359.72195c	(08010924)	283332.97	4051176.50	297.59497c	(08010924)
283356.91	4051183.75	253.23352c	(08010924)	283380.81	4051191.00	220.95721c	(07121024)
283322.34	4051138.25	363.34818c	(08010924)	283345.38	4051148.00	299.97446c	(08010924)
283368.38	4051157.75	256.14590c	(08010924)	283391.38	4051167.50	221.14458c	(08010924)
283337.91	4051103.50	371.17029c	(08010924)	283360.56	4051114.00	305.52267c	(08010924)
283383.22	4051124.50	261.02542c	(08010924)	283405.88	4051135.25	226.27208c	(08010924)
283354.84	4051069.50	376.02225c	(08010924)	283376.84	4051081.50	310.09418c	(08010924)
283398.84	4051093.25	265.01862c	(08010924)	283420.88	4051105.25	230.14983c	(08010924)
283343.56	4051038.75	398.75732c	(08010924)	283308.69	4051032.75	364.16550c	(06103124)
283284.56	4051032.75	356.21732c	(06103124)	283260.44	4051032.75	376.56845c	(07022524)
283236.31	4051032.75	388.46271c	(07022524)	283212.19	4051032.75	387.00409c	(07022524)
283188.06	4051032.75	378.22818c	(07022524)	283163.94	4051032.75	366.90286c	(07022524)
283139.81	4051032.75	379.34412c	(08040408)	283115.69	4051032.75	386.76266c	(08040408)

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       283091.56   4051032.75      392.26257c (08040408)
283067.44   4051032.75      397.48477c (08040408)
       283043.31   4051032.75      402.52368c (08040408)
283019.16   4051032.75      407.41959c (08040408)
       282995.06   4051032.75      412.13925c (08040408)
282970.91   4051032.75      416.74902c (08040408)
       282946.78   4051032.75      421.20706c (08040408)
282922.66   4051032.75      425.55698c (08040408)
       282898.53   4051032.75      411.05411c (08040408)
283347.12   4051015.75      323.16855c (08010924)
       283376.12   4051048.50      348.74597c (08010924)
283308.69   4051007.75      298.78735c (06103124)
       283284.56   4051007.75      299.67938c (07022524)
283260.44   4051007.75      318.64386c (07022524)
       283236.31   4051007.75      327.69238c (07022524)
283212.19   4051007.75      325.37869c (07022524)
       283188.06   4051007.75      316.42490c (07022524)
283163.94   4051007.75      332.70770c (08040408)
       283139.81   4051007.75      355.76132c (08040408)
283115.69   4051007.75      364.21329c (08040408)
       283091.56   4051007.75      369.55234c (08040408)
283067.44   4051007.75      374.45874c (08040408)
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                ***        10/15/09
                                     ***
                               ***        09:49:26
**MODELOPTs:
                                          PAGE  23
CONC                        DFAULT ELEV


                               *** THE   1ST HIGHEST  8-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                 INCLUDING SOURCE(S):      PAREA1  ,

                                              *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                           ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD
(M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -
       283043.31   4051007.75      379.22791c (08040408)
283019.16   4051007.75      383.88211c (08040408)
       282995.06   4051007.75      388.40552c (08040408)
282970.91   4051007.75      392.83719c (08040408)
       282946.78   4051007.75      397.15884c (08040408)
282922.66   4051007.75      401.37668c (08040408)
       282898.53   4051007.75      393.77835c (08040408)
283348.91   4050991.75      276.99405c (06103124)
       283381.12   4051010.25      317.86685c (08010924)
283397.62   4051037.75      315.21518c (08010924)
       283308.69   4050982.75      256.10059c (07111708)
283284.56   4050982.75      261.99557c (07022524)
       283260.44   4050982.75      276.86758c (07022524)
283236.31   4050982.75      283.62762c (07022524)
       283212.19   4050982.75      280.70001c (07022524)
283188.06   4050982.75      271.70129c (07022524)
       283163.94   4050982.75      302.26721c (08040408)
283139.81   4050982.75      329.27158c (08040408)
       283115.69   4050982.75      339.25467c (08040408)
283091.56   4050982.75      344.65796c (08040408)
       283067.44   4050982.75      349.33545c (08040408)
283043.31   4050982.75      353.83374c (08040408)
       283019.16   4050982.75      358.23666c (08040408)
282995.06   4050982.75      362.54553c (08040408)
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        282970.91   4050982.75       366.77884c (08040408)
282946.78   4050982.75       370.92953c (08040408)
        282922.66   4050982.75       375.00085c (08040408)
282898.53   4050982.75       371.97849c (08040408)
        283350.00   4050967.50       242.60960c (07111708)
283384.34   4050987.00       272.68747c (08010924)
        283419.12   4051026.25       288.80991c (08010924)
283420.00   4051065.75       260.03586c (08010924)
        283308.69   4050957.75       233.36891c (05082208)
283284.56   4050957.75       232.00014c (05082208)
        283260.44   4050957.75       243.60706c (07022524)
283236.31   4050957.75       248.56258c (07022524)
        283212.19   4050957.75       245.17134c (07022524)
283188.06   4050957.75       236.19006c (07022524)
        283163.94   4050957.75       273.04248c (08040408)
283139.81   4050957.75       303.65512c (08040408)
        283115.69   4050957.75       315.60303c (08040408)
283091.56   4050957.75       321.27698c (08040408)
        283067.44   4050957.75       325.82095c (08040408)
283043.31   4050957.75       330.11792c (08040408)
        283019.16   4050957.75       334.29160c (08040408)
282995.06   4050957.75       338.37561c (08040408)
        282970.91   4050957.75       342.40756c (08040408)
282946.78   4050957.75       346.37659c (08040408)
        282922.66   4050957.75       350.28757c (08040408)
282898.53   4050957.75       349.77649c (08040408)
        282873.53   4051057.75       453.99109c (06121224)
282873.47   4051082.25       529.43793c (05120708)
        282873.38   4051106.75       600.12311c (05120708)
282873.31   4051131.25       618.93793c (05120708)
        282873.25   4051155.75       622.00287c (05120708)
282873.16   4051180.25       617.39838c (05120708)
        282873.09   4051204.75       611.25171c (05120708)
282873.03   4051229.25       605.61926c (05120708)
        282872.94   4051253.75       600.99420c (05120708)
282872.88   4051278.25       597.43939c (05120708)
        282872.81   4051302.75       594.65790c (05120708)
282872.72   4051327.25       592.61981c (05120708)
        282872.66   4051351.75       591.41223c (05120708)
282872.59   4051376.25       591.74731c (05120708)
        282872.50   4051400.75       589.28424c (05120708)
282872.44   4051425.25       576.82001c (05120708)
        282872.34   4051449.75       523.65118c (05120708)
282872.28   4051474.25       465.36096c (08013108)
        282855.88   4051040.00       356.72952c (06121224)
282848.47   4051082.00       453.79703c (05120708)
        282848.38   4051106.50       529.15497c (05120708)
282848.31   4051131.00       549.74976c (05120708)
        282848.25   4051155.75       554.69531c (05120708)
282848.16   4051180.25       551.46210c (05120708)
        282848.09   4051204.75       545.85657c (05120708)
282848.03   4051229.25       540.49243c (05120708)
        282847.94   4051253.75       536.01556c (05120708)
282847.88   4051278.25       532.54266c (05120708)
        282847.81   4051302.75       529.85162c (05120708)
282847.72   4051327.25       527.90710c (05120708)
] *** AERMOD - VERSION 07026 ***     *** C:\Lakes\BFD\BFD.isc
                                 ***          10/15/09
                                      ***
                                 ***          09:49:26
**MODELOPTs:
                                              PAGE  24
CONC                          DFAULT ELEV


                                 *** THE   1ST HIGHEST  8-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                 INCLUDING SOURCE(S):      PAREA1   ,
```

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
282847.66	4051351.75	527.57825c	(05120708)				
282847.59	4051376.25	526.37500c	(05120708)				
282847.50	4051400.75	522.60107c	(05120708)				
282847.44	4051425.25	508.48181c	(05120708)				
282847.34	4051449.75	451.90219c	(05120708)				
282847.28	4051474.25	410.63492c	(08013108)				
282830.88	4051039.75	341.05545c	(06121224)				
282863.25	4050997.25	271.39383c	(08041724)				
282823.47	4051082.00	398.91409c	(05120708)				
282823.38	4051106.50	474.91333c	(05120708)				
282823.31	4051131.00	497.47351c	(05120708)				
282823.25	4051155.50	503.65219c	(05120708)				
282823.16	4051180.00	502.27771c	(05120708)				
282823.09	4051204.50	497.37439c	(05120708)				
282823.03	4051229.00	492.27808c	(05120708)				
282822.94	4051253.50	487.94290c	(05120708)				
282822.88	4051278.00	484.54330c	(05120708)				
282822.81	4051302.75	481.90161c	(05120708)				
282822.72	4051327.25	480.03122c	(05120708)				
282822.66	4051351.75	479.49316c	(05120708)				
282822.59	4051376.25	477.76855c	(05120708)				
282822.50	4051400.75	472.24780c	(05120708)				
282822.44	4051425.25	457.13315c	(05120708)				
282822.34	4051449.75	398.65442c	(05120708)				
282822.28	4051474.25	366.72217c	(08013108)				
282805.88	4051039.75	325.48752c	(06121224)				
282820.59	4051004.50	250.47847c	(05030724)				
282845.59	4050979.50	231.86580c	(08041724)				
282798.47	4051082.00	357.53360c	(05120708)				
282798.38	4051106.50	431.65866c	(05120708)				
282798.31	4051131.00	456.04935c	(05120708)				
282798.25	4051155.50	463.77527c	(05120708)				
282798.16	4051180.00	463.50278c	(05120708)				
282798.09	4051204.50	459.67075c	(05120708)				
282798.03	4051229.00	454.87784c	(05120708)				
282797.94	4051253.50	450.69772c	(05120708)				
282797.88	4051278.00	447.37903c	(05120708)				
282797.81	4051302.50	444.82755c	(05120708)				
282797.72	4051327.00	442.99719c	(05120708)				
282797.66	4051351.50	442.22995c	(05120708)				
282797.59	4051376.00	439.94278c	(05120708)				
282797.50	4051400.50	433.48633c	(05120708)				
282797.44	4051425.00	416.97037c	(05120708)				
282797.34	4051449.75	358.23303c	(05120708)				
282797.28	4051474.25	329.25943c	(08013108)				
282897.19	4051499.50	396.12759c	(08012108)				
282920.88	4051499.50	398.81210c	(05102724)				
282944.59	4051499.50	416.48560c	(08120524)				
282968.28	4051499.75	424.94766c	(08120524)				
282991.97	4051499.75	425.20291c	(08120524)				
283015.66	4051499.75	418.94336c	(08120524)				
283039.34	4051500.00	406.19647c	(08120524)				
283063.03	4051500.00	387.27603c	(08120524)				
283086.72	4051500.00	359.51703c	(08120524)				
283110.41	4051500.25	323.99115c	(08120524)				
283134.12	4051500.25	287.29205c	(08120524)				
283157.81	4051500.25	250.33740c	(08120524)				
283181.50	4051500.50	210.79744c	(08120524)				
283205.19	4051500.50	192.61186c	(05111024)				

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283228.88   4051500.50      201.42773c (05010408)
       283252.56   4051500.50      210.59180c (05010408)
283276.25   4051500.75      218.22070c (05010408)
       282879.47   4051517.00      357.53329c (08012108)
282920.81   4051524.50      322.34445c (08012108)
       282944.50   4051524.50      341.56049c (08120524)
282968.19   4051524.75      351.30469c (08120524)
       282991.88   4051524.75      352.48532c (08120524)
283015.56   4051524.75      346.19772c (08120524)
       283039.25   4051525.00      331.83286c (08120524)
283062.94   4051525.00      309.66376c (08120524)
       283086.62   4051525.00      280.03726c (08120524)
283110.34   4051525.25      246.44743c (08120524)
       283134.03   4051525.25      213.84154c (08120524)
283157.72   4051525.25      181.77798c (08120524)
       283181.41   4051525.50      156.53299c (05111024)
283205.09   4051525.50      155.40062c (08052524)
       283228.78   4051525.50      155.54500c (05010408)
283252.47   4051525.50      164.67323c (05010408)
       283276.16   4051525.75      172.73228c (05010408)
282879.38   4051542.00      307.83508c (08012108)
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***        10/15/09
                                      ***
                                 ***        09:49:26
**MODELOPTs:
                                            PAGE  25
CONC                        DFAULT ELEV


                                 *** THE   1ST HIGHEST  8-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                 INCLUDING SOURCE(S):      PAREA1  ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                            ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

     X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)                X-COORD
(M)  Y-COORD (M)        CONC      (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       282836.81   4051509.50      341.30835c (08013108)
282920.72   4051549.50      271.50876c (08012108)
       282944.41   4051549.50      287.44391c (08120524)
282968.09   4051549.75      298.02365c (08120524)
       282991.81   4051549.75      299.57324c (08120524)
283015.50   4051549.75      292.42413c (08120524)
       283039.19   4051550.00      275.82718c (08120524)
283062.88   4051550.00      251.49393c (08120524)
       283086.56   4051550.00      222.46620c (08120524)
283110.25   4051550.25      192.73790c (08120524)
       283133.94   4051550.25      165.32755c (08120524)
283157.62   4051550.25      139.73593c (08120524)
       283181.34   4051550.50      134.49373c (08052524)
283205.03   4051550.50      136.32468c (08052524)
       283228.72   4051550.50      132.81079c (08052524)
283252.41   4051550.50      132.36546c (05010408)
       283276.09   4051550.75      140.72168c (05010408)
282879.31   4051567.00      266.79544c (08012108)
       282844.00   4051552.25      301.79929c (08012108)
282819.09   4051527.25      305.19238c (08012108)
       282920.62   4051574.50      238.53259c (08122108)
282944.34   4051574.50      244.99391c (08120524)
       282968.03   4051574.75      255.72917c (08120524)
282991.72   4051574.75      256.99194c (08120524)
       283015.41   4051574.75      248.46387c (08120524)
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283039.09   4051575.00      230.20279c (08120524)
       283062.78   4051575.00      205.93364c (08120524)
283086.47   4051575.00      180.00705c (08120524)
       283110.16   4051575.25      155.43523c (08120524)
283133.88   4051575.25      133.25587c (08120524)
       283157.56   4051575.25      124.35429c (07112724)
283181.25   4051575.50      119.77987c (07112724)
       283204.94   4051575.50      121.78132c (08052524)
283228.62   4051575.50      118.61990c (08052524)
       283252.31   4051575.50      106.34687c (05010408)
283276.00   4051575.75      114.88892c (05010408)
       283297.66   4051474.25      242.25656c (05010408)
283318.47   4051464.50      227.05823c (05010408)
       283305.81   4051507.75      202.95439c (05010408)
283340.81   4051479.50      187.43539c (05010408)
       283329.41   4051518.50      181.70244c (05010408)
283302.75   4051534.75      168.40623c (05010408)
       283361.66   4051470.25      181.18288c (05010408)
283363.81   4051505.00      162.65268c (05010408)
       283350.09   4051531.00      165.72047c (05010408)
283320.44   4051549.00      155.64491c (05010408)
1 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***         10/15/09
                                        ***
                                 ***        09:49:26
**MODELOPTs:
                                            PAGE  26
CONC                          DFAULT ELEV


                                 *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                     INCLUDING SOURCE(S):      PAREA1   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                              ** CONC OF OTHER    IN MICROGRAMS/M**3
                          **

     X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)               X-COORD
(M)  Y-COORD (M)        CONC     (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       283280.97   4051443.25      122.46041c (05010424)
283277.22   4051418.00      127.55811c (05010424)
       283305.69   4051439.50      102.26122c (05010424)
283301.94   4051414.25      106.63148c (05010424)
       283330.41   4051435.75       89.76041c (05010424)
283326.66   4051410.50       92.74654c (05010424)
       283355.16   4051432.00       80.47779c (05010424)
283351.38   4051407.00       82.34493c (05010424)
       283276.66   4051374.50      142.33104c (08010924)
283276.22   4051351.00      162.76726c (08010924)
       283301.62   4051374.00      108.25610c (05010424)
283301.22   4051350.50      124.32082c (08010924)
       283326.62   4051373.50       93.51456c (05010424)
283326.22   4051350.00       97.57768c (08010924)
       283351.62   4051373.00       82.33453c (05010424)
283351.22   4051349.75       82.20558c (05010424)
       283279.88   4051315.00      179.67320c (08010924)
283304.78   4051317.25      141.60007c (08010924)
       283329.66   4051319.75      114.00403c (08010924)
283354.53   4051322.25       92.01588c (08010924)
       283283.25   4051278.75      193.19527c (08010924)
283308.12   4051281.25      156.07843c (08010924)
       283333.03   4051283.50      129.60536c (08010924)
283357.91   4051285.75      108.57240c (08010924)
       283288.59   4051245.75      201.02930c (08010924)
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283296.94   4051208.75      206.61942c (08010924)
       283312.97   4051251.25      163.96721c (08010924)
283321.34   4051214.50      170.25125c (08010924)
       283337.34   4051256.75      137.37674c (08010924)
283345.72   4051220.00      144.61662c (08010924)
       283361.72   4051262.25      116.01543c (08010924)
283370.09   4051225.50      124.24076c (08010924)
       283309.06   4051169.25      211.19745c (08010924)
283332.97   4051176.50      174.61575c (08010924)
       283356.91   4051183.75      149.20064c (08010924)
283380.81   4051191.00      129.16812c (08010924)
       283322.34   4051138.25      212.62466c (08010924)
283345.38   4051148.00      175.33379c (08010924)
       283368.38   4051157.75      150.03729c (08010924)
283391.38   4051167.50      130.37717c (08010924)
       283337.91   4051103.50      215.54974c (08010924)
283360.56   4051114.00      177.45554c (08010924)
       283383.22   4051124.50      151.94286c (08010924)
283405.88   4051135.25      132.28497c (08010924)
       283354.84   4051069.50      214.69443c (08010924)
283376.84   4051081.50      178.29764c (08010924)
       283398.84   4051093.25      153.14310c (08010924)
283420.88   4051105.25      133.70514c (08010924)
       283343.56   4051038.75      210.46698c (08010924)
283308.69   4051032.75      188.27173c (08010924)
       283284.56   4051032.75      181.26587c (08010924)
283260.44   4051032.75      173.52077c (08010924)
       283236.31   4051032.75      169.63293c (05101924)
283212.19   4051032.75      168.90205c (05101924)
       283188.06   4051032.75      165.64128c (05101924)
283163.94   4051032.75      161.05791c (05101924)
       283139.81   4051032.75      155.64113c (05101924)
283115.69   4051032.75      149.45488c (05101924)
       283091.56   4051032.75      146.37006c (08040424)
283067.44   4051032.75      147.27354c (08040424)
       283043.31   4051032.75      148.25626c (06020624)
283019.16   4051032.75      150.70071c (06020624)
       282995.06   4051032.75      151.54402c (06020624)
282970.91   4051032.75      156.84676c (05030724)
       282946.78   4051032.75      162.55560c (05030724)
282922.66   4051032.75      164.34544c (05030724)
       282898.53   4051032.75      156.37218c (06123024)
283347.12   4051015.75      165.28815c (08010924)
       283376.12   4051048.50      191.74536c (08010924)
283308.69   4051007.75      142.55353c (08010924)
       283284.56   4051007.75      135.46198c (08010924)
283260.44   4051007.75      139.45384c (05101924)
       283236.31   4051007.75      141.77031c (05101924)
283212.19   4051007.75      140.65854c (05101924)
       283188.06   4051007.75      137.24373c (05101924)
283163.94   4051007.75      132.55908c (05101924)
       283139.81   4051007.75      131.13197c (08040424)
283115.69   4051007.75      133.37970c (08040424)
       283091.56   4051007.75      134.46014c (08040424)
283067.44   4051007.75      135.25006c (08040424)
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                                 *** THE    1ST HIGHEST 24-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1    ***
                                 INCLUDING SOURCE(S):      PAREA1   ,

                                              *** DISCRETE CARTESIAN RECEPTOR
```

POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3

**

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
283043.31	4051007.75	135.82527c	(08040424)	283019.16	4051007.75	136.16222c	(08040424)
282995.06	4051007.75	136.22607c	(08040424)	282970.91	4051007.75	136.00122c	(08040424)
282946.78	4051007.75	135.59787c	(08040424)	282922.66	4051007.75	135.54419c	(08040424)
282898.53	4051007.75	132.44734c	(08040424)	283348.91	4050991.75	132.02881c	(08010924)
283381.12	4051010.25	161.49426c	(08010924)	283397.62	4051037.75	170.56984c	(08010924)
283308.69	4050982.75	117.90178c	(06050924)	283284.56	4050982.75	117.01984c	(06050924)
283260.44	4050982.75	120.82310c	(05101924)	283236.31	4050982.75	122.39444c	(05101924)
283212.19	4050982.75	121.02147c	(05101924)	283188.06	4050982.75	117.55170c	(05101924)
283163.94	4050982.75	112.87577c	(05101924)	283139.81	4050982.75	119.62838c	(08040424)
283115.69	4050982.75	122.37331c	(08040424)	283091.56	4050982.75	123.47421c	(08040424)
283067.44	4050982.75	124.20516c	(08040424)	283043.31	4050982.75	124.73812c	(08040424)
283019.16	4050982.75	125.09523c	(08040424)	282995.06	4050982.75	125.29536c	(08040424)
282970.91	4050982.75	125.40829c	(08040424)	282946.78	4050982.75	125.63334c	(08040424)
282922.66	4050982.75	126.26850c	(08040424)	282898.53	4050982.75	124.98483c	(08040424)
283350.00	4050967.50	106.38152c	(08010924)	283384.34	4050987.00	135.17429c	(08010924)
283419.12	4051026.25	153.92313c	(08010924)	283420.00	4051065.75	148.68939c	(08010924)
283308.69	4050957.75	105.48446c	(06050924)	283284.56	4050957.75	103.97756c	(06050924)
283260.44	4050957.75	106.51199c	(05101924)	283236.31	4050957.75	107.52792c	(05101924)
283212.19	4050957.75	105.99200c	(05101924)	283188.06	4050957.75	102.54162c	(05101924)
283163.94	4050957.75	99.45162c	(08040424)	283139.81	4050957.75	109.16618c	(08040424)
283115.69	4050957.75	112.56615c	(08040424)	283091.56	4050957.75	113.77585c	(08040424)
283067.44	4050957.75	114.50743c	(08040424)	283043.31	4050957.75	115.05908c	(08040424)
283019.16	4050957.75	115.48816c	(08040424)	282995.06	4050957.75	115.85416c	(08040424)
282970.91	4050957.75	116.26188c	(08040424)	282946.78	4050957.75	116.86461c	(08040424)
282922.66	4050957.75	117.77348c	(08040424)	282898.53	4050957.75	117.44357c	(08040424)
282873.53	4051057.75	219.36186c	(06123024)	282873.47	4051082.25	247.71257c	(07120224)
282873.38	4051106.75	262.58588c	(07120224)	282873.31	4051131.25	269.98605c	(07120224)
282873.25	4051155.75	274.61746c	(07120224)	282873.16	4051180.25	278.05179c	(07120224)
282873.09	4051204.75	281.15906c	(07120224)	282873.03	4051229.25	283.81921c	(07120224)
282872.94	4051253.75	285.66635c	(07120224)	282872.88	4051278.25	286.58261c	(07120224)

282872.81 4051302.75 286.46802c (07120224)
282872.72 4051327.25 284.93860c (07120224)
282872.66 4051351.75 281.48907c (07120224)
282872.59 4051376.25 275.53336c (07120224)
282872.50 4051400.75 263.92310c (07120224)
282872.44 4051425.25 241.17686c (07120224)
282872.34 4051449.75 222.91461c (08120324)
282872.28 4051474.25 212.68745c (08120324)
282855.88 4051040.00 166.75162c (06123024)
282848.47 4051082.00 217.75212c (07120224)
282848.38 4051106.50 228.07617c (07120224)
282848.31 4051131.00 231.93813c (07120224)
282848.25 4051155.75 236.12717c (07120224)
282848.16 4051180.25 239.60002c (07120224)
282848.09 4051204.75 242.60376c (07120224)
282848.03 4051229.25 244.97542c (07120224)
282847.94 4051253.75 246.43451c (07120224)
282847.88 4051278.25 247.00822c (07120224)
282847.81 4051302.75 246.55232c (07120224)
282847.72 4051327.25 244.58908c (07120224)

**MODELOPTs:
CONC DFAULT ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: PAREA1 ***
INCLUDING SOURCE(S): PAREA1 ,

*** DISCRETE CARTESIAN RECEPTOR
POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3
**

X-COORD (M) Y-COORD (M) CONC (YYMMDDHH) X-COORD (M) Y-COORD (M) CONC (YYMMDDHH)

282847.66 4051351.75 240.88861c (07120224)
282847.59 4051376.25 234.06462c (07120224)
282847.50 4051400.75 221.52162c (07120224)
282847.44 4051425.25 198.05951c (07120224)
282847.34 4051449.75 182.75499c (08013124)
282847.28 4051474.25 174.36913c (08013124)
282830.88 4051039.75 157.17137c (06123024)
282863.25 4050997.25 116.34825c (06120624)
282823.47 4051082.00 196.07303c (07120224)
282823.38 4051106.50 206.10901c (07120224)
282823.31 4051131.00 207.14677c (07120224)
282823.25 4051155.50 208.90613c (07120224)
282823.16 4051180.00 211.73911c (07120224)
282823.09 4051204.50 214.43735c (07120224)
282823.03 4051229.00 216.44025c (07120224)
282822.94 4051253.50 217.56058c (07120224)
282822.88 4051278.00 217.85950c (07120224)
282822.81 4051302.75 217.06084c (07120224)
282822.72 4051327.25 214.67989c (07120224)
282822.66 4051351.75 210.51546c (07120224)
282822.59 4051376.25 203.07150c (07120224)
282822.50 4051400.75 189.51616c (07120224)
282822.44 4051425.25 166.84676c (07120224)
282822.34 4051449.75 159.94229c (08013124)
282822.28 4051474.25 155.53398c (08013124)
282805.88 4051039.75 147.22249c (06123024)

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       282820.59   4051004.50      109.48672c (06123024)
282845.59   4050979.50      107.09645c (06120624)
       282798.47   4051082.00      179.26370c (07120224)
282798.38   4051106.50      189.61023c (07120224)
       282798.31   4051131.00      190.00195c (07120224)
282798.25   4051155.50      189.82452c (07120224)
       282798.16   4051180.00      190.88403c (07120224)
282798.09   4051204.50      192.57993c (07120224)
       282798.03   4051229.00      194.03351c (07120224)
282797.94   4051253.50      194.84389c (07120224)
       282797.88   4051278.00      194.86969c (07120224)
282797.81   4051302.50      193.72449c (07120224)
       282797.72   4051327.00      190.97205c (07120224)
282797.66   4051351.50      186.40216c (07120224)
       282797.59   4051376.00      178.38135c (07120224)
282797.50   4051400.50      164.53439c (07120224)
       282797.44   4051425.00      144.10696c (07120224)
282797.34   4051449.75      141.82613c (08013124)
       282797.28   4051474.25      139.88925c (08013124)
282897.19   4051499.50      211.03435c (08120324)
       282920.88   4051499.50      206.59241c (08120324)
282944.59   4051499.50      201.26656c (08120324)
       282968.28   4051499.75      195.23737c (08120324)
282991.97   4051499.75      189.39659c (08120324)
       283015.66   4051499.75      183.11493c (08120324)
283039.34   4051500.00      175.60065c (08120324)
       283063.03   4051500.00      167.25226c (08120324)
283086.72   4051500.00      157.10931c (08120324)
       283110.41   4051500.25      144.47360c (08120324)
283134.12   4051500.25      128.93092c (08120324)
       283157.81   4051500.25      106.95523c (08120324)
283181.50   4051500.50      102.50389c (05111024)
       283205.19   4051500.50       96.07287c (05111024)
283228.88   4051500.50       85.41573c (05111024)
       283252.56   4051500.50       81.91850c (05010424)
283276.25   4051500.75       84.88603c (05010424)
       282879.47   4051517.00      177.40158c (08120324)
282920.81   4051524.50      167.72533c (08120324)
       282944.50   4051524.50      162.89729c (08120324)
282968.19   4051524.75      157.58153c (08120324)
       282991.88   4051524.75      152.28203c (08120324)
283015.56   4051524.75      146.47411c (08120324)
       283039.25   4051525.00      139.46552c (08120324)
283062.94   4051525.00      131.37665c (08120324)
       283086.62   4051525.00      121.72609c (08120324)
283110.34   4051525.25      109.89790c (08120324)
       283134.03   4051525.25       94.59239c (08120324)
283157.72   4051525.25       77.52721c (05111024)
       283181.41   4051525.50       75.55195c (05111024)
283205.09   4051525.50       71.45972c (05111024)
       283228.78   4051525.50       64.82209c (05111024)
283252.47   4051525.50       64.04230c (05010424)
       283276.16   4051525.75       67.17661c (05010424)
282879.38   4051542.00      153.88277c (08120324)
] *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***         10/15/09
                                      ***
                                 ***        09:49:26
**MODELOPTS:
                                            PAGE  29
CONC                          DFAULT ELEV


                                 *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
  VALUES FOR SOURCE GROUP:  PAREA1   ***
                                 INCLUDING SOURCE(S):      PAREA1   ,

                                                 *** DISCRETE CARTESIAN RECEPTOR
POINTS ***
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     X-COORD (M)  Y-COORD (M)        CONC      (YYMMDDHH)                X-COORD
(M)  Y-COORD (M)        CONC      (YYMMDDHH)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -
       282836.81   4051509.50      152.86630c (05010124)
282920.72   4051549.50      142.05846c (08120324)
       282944.41   4051549.50      137.69269c (08120324)
282968.09   4051549.75      132.90440c (08120324)
       282991.81   4051549.75      127.94709c (08120324)
283015.50   4051549.75      122.31859c (08120324)
       283039.19   4051550.00      115.40878c (08120324)
283062.88   4051550.00      107.41896c (08120324)
       283086.56   4051550.00       98.17752c (08120324)
283110.25   4051550.25       86.82516c (08120324)
       283133.94   4051550.25       71.79704c (08120324)
283157.62   4051550.25       60.02571c (05111024)
       283181.34   4051550.50       59.24113c (05111024)
283205.03   4051550.50       56.60598c (05111024)
       283228.72   4051550.50       51.36630c (05111024)
283252.41   4051550.50       51.47575c (05010424)
       283276.09   4051550.75       54.72544c (05010424)
282879.31   4051567.00      134.62299c (08120324)
       282844.00   4051552.25      137.70377c (05010124)
282819.09   4051527.25      134.96410c (05010124)
       282920.62   4051574.50      123.34319c (08120324)
282944.34   4051574.50      119.23469c (08120324)
       282968.03   4051574.75      114.68810c (08120324)
282991.72   4051574.75      109.80890c (08120324)
       283015.41   4051574.75      104.12570c (08120324)
283039.09   4051575.00       97.26859c (08120324)
       283062.78   4051575.00       89.66201c (08120324)
283086.47   4051575.00       81.14664c (08120324)
       283110.16   4051575.25       70.41589c (08120324)
283133.88   4051575.25       56.76576c (05012024)
       283157.56   4051575.25       48.69191c (05111024)
283181.25   4051575.50       48.47396c (05111024)
       283204.94   4051575.50       45.90096c (05111024)
283228.62   4051575.50       41.39267c (05111024)
       283252.31   4051575.50       41.35714c (05010424)
283276.00   4051575.75       44.67906c (05010424)
       283297.66   4051474.25       94.46434c (05010424)
283318.47   4051464.50       88.72439c (05010424)
       283305.81   4051507.75       78.94038c (05010424)
283340.81   4051479.50       73.00909c (05010424)
       283329.41   4051518.50       70.66830c (05010424)
283302.75   4051534.75       65.49290c (05010424)
       283361.66   4051470.25       70.63268c (05010424)
283363.81   4051505.00       63.27214c (05010424)
       283350.09   4051531.00       64.44939c (05010424)
283320.44   4051549.00       60.52910c (05010424)
] *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                                 ***        10/15/09
                                      ***
                                 ***        09:49:26
**MODELOPTs:
                                            PAGE  30
CONC                          DFAULT ELEV


                                        *** THE SUMMARY OF MAXIMUM PERIOD (
43848 HRS) RESULTS ***
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                        NETWORK
GROUP ID                        AVERAGE CONC                RECEPTOR  (XR, YR,
ZELEV, ZHILL, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

PAREA1   1ST HIGHEST VALUE IS      44.80323 AT (  283212.19,  4051032.75,
0.00,      0.00,      0.00)  DC
         2ND HIGHEST VALUE IS      44.68817 AT (  283188.06,  4051032.75,
0.00,      0.00,      0.00)  DC
         3RD HIGHEST VALUE IS      44.61283 AT (  283236.31,  4051032.75,
0.00,      0.00,      0.00)  DC
         4TH HIGHEST VALUE IS      44.28849 AT (  283163.94,  4051032.75,
0.00,      0.00,      0.00)  DC
         5TH HIGHEST VALUE IS      44.05919 AT (  283260.44,  4051032.75,
0.00,      0.00,      0.00)  DC
         6TH HIGHEST VALUE IS      43.60425 AT (  283139.81,  4051032.75,
0.00,      0.00,      0.00)  DC
         7TH HIGHEST VALUE IS      43.06446 AT (  283284.56,  4051032.75,
0.00,      0.00,      0.00)  DC
         8TH HIGHEST VALUE IS      42.62910 AT (  283115.69,  4051032.75,
0.00,      0.00,      0.00)  DC
         9TH HIGHEST VALUE IS      41.35032 AT (  283091.56,  4051032.75,
0.00,      0.00,      0.00)  DC
        10TH HIGHEST VALUE IS      41.33798 AT (  283308.69,  4051032.75,
0.00,      0.00,      0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
1 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                              ***        10/15/09
                                  ***
                             ***        09:49:26
**MODELOPTs:
                                        PAGE  31
CONC                        DFAULT ELEV


                                                  *** THE SUMMARY OF HIGHEST
1-HR RESULTS ***


                                        ** CONC OF OTHER    IN MICROGRAMS/M**3
                        **

                                                     DATE
                                        NETWORK
GROUP ID                          AVERAGE CONC     (YYMMDDHH)
RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)     OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

PAREA1   HIGH  1ST HIGH VALUE IS    2051.78052  ON 08041724: AT (  282995.06,
4051032.75,      0.00,      0.00,      0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
1 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                              ***        10/15/09
                                  ***
                             ***        09:49:26
```

```
**MODELOPTs:
                                        PAGE  32
CONC                        DFAULT ELEV

                                                  *** THE SUMMARY OF HIGHEST
3-HR RESULTS ***

                                        ** CONC OF OTHER    IN MICROGRAMS/M**3
                        **

                                                       DATE
                                        NETWORK
GROUP ID                            AVERAGE CONC     (YYMMDDHH)
RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)     OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -

PAREA1   HIGH  1ST HIGH VALUE IS     851.11395c ON 08040403: AT (  282922.66,
4051032.75,      0.00,      0.00,      0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                            ***        10/15/09
                                 ***
                            ***        09:49:26
**MODELOPTs:
                                        PAGE  33
CONC                        DFAULT ELEV

                                                  *** THE SUMMARY OF HIGHEST
8-HR RESULTS ***

                                        ** CONC OF OTHER    IN MICROGRAMS/M**3
                        **

                                                       DATE
                                        NETWORK
GROUP ID                            AVERAGE CONC     (YYMMDDHH)
RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)     OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -

PAREA1   HIGH  1ST HIGH VALUE IS     622.00287c ON 05120708: AT (  282873.25,
4051155.75,      0.00,      0.00,      0.00)  DC

 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
 *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                            ***        10/15/09
                                 ***
                            ***        09:49:26
**MODELOPTs:
                                        PAGE  34
CONC                        DFAULT ELEV

                                                  *** THE SUMMARY OF HIGHEST
24-HR RESULTS ***
```

```
                                        ** CONC OF OTHER    IN MICROGRAMS/M**3
                        **

                                                              DATE
                                          NETWORK
GROUP ID                            AVERAGE CONC      (YYMMDDHH)
RECEPTOR  (XR, YR, ZELEV, ZHILL, ZFLAG)     OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - -

PAREA1   HIGH  1ST HIGH VALUE IS     286.58261c ON 07120224: AT (  282872.88,
4051278.25,      0.00,      0.00,      0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
] *** AERMOD - VERSION 07026 ***    *** C:\Lakes\BFD\BFD.isc
                              ***        10/15/09
                                   ***
                             ***        09:49:26
**MODELOPTs:
                                        PAGE  35
CONC                         DFAULT ELEV


*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of            0 Fatal Error Message(s)
A Total of            0 Warning Message(s)
A Total of        13261 Informational Message(s)

A Total of        12233 Calm Hours Identified

A Total of         1028 Missing Hours Identified (  2.34 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
              ***  NONE  ***


   ************************************
   *** AERMOD Finishes Successfully ***
   ************************************
```

ATTACHMENT G

HARP and AERMOD Output Files – Health Risk Impacts

FILE: c:\HARP\projects\demo\Rep_PMI.txt

EXCEPTION REPORT
(there have been no changes or exceptions)

RECEPTORS WITH HIGHEST CANCER RISK

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
332	GRID	5.10E-06	2.47E-03	1.61E-04	282872	4051175	11
337	GRID	3.22E-06	1.56E-03	8.23E-05	282872	4051273	11
327	GRID	3.01E-06	1.46E-03	1.99E-04	282872	4051077	11
331	GRID	2.35E-06	1.14E-03	1.01E-04	282789	4051175	11
336	GRID	2.08E-06	1.00E-03	7.97E-05	282789	4051273	11
326	GRID	1.70E-06	8.24E-04	1.24E-04	282789	4051077	11
335	GRID	1.41E-06	6.83E-04	6.41E-05	282706	4051273	11
330	GRID	1.40E-06	6.77E-04	6.75E-05	282706	4051175	11
325	GRID	1.17E-06	5.66E-04	9.16E-05	282706	4051077	11
341	GRID	1.09E-06	5.27E-04	4.90E-05	282789	4051371	11

RECEPTORS WITH HIGHEST CHRONIC HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
332	GRID	5.10E-06	2.47E-03	1.61E-04	282872	4051175	11
337	GRID	3.22E-06	1.56E-03	8.23E-05	282872	4051273	11
327	GRID	3.01E-06	1.46E-03	1.99E-04	282872	4051077	11
331	GRID	2.35E-06	1.14E-03	1.01E-04	282789	4051175	11
336	GRID	2.08E-06	1.00E-03	7.97E-05	282789	4051273	11
326	GRID	1.70E-06	8.24E-04	1.24E-04	282789	4051077	11
335	GRID	1.41E-06	6.83E-04	6.41E-05	282706	4051273	11
330	GRID	1.40E-06	6.77E-04	6.75E-05	282706	4051175	11
325	GRID	1.17E-06	5.66E-04	9.16E-05	282706	4051077	11
341	GRID	1.09E-06	5.27E-04	4.90E-05	282789	4051371	11

RECEPTORS WITH HIGHEST ACUTE HI

REC	TYPE	CANCER	CHRONIC	ACUTE	UTME	UTMN	ZONE
327	GRID	3.01E-06	1.46E-03	1.99E-04	282872	4051077	11
332	GRID	5.10E-06	2.47E-03	1.61E-04	282872	4051175	11
326	GRID	1.70E-06	8.24E-04	1.24E-04	282789	4051077	11
331	GRID	2.35E-06	1.14E-03	1.01E-04	282789	4051175	11
228	GRID	5.73E-07	2.78E-04	9.52E-05	282802	4050946	11
325	GRID	1.17E-06	5.66E-04	9.16E-05	282706	4051077	11
337	GRID	3.22E-06	1.56E-03	8.23E-05	282872	4051273	11
336	GRID	2.08E-06	1.00E-03	7.97E-05	282789	4051273	11
227	GRID	6.04E-07	2.93E-04	7.60E-05	282758	4050968	11
231	GRID	7.79E-07	3.78E-04	7.36E-05	282685	4051014	11

This file:
c:\HARP\projects\demo\Rep_Can_70yr_DerOEH_AllRec_AllSrc_AllCh_ByRec_Site.txt

Created by HARP Version 1.4 Build 23.06.09
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 10/16/2009 10:44:04 AM

EXCEPTION REPORT
(there have been no changes or exceptions)

INPUT FILES:
Source-Receptor file: C:\Lakes\Reedley\Reedley.src
Averaging period adjustment factors file: not applicable
Emission rates file: Reedley.ems
Site parameters file: C:\HARP\PROJECTS\DEMO\project.sit

Screening mode is OFF

Exposure duration: 70 year (adult resident)
Analysis method: Derived (OEHHA) Method
Health effect: Cancer Risk
Receptor(s): All
Sources(s): All
Chemicals(s): All

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

HUMAN INGESTION
Fraction of ingested leafy vegetable
from home grown source 0.15
Fraction of ingested exposed vegetable
from home grown source 0.15
Fraction of ingested protected vegetable
from home grown source 0.15
Fraction of ingested root vegetable
from home grown source 0.15

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m^3)
0001	9901	DieselExhPM	Diesel engine exhaust, particulate matter (Diesel PM)	0.000E+00
0002	71432	Benzene	Benzene	0.000E+00
0003	100414	Ethyl Benzene	Ethyl benzene	0.000E+00
0004	108383	m-Xylene	m-Xylene	0.000E+00
0005	108883	Toluene	Toluene	0.000E+00
0006	1634044	Me t-ButylEther	Methyl tert-butyl ether	0.000E+00

CHEMICAL HEALTH VALUES

CHEM	CAS	ABBREVIATION	CancerPF(Inh) (mg/kg-d)^-1	CancerPF(Oral) (mg/kg-d)^-1	ChronicREL(Inh) ug/m^3	ChronicREL(Oral) mg/kg-d	AcuteREL ug/m^3
0001	9901	DieselExhPM	1.10E+00	*	*	*	*
0002	71432	Benzene	1.00E-01	*	*	*	1.30E+03
0003	100414	Ethyl Benzene	8.70E-03	*	*	*	*
0004	108383	m-Xylene	*	*	*	*	2.20E+04
0005	108883	Toluene	*	*	*	*	3.70E+04
0006	1634044	Me t-ButylEther	1.80E-03	*	*	*	*

EMISSIONS DATA SOURCE: Emission rates loaded from file:
C:\Lakes\Reedley\Reedley.ems
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA1 NAME=Reedley AREA1 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA10 NAME=Reedley AREA10 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)

```
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA11   NAME=Reedley
AREA11  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS                 ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA12   NAME=Reedley
AREA12  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS                 ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA13   NAME=Reedley
AREA13  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS                 ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA14   NAME=Reedley
AREA14  EMS (lbs/yr)
```

```
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA15   NAME=Reedley
AREA15  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA16   NAME=Reedley
AREA16  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA17   NAME=Reedley
AREA17  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00
```

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA18 NAME=Reedley AREA18 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA19 NAME=Reedley AREA19 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA2 NAME=Reedley AREA2 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA20 NAME=Reedley AREA20 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1			

```
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA21   NAME=Reedley
AREA21  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA22   NAME=Reedley
AREA22  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA23   NAME=Reedley
AREA23  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA24   NAME=Reedley
AREA24  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
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108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA25   NAME=Reedley
AREA25  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA26   NAME=Reedley
AREA26  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA27   NAME=Reedley
AREA27  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA28   NAME=Reedley
AREA28  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
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```
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA29   NAME=Reedley
AREA29  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA3   NAME=Reedley AREA3
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA30   NAME=Reedley
AREA30  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA31   NAME=Reedley
AREA31  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
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9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA32   NAME=Reedley
AREA32  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA33   NAME=Reedley
AREA33  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA34   NAME=Reedley
AREA34  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA35   NAME=Reedley
AREA35  EMS (lbs/yr)
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SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA36   NAME=Reedley
AREA36  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA37   NAME=Reedley
AREA37  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA38   NAME=Reedley
AREA38  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00
```

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA4 NAME=Reedley AREA4
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA5 NAME=Reedley AREA5
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA6 NAME=Reedley AREA6
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA7 NAME=Reedley AREA7
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			

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0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA8   NAME=Reedley AREA8
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA9   NAME=Reedley AREA9
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK1   NAME=Reedley STCK1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
3.26E+01        9.20E-02
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK2   NAME=Reedley STCK2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
1.13E-01        4.33E-05
100414          Ethyl Benzene                   1
1.80E-01        6.93E-05
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108383          m-Xylene                        1
2.70E-01        1.04E-04
108883          Toluene                         1
9.00E-01        3.46E-04
1634044         Me t-ButylEther                 1
1.24E+00        4.76E-04

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK3   NAME=Reedley STCK3
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
3.40E-02        1.29E-05
100414          Ethyl Benzene                   1
5.40E-02        2.06E-05
108383          m-Xylene                        1
8.00E-02        3.09E-05
108883          Toluene                         1
2.68E-01        1.03E-04
1634044         Me t-ButylEther                 1
3.69E-01        1.42E-04

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=VOL1   NAME=Reedley VOL1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
9.92E-01        3.81E-04
100414          Ethyl Benzene                   1
1.59E+00        6.10E-04
108383          m-Xylene                        1
2.38E+00        9.15E-04
108883          Toluene                         1
7.93E+00        3.05E-03
1634044         Me t-ButylEther                 1
1.09E+01        4.20E-03

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=VOL2   NAME=Reedley VOL2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
5.63E-01        2.16E-04
100414          Ethyl Benzene                   1
9.00E-01        3.46E-04
108383          m-Xylene                        1
1.35E+00        5.20E-04
108883          Toluene                         1
4.50E+00        1.73E-03
1634044         Me t-ButylEther                 1
6.19E+00        2.38E-03

CANCER RISK REPORT
REC       INHAL      DERM      SOIL    MOTHER      FISH     WATER       VEG     DAIRY
   BEEF     CHICK       PIG       EGG      MEAT      ORAL     TOTAL
0001  1.46E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.46E-07
0002  1.64E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.64E-07
0003  1.84E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.84E-07
0004 2.00E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.00E-07
0005 2.07E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.07E-07
0006 2.06E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.06E-07
0007 2.09E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.09E-07
0008 2.23E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.23E-07
0009 2.43E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.43E-07
0010 2.46E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.46E-07
0011 2.33E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.33E-07
0012 2.29E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.29E-07
0013 2.24E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.24E-07
0014 1.93E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.93E-07
0015 1.73E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.73E-07
0016 1.61E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.61E-07
0017 1.76E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.76E-07
0018 1.84E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.84E-07
0019 1.83E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.83E-07
0020 1.80E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.80E-07
0021 1.86E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.86E-07
0022 2.03E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.03E-07
0023 2.18E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.18E-07
0024 2.17E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.17E-07
0025 2.04E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.04E-07
0026 2.01E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0027 2.01E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0028 1.77E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.77E-07
0029 1.56E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.56E-07
0030 1.46E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.46E-07
0031 1.65E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.65E-07
0032 1.65E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.65E-07
0033 1.60E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.60E-07
0034 1.59E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.59E-07
0035 1.69E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.69E-07
0036 1.86E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.86E-07
0037 1.98E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.98E-07

0038 1.92E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.92E-07
0039 1.79E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.79E-07
0040 1.78E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.78E-07
0041 1.81E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.81E-07
0042 1.64E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.64E-07
0043 1.41E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0044 1.34E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0045 1.23E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.23E-07
0046 1.45E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.45E-07
0047 1.41E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0048 1.44E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.44E-07
0049 1.56E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0050 1.72E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.72E-07
0051 1.80E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.80E-07
0052 1.71E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0053 1.59E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0054 1.59E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0055 1.64E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0056 1.52E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0057 1.30E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0058 1.22E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0059 1.15E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0060 1.06E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0061 1.26E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0062 1.32E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0063 1.46E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0066 1.54E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0067 1.42E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0068 1.43E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0069 1.50E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0070 1.42E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.42E-07
0071 1.21E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0072 1.11E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

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0073 1.08E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0074 9.85E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0075 9.64E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0076 1.24E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0077 1.38E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0078 1.49E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0080 1.38E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0081 1.28E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0082 1.29E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0084 1.33E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0085 1.14E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0086 1.02E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0092 1.39E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0093 1.36E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0094 1.25E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0095 1.16E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0096 1.18E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0097 1.26E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0100 9.44E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0101 9.22E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0102 9.02E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0103 8.13E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.29E-07

0107 1.24E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0108 1.13E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0109 1.05E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0110 1.07E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.07E-07
0111 1.16E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0112 1.16E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0113 1.04E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.04E-07
0114 8.87E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0115 8.44E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0116 8.52E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0117 7.87E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0118 7.21E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0119 7.45E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0120 7.35E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0121 1.14E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0122 1.03E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0123 9.62E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0124 9.86E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0125 1.07E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0126 1.09E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0127 9.93E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0128 8.44E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0129 7.77E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0130 7.91E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0131 7.66E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0133 6.67E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0134 7.00E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0135 6.54E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0136 9.43E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0138 9.08E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0139 9.88E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0141 9.51E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

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0142 8.10E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0143 7.23E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0146 6.71E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 6.41E-08
0175 5.79E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0176 5.27E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0177 5.44E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0178 5.72E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0179 5.31E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0180 4.56E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0181 7.95E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0182 8.52E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0183 8.33E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0184 7.36E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0185 6.26E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0188 6.13E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0189 5.75E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0209 4.24E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0213 5.93E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0214 5.18E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0215 5.06E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0216 5.35E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0217 5.47E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0218 5.06E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0219 4.47E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0220 4.30E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0222 4.80E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0223 4.43E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0225 3.48E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0259 3.36E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0260 3.61E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0264 5.60E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0275 3.38E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0292 3.16E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0293 3.32E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0300 2.93E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0310 2.42E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0311 2.32E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0314 5.22E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0315 5.98E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0343 6.13E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0363 2.38E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0364 2.56E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0411 6.01E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0412 1.46E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0415 9.70E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0416 7.69E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0417 6.84E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

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0418 6.33E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0419 5.91E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0421 5.40E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0422 1.19E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0423 1.18E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0424 9.78E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0426 6.50E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 6.50E-08
0427 5.84E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0428 5.46E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0429 5.11E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0430 4.90E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0431 4.77E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0432 1.04E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0433 9.91E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0434 8.18E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0435 6.77E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0436 5.58E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0437 5.06E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0438 4.77E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0439 4.48E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0440 4.29E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0441 4.18E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0442 9.31E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0443 8.24E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0444 7.00E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0445 5.79E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0446 4.86E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0447 4.43E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0448 4.21E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0449 3.97E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0450 3.80E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0451 3.69E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0452 4.91E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0456 2.22E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0457 7.02E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0458 7.48E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0459 6.54E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0460 6.39E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0461 6.81E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0462 6.29E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0463 2.17E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0465 1.18E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0466 5.40E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0467 4.93E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0468 3.45E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0469 2.58E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0470 1.17E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0471 7.03E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0472 4.75E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0473 1.04E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0474 4.09E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0475 4.63E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0476 2.63E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0477 2.34E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0478 1.84E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0480 1.85E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0481 2.45E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0482 2.41E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0483 2.35E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0488 3.30E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0492 4.41E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0494 4.74E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0496 3.87E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0498 4.73E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0501 8.16E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0503 8.36E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
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0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.52E-07
0510 1.58E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.58E-07
0511 1.70E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.70E-07
0512 1.74E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.74E-07
0513 1.73E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.73E-07
0514 1.74E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.74E-07
0515 1.93E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.93E-07
0516 2.18E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.18E-07
0517 2.50E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.50E-07
0518 2.13E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.13E-07
0519 2.15E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.15E-07
0520 4.68E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 4.68E-07

0521 3.88E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.88E-07
0522 4.11E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 4.11E-07
0523 1.82E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.82E-07
0524 1.90E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.90E-07
0525 3.60E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.60E-07
0526 3.86E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.86E-07
0527 4.41E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 4.41E-07
0528 5.07E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 5.07E-07
0529 3.18E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.18E-07
0530 2.84E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.84E-07
0531 2.48E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.48E-07
0532 2.20E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.20E-07
0533 3.39E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.39E-07
0534 2.96E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.96E-07
0535 2.58E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.58E-07
0536 2.35E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.35E-07
0537 3.59E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.59E-07
0538 3.08E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.08E-07
0539 2.75E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.75E-07
0540 2.39E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.39E-07
0541 2.00E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.00E-07
0542 2.38E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.38E-07
0543 2.02E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.02E-07
0544 2.38E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.38E-07
0545 2.64E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.64E-07
0546 2.84E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.84E-07
0547 3.30E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.30E-07
0548 1.34E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.34E-07
0549 1.52E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.52E-07
0550 2.91E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.91E-07
0551 3.24E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 3.24E-07
0552 2.97E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.97E-07
0553 2.69E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.69E-07
0554 2.68E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.68E-07
0555 2.43E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00

0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.43E-07
0556 2.30E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.30E-07
0557 1.98E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.98E-07
0558 7.44E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 7.44E-08
0559 6.92E-08 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 6.92E-08
0560 1.77E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 1.77E-07
0561 2.53E-07 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00
0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 0.00E+00 2.53E-07

This file:
c:\HARP\projects\demo\Rep_Chr_Res_DerOEH_AllRec_AllSrc_AllCh_ByRec_Site.txt

Created by HARP Version 1.4 Build 23.06.09
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 10/16/2009 10:44:19 AM

EXCEPTION REPORT
(there have been no changes or exceptions)

INPUT FILES:
Source-Receptor file: C:\Lakes\Reedley\Reedley.src
Averaging period adjustment factors file: not applicable
Emission rates file: Reedley.ems
Site parameters file: C:\HARP\PROJECTS\DEMO\project.sit

Screening mode is OFF

Exposure duration: resident
Analysis method: Derived (OEHHA) Method
Health effect: Chronic HI
Receptor(s): All
Sources(s): All
Chemicals(s): All

SITE PARAMETERS

DEPOSITION

Deposition rate (m/s) 0.02

DRINKING WATER

*** Pathway disabled ***

FISH

*** Pathway disabled ***

PASTURE

*** Pathway disabled ***

HOME GROWN PRODUCE

HUMAN INGESTION
Fraction of ingested leafy vegetable
from home grown source 0.15
Fraction of ingested exposed vegetable
from home grown source 0.15
Fraction of ingested protected vegetable
from home grown source 0.15
Fraction of ingested root vegetable
from home grown source 0.15

PIGS, CHICKENS AND EGGS

*** Pathway disabled ***

DERMAL ABSORPTION

*** Pathway enabled ***

SOIL INGESTION

*** Pathway enabled ***

MOTHER'S MILK

*** Pathway enabled ***

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m^3)
0001	9901	DieselExhPM	Diesel engine exhaust, particulate matter (Diesel PM)	0.000E+00
0002	71432	Benzene	Benzene	0.000E+00
0003	100414	Ethyl Benzene	Ethyl benzene	0.000E+00
0004	108383	m-Xylene	m-Xylene	0.000E+00
0005	108883	Toluene	Toluene	0.000E+00
0006	1634044	Me t-ButylEther	Methyl tert-butyl ether	0.000E+00

CHEMICAL HEALTH VALUES

CHEM	CAS	ABBREVIATION	CancerPF(Inh) (mg/kg-d)^-1	CancerPF(Oral) (mg/kg-d)^-1	ChronicREL(Inh) ug/m^3	ChronicREL(Oral) mg/kg-d	AcuteREL ug/m^3
0001	9901	DieselExhPM	1.10E+00	*	*	*	*
0002	71432	Benzene	1.00E-01	*	*	6.00E+01	1.30E+03
0003	100414	Ethyl Benzene	8.70E-03	*	*	2.00E+03	*
0004	108383	m-Xylene	*	*	*	7.00E+02	2.20E+04
0005	108883	Toluene	*	*	*	3.00E+02	3.70E+04
0006	1634044	Me t-ButylEther	1.80E-03	*	*	8.00E+03	*

EMISSIONS DATA SOURCE: Emission rates loaded from file:
C:\Lakes\Reedley\Reedley.ems
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA1 NAME=Reedley AREA1
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA10 NAME=Reedley
AREA10 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)

```
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA11   NAME=Reedley
AREA11  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA12   NAME=Reedley
AREA12  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA13   NAME=Reedley
AREA13  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                    1
6.87E-02        5.50E-03
71432           Benzene                        1
0.00E+00        0.00E+00
100414          Ethyl Benzene                  1
0.00E+00        0.00E+00
108383          m-Xylene                       1
0.00E+00        0.00E+00
108883          Toluene                        1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA14   NAME=Reedley
AREA14  EMS (lbs/yr)
```

```
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA15   NAME=Reedley
AREA15  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA16   NAME=Reedley
AREA16  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA17   NAME=Reedley
AREA17  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00
```

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA18 NAME=Reedley AREA18 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA19 NAME=Reedley AREA19 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA2 NAME=Reedley AREA2 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1		0.00E+00	0.00E+00
1634044	Me t-ButylEther	1		0.00E+00	0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA20 NAME=Reedley AREA20 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1		6.87E-02	5.50E-03
71432	Benzene	1		0.00E+00	0.00E+00
100414	Ethyl Benzene	1		0.00E+00	0.00E+00
108383	m-Xylene	1		0.00E+00	0.00E+00
108883	Toluene	1			

```
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA21   NAME=Reedley
AREA21  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA22   NAME=Reedley
AREA22  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA23   NAME=Reedley
AREA23  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA24   NAME=Reedley
AREA24  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
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108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA25   NAME=Reedley
AREA25  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA26   NAME=Reedley
AREA26  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA27   NAME=Reedley
AREA27  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA28   NAME=Reedley
AREA28  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
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```
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA29   NAME=Reedley
AREA29  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA3   NAME=Reedley AREA3
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA30   NAME=Reedley
AREA30  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA31   NAME=Reedley
AREA31  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
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```
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA32   NAME=Reedley
AREA32  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS                 ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA33   NAME=Reedley
AREA33  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS                 ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA34   NAME=Reedley
AREA34  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS                 ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901                DieselExhPM                     1
6.87E-02            5.50E-03
71432               Benzene                         1
0.00E+00            0.00E+00
100414              Ethyl Benzene                   1
0.00E+00            0.00E+00
108383              m-Xylene                        1
0.00E+00            0.00E+00
108883              Toluene                         1
0.00E+00            0.00E+00
1634044             Me t-ButylEther                 1
0.00E+00            0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA35   NAME=Reedley
AREA35  EMS (lbs/yr)
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SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA36   NAME=Reedley
AREA36  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA37   NAME=Reedley
AREA37  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA38   NAME=Reedley
AREA38  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)    AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00
```

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA4 NAME=Reedley AREA4
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA5 NAME=Reedley AREA5
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA6 NAME=Reedley AREA6
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA7 NAME=Reedley AREA7
EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			

```
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA8   NAME=Reedley AREA8
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA9   NAME=Reedley AREA9
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK1   NAME=Reedley STCK1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
3.26E+01        9.20E-02
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK2   NAME=Reedley STCK2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
1.13E-01        4.33E-05
100414          Ethyl Benzene                   1
1.80E-01        6.93E-05
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108383          m-Xylene                        1
2.70E-01        1.04E-04
108883          Toluene                         1
9.00E-01        3.46E-04
1634044         Me t-ButylEther                 1
1.24E+00        4.76E-04

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK3   NAME=Reedley STCK3
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
3.40E-02        1.29E-05
100414          Ethyl Benzene                   1
5.40E-02        2.06E-05
108383          m-Xylene                        1
8.00E-02        3.09E-05
108883          Toluene                         1
2.68E-01        1.03E-04
1634044         Me t-ButylEther                 1
3.69E-01        1.42E-04

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=VOL1   NAME=Reedley VOL1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
9.92E-01        3.81E-04
100414          Ethyl Benzene                   1
1.59E+00        6.10E-04
108383          m-Xylene                        1
2.38E+00        9.15E-04
108883          Toluene                         1
7.93E+00        3.05E-03
1634044         Me t-ButylEther                 1
1.09E+01        4.20E-03

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=VOL2   NAME=Reedley VOL2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
5.63E-01        2.16E-04
100414          Ethyl Benzene                   1
9.00E-01        3.46E-04
108383          m-Xylene                        1
1.35E+00        5.20E-04
108883          Toluene                         1
4.50E+00        1.73E-03
1634044         Me t-ButylEther                 1
6.19E+00        2.38E-03

CHRONIC HI REPORT
REC          CV       CNS      BONE     DEVEL      ENDO       EYE      GILV     IMMUN
   KIDN     REPRO      RESP      SKIN     BLOOD       MAX
0001  0.00E+00 1.05E-06 0.00E+00 9.90E-07 1.80E-08 3.08E-08 4.88E-08 0.00E+00
4.88E-08 0.00E+00 7.04E-05 0.00E+00 3.74E-07 7.04E-05
0002  0.00E+00 1.22E-06 0.00E+00 1.15E-06 2.09E-08 3.58E-08 5.67E-08 0.00E+00
5.67E-08 0.00E+00 7.91E-05 0.00E+00 4.35E-07 7.91E-05
0003  0.00E+00 1.40E-06 0.00E+00 1.32E-06 2.40E-08 4.12E-08 6.53E-08 0.00E+00
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6.53E-08 0.00E+00 8.89E-05 0.00E+00 5.01E-07 8.89E-05
0004 0.00E+00 1.54E-06 0.00E+00 1.46E-06 2.64E-08 4.53E-08 7.17E-08 0.00E+00
7.17E-08 0.00E+00 9.67E-05 0.00E+00 5.50E-07 9.67E-05
0005 0.00E+00 1.59E-06 0.00E+00 1.50E-06 2.73E-08 4.68E-08 7.41E-08 0.00E+00
7.41E-08 0.00E+00 1.00E-04 0.00E+00 5.68E-07 1.00E-04
0006 0.00E+00 1.58E-06 0.00E+00 1.50E-06 2.71E-08 4.66E-08 7.37E-08 0.00E+00
7.37E-08 0.00E+00 9.98E-05 0.00E+00 5.65E-07 9.98E-05
0007 0.00E+00 1.63E-06 0.00E+00 1.54E-06 2.79E-08 4.79E-08 7.58E-08 0.00E+00
7.58E-08 0.00E+00 1.01E-04 0.00E+00 5.81E-07 1.01E-04
0008 0.00E+00 1.81E-06 0.00E+00 1.71E-06 3.10E-08 5.32E-08 8.41E-08 0.00E+00
8.41E-08 0.00E+00 1.08E-04 0.00E+00 6.45E-07 1.08E-04
0009 0.00E+00 2.01E-06 0.00E+00 1.90E-06 3.44E-08 5.91E-08 9.35E-08 0.00E+00
9.35E-08 0.00E+00 1.17E-04 0.00E+00 7.17E-07 1.17E-04
0010 0.00E+00 2.03E-06 0.00E+00 1.91E-06 3.47E-08 5.96E-08 9.43E-08 0.00E+00
9.43E-08 0.00E+00 1.19E-04 0.00E+00 7.23E-07 1.19E-04
0011 0.00E+00 1.94E-06 0.00E+00 1.83E-06 3.33E-08 5.71E-08 9.04E-08 0.00E+00
9.04E-08 0.00E+00 1.13E-04 0.00E+00 6.93E-07 1.13E-04
0012 0.00E+00 2.01E-06 0.00E+00 1.89E-06 3.44E-08 5.90E-08 9.33E-08 0.00E+00
9.33E-08 0.00E+00 1.11E-04 0.00E+00 7.16E-07 1.11E-04
0013 0.00E+00 1.99E-06 0.00E+00 1.88E-06 3.41E-08 5.86E-08 9.27E-08 0.00E+00
9.27E-08 0.00E+00 1.08E-04 0.00E+00 7.11E-07 1.08E-04
0014 0.00E+00 1.77E-06 0.00E+00 1.67E-06 3.03E-08 5.19E-08 8.22E-08 0.00E+00
8.22E-08 0.00E+00 9.35E-05 0.00E+00 6.30E-07 9.35E-05
0015 0.00E+00 1.68E-06 0.00E+00 1.58E-06 2.87E-08 4.93E-08 7.80E-08 0.00E+00
7.80E-08 0.00E+00 8.36E-05 0.00E+00 5.98E-07 8.36E-05
0016 0.00E+00 1.18E-06 0.00E+00 1.12E-06 2.03E-08 3.48E-08 5.51E-08 0.00E+00
5.51E-08 0.00E+00 7.80E-05 0.00E+00 4.22E-07 7.80E-05
0017 0.00E+00 1.30E-06 0.00E+00 1.23E-06 2.23E-08 3.83E-08 6.07E-08 0.00E+00
6.07E-08 0.00E+00 8.53E-05 0.00E+00 4.65E-07 8.53E-05
0018 0.00E+00 1.36E-06 0.00E+00 1.28E-06 2.32E-08 3.98E-08 6.30E-08 0.00E+00
6.30E-08 0.00E+00 8.88E-05 0.00E+00 4.83E-07 8.88E-05
0019 0.00E+00 1.34E-06 0.00E+00 1.27E-06 2.30E-08 3.94E-08 6.24E-08 0.00E+00
6.24E-08 0.00E+00 8.84E-05 0.00E+00 4.79E-07 8.84E-05
0020 0.00E+00 1.33E-06 0.00E+00 1.26E-06 2.28E-08 3.91E-08 6.19E-08 0.00E+00
6.19E-08 0.00E+00 8.71E-05 0.00E+00 4.75E-07 8.71E-05
0021 0.00E+00 1.41E-06 0.00E+00 1.33E-06 2.42E-08 4.16E-08 6.58E-08 0.00E+00
6.58E-08 0.00E+00 8.98E-05 0.00E+00 5.04E-07 8.98E-05
0022 0.00E+00 1.60E-06 0.00E+00 1.51E-06 2.73E-08 4.69E-08 7.42E-08 0.00E+00
7.42E-08 0.00E+00 9.80E-05 0.00E+00 5.69E-07 9.80E-05
0023 0.00E+00 1.74E-06 0.00E+00 1.64E-06 2.97E-08 5.11E-08 8.08E-08 0.00E+00
8.08E-08 0.00E+00 1.06E-04 0.00E+00 6.20E-07 1.06E-04
0024 0.00E+00 1.71E-06 0.00E+00 1.61E-06 2.92E-08 5.02E-08 7.94E-08 0.00E+00
7.94E-08 0.00E+00 1.05E-04 0.00E+00 6.09E-07 1.05E-04
0025 0.00E+00 1.63E-06 0.00E+00 1.53E-06 2.79E-08 4.78E-08 7.56E-08 0.00E+00
7.56E-08 0.00E+00 9.84E-05 0.00E+00 5.80E-07 9.84E-05
0026 0.00E+00 1.69E-06 0.00E+00 1.59E-06 2.89E-08 4.96E-08 7.86E-08 0.00E+00
7.86E-08 0.00E+00 9.73E-05 0.00E+00 6.03E-07 9.73E-05
0027 0.00E+00 1.71E-06 0.00E+00 1.62E-06 2.94E-08 5.04E-08 7.98E-08 0.00E+00
7.98E-08 0.00E+00 9.71E-05 0.00E+00 6.12E-07 9.71E-05
0028 0.00E+00 1.53E-06 0.00E+00 1.44E-06 2.62E-08 4.49E-08 7.11E-08 0.00E+00
7.11E-08 0.00E+00 8.56E-05 0.00E+00 5.45E-07 8.56E-05
0029 0.00E+00 1.43E-06 0.00E+00 1.35E-06 2.44E-08 4.19E-08 6.64E-08 0.00E+00
6.64E-08 0.00E+00 7.52E-05 0.00E+00 5.09E-07 7.52E-05
0030 0.00E+00 1.37E-06 0.00E+00 1.29E-06 2.34E-08 4.02E-08 6.36E-08 0.00E+00
6.36E-08 0.00E+00 7.05E-05 0.00E+00 4.87E-07 7.05E-05
0031 0.00E+00 1.17E-06 0.00E+00 1.11E-06 2.01E-08 3.45E-08 5.45E-08 0.00E+00
5.45E-08 0.00E+00 7.96E-05 0.00E+00 4.18E-07 7.96E-05
0032 0.00E+00 1.16E-06 0.00E+00 1.10E-06 1.99E-08 3.42E-08 5.42E-08 0.00E+00
5.42E-08 0.00E+00 7.96E-05 0.00E+00 4.15E-07 7.96E-05
0033 0.00E+00 1.13E-06 0.00E+00 1.07E-06 1.94E-08 3.33E-08 5.27E-08 0.00E+00
5.27E-08 0.00E+00 7.75E-05 0.00E+00 4.04E-07 7.75E-05
0034 0.00E+00 1.15E-06 0.00E+00 1.08E-06 1.97E-08 3.37E-08 5.34E-08 0.00E+00
5.34E-08 0.00E+00 7.70E-05 0.00E+00 4.10E-07 7.70E-05
0035 0.00E+00 1.26E-06 0.00E+00 1.19E-06 2.16E-08 3.70E-08 5.86E-08 0.00E+00
5.86E-08 0.00E+00 8.16E-05 0.00E+00 4.50E-07 8.16E-05
0036 0.00E+00 1.43E-06 0.00E+00 1.35E-06 2.44E-08 4.19E-08 6.63E-08 0.00E+00
6.63E-08 0.00E+00 9.00E-05 0.00E+00 5.09E-07 9.00E-05
0037 0.00E+00 1.51E-06 0.00E+00 1.43E-06 2.59E-08 4.45E-08 7.04E-08 0.00E+00
7.04E-08 0.00E+00 9.56E-05 0.00E+00 5.40E-07 9.56E-05

0038 0.00E+00 1.45E-06 0.00E+00 1.37E-06 2.49E-08 4.28E-08 6.77E-08 0.00E+00
6.77E-08 0.00E+00 9.29E-05 0.00E+00 5.19E-07 9.29E-05
0039 0.00E+00 1.38E-06 0.00E+00 1.30E-06 2.37E-08 4.06E-08 6.43E-08 0.00E+00
6.43E-08 0.00E+00 8.66E-05 0.00E+00 4.93E-07 8.66E-05
0040 0.00E+00 1.44E-06 0.00E+00 1.36E-06 2.47E-08 4.24E-08 6.71E-08 0.00E+00
6.71E-08 0.00E+00 8.61E-05 0.00E+00 5.15E-07 8.61E-05
0041 0.00E+00 1.49E-06 0.00E+00 1.41E-06 2.56E-08 4.39E-08 6.94E-08 0.00E+00
6.94E-08 0.00E+00 8.76E-05 0.00E+00 5.32E-07 8.76E-05
0042 0.00E+00 1.35E-06 0.00E+00 1.27E-06 2.31E-08 3.97E-08 6.28E-08 0.00E+00
6.28E-08 0.00E+00 7.91E-05 0.00E+00 4.82E-07 7.91E-05
0043 0.00E+00 1.23E-06 0.00E+00 1.16E-06 2.10E-08 3.61E-08 5.71E-08 0.00E+00
5.71E-08 0.00E+00 6.83E-05 0.00E+00 4.38E-07 6.83E-05
0044 0.00E+00 1.21E-06 0.00E+00 1.14E-06 2.07E-08 3.55E-08 5.62E-08 0.00E+00
5.62E-08 0.00E+00 6.48E-05 0.00E+00 4.31E-07 6.48E-05
0045 0.00E+00 1.11E-06 0.00E+00 1.05E-06 1.91E-08 3.27E-08 5.18E-08 0.00E+00
5.18E-08 0.00E+00 5.94E-05 0.00E+00 3.97E-07 5.94E-05
0046 0.00E+00 9.92E-07 0.00E+00 9.36E-07 1.70E-08 2.92E-08 4.61E-08 0.00E+00
4.61E-08 0.00E+00 7.02E-05 0.00E+00 3.54E-07 7.02E-05
0047 0.00E+00 9.71E-07 0.00E+00 9.17E-07 1.66E-08 2.85E-08 4.52E-08 0.00E+00
4.52E-08 0.00E+00 6.81E-05 0.00E+00 3.46E-07 6.81E-05
0048 0.00E+00 1.02E-06 0.00E+00 9.61E-07 1.74E-08 2.99E-08 4.74E-08 0.00E+00
4.74E-08 0.00E+00 6.94E-05 0.00E+00 3.63E-07 6.94E-05
0049 0.00E+00 1.15E-06 0.00E+00 1.08E-06 1.96E-08 3.37E-08 5.33E-08 0.00E+00
5.33E-08 0.00E+00 7.54E-05 0.00E+00 4.08E-07 7.54E-05
0050 0.00E+00 1.28E-06 0.00E+00 1.21E-06 2.20E-08 3.77E-08 5.97E-08 0.00E+00
5.97E-08 0.00E+00 8.33E-05 0.00E+00 4.58E-07 8.33E-05
0051 0.00E+00 1.33E-06 0.00E+00 1.25E-06 2.27E-08 3.90E-08 6.17E-08 0.00E+00
6.17E-08 0.00E+00 8.68E-05 0.00E+00 4.73E-07 8.68E-05
0052 0.00E+00 1.25E-06 0.00E+00 1.18E-06 2.15E-08 3.69E-08 5.83E-08 0.00E+00
5.83E-08 0.00E+00 8.28E-05 0.00E+00 4.47E-07 8.28E-05
0053 0.00E+00 1.19E-06 0.00E+00 1.12E-06 2.04E-08 3.50E-08 5.54E-08 0.00E+00
5.54E-08 0.00E+00 7.69E-05 0.00E+00 4.25E-07 7.69E-05
0054 0.00E+00 1.25E-06 0.00E+00 1.18E-06 2.14E-08 3.67E-08 5.81E-08 0.00E+00
5.81E-08 0.00E+00 7.69E-05 0.00E+00 4.45E-07 7.69E-05
0055 0.00E+00 1.31E-06 0.00E+00 1.24E-06 2.25E-08 3.86E-08 6.10E-08 0.00E+00
6.10E-08 0.00E+00 7.94E-05 0.00E+00 4.68E-07 7.94E-05
0056 0.00E+00 1.21E-06 0.00E+00 1.14E-06 2.07E-08 3.56E-08 5.63E-08 0.00E+00
5.63E-08 0.00E+00 7.35E-05 0.00E+00 4.31E-07 7.35E-05
0057 0.00E+00 1.07E-06 0.00E+00 1.01E-06 1.84E-08 3.16E-08 4.99E-08 0.00E+00
4.99E-08 0.00E+00 6.28E-05 0.00E+00 3.83E-07 6.28E-05
0058 0.00E+00 1.06E-06 0.00E+00 1.00E-06 1.82E-08 3.12E-08 4.93E-08 0.00E+00
4.93E-08 0.00E+00 5.91E-05 0.00E+00 3.78E-07 5.91E-05
0059 0.00E+00 1.01E-06 0.00E+00 9.53E-07 1.73E-08 2.97E-08 4.70E-08 0.00E+00
4.70E-08 0.00E+00 5.58E-05 0.00E+00 3.60E-07 5.58E-05
0060 0.00E+00 9.39E-07 0.00E+00 8.86E-07 1.61E-08 2.76E-08 4.37E-08 0.00E+00
4.37E-08 0.00E+00 5.15E-05 0.00E+00 3.35E-07 5.15E-05
0061 0.00E+00 8.53E-07 0.00E+00 8.05E-07 1.46E-08 2.51E-08 3.97E-08 0.00E+00
3.97E-08 0.00E+00 6.07E-05 0.00E+00 3.04E-07 6.07E-05
0062 0.00E+00 9.26E-07 0.00E+00 8.74E-07 1.59E-08 2.72E-08 4.31E-08 0.00E+00
4.31E-08 0.00E+00 6.38E-05 0.00E+00 3.30E-07 6.38E-05
0063 0.00E+00 1.05E-06 0.00E+00 9.94E-07 1.80E-08 3.09E-08 4.90E-08 0.00E+00
4.90E-08 0.00E+00 7.07E-05 0.00E+00 3.76E-07 7.07E-05
0064 0.00E+00 1.16E-06 0.00E+00 1.09E-06 1.99E-08 3.41E-08 5.40E-08 0.00E+00
5.40E-08 0.00E+00 7.75E-05 0.00E+00 4.14E-07 7.75E-05
0065 0.00E+00 1.17E-06 0.00E+00 1.10E-06 2.00E-08 3.44E-08 5.44E-08 0.00E+00
5.44E-08 0.00E+00 7.90E-05 0.00E+00 4.17E-07 7.90E-05
0066 0.00E+00 1.09E-06 0.00E+00 1.03E-06 1.87E-08 3.21E-08 5.07E-08 0.00E+00
5.07E-08 0.00E+00 7.42E-05 0.00E+00 3.89E-07 7.42E-05
0067 0.00E+00 1.04E-06 0.00E+00 9.78E-07 1.77E-08 3.04E-08 4.82E-08 0.00E+00
4.82E-08 0.00E+00 6.87E-05 0.00E+00 3.70E-07 6.87E-05
0068 0.00E+00 1.09E-06 0.00E+00 1.03E-06 1.87E-08 3.21E-08 5.07E-08 0.00E+00
5.07E-08 0.00E+00 6.91E-05 0.00E+00 3.89E-07 6.91E-05
0069 0.00E+00 1.16E-06 0.00E+00 1.10E-06 1.99E-08 3.41E-08 5.40E-08 0.00E+00
5.40E-08 0.00E+00 7.24E-05 0.00E+00 4.14E-07 7.24E-05
0070 0.00E+00 1.09E-06 0.00E+00 1.03E-06 1.87E-08 3.22E-08 5.09E-08 0.00E+00
5.09E-08 0.00E+00 6.86E-05 0.00E+00 3.90E-07 6.86E-05
0071 0.00E+00 9.58E-07 0.00E+00 9.05E-07 1.64E-08 2.82E-08 4.46E-08 0.00E+00
4.46E-08 0.00E+00 5.86E-05 0.00E+00 3.42E-07 5.86E-05
0072 0.00E+00 9.27E-07 0.00E+00 8.75E-07 1.59E-08 2.73E-08 4.31E-08 0.00E+00

4.31E-08 0.00E+00 5.37E-05 0.00E+00 3.31E-07 5.37E-05
0073 0.00E+00 9.21E-07 0.00E+00 8.69E-07 1.58E-08 2.71E-08 4.28E-08 0.00E+00
4.28E-08 0.00E+00 5.24E-05 0.00E+00 3.28E-07 5.24E-05
0074 0.00E+00 8.42E-07 0.00E+00 7.95E-07 1.44E-08 2.47E-08 3.92E-08 0.00E+00
3.92E-08 0.00E+00 4.76E-05 0.00E+00 3.00E-07 4.76E-05
0075 0.00E+00 8.25E-07 0.00E+00 7.79E-07 1.41E-08 2.43E-08 3.84E-08 0.00E+00
3.84E-08 0.00E+00 4.66E-05 0.00E+00 2.94E-07 4.66E-05
0076 0.00E+00 8.57E-07 0.00E+00 8.09E-07 1.47E-08 2.52E-08 3.99E-08 0.00E+00
3.99E-08 0.00E+00 5.97E-05 0.00E+00 3.06E-07 5.97E-05
0077 0.00E+00 9.74E-07 0.00E+00 9.19E-07 1.67E-08 2.86E-08 4.53E-08 0.00E+00
4.53E-08 0.00E+00 6.67E-05 0.00E+00 3.47E-07 6.67E-05
0078 0.00E+00 1.05E-06 0.00E+00 9.92E-07 1.80E-08 3.09E-08 4.89E-08 0.00E+00
4.89E-08 0.00E+00 7.21E-05 0.00E+00 3.75E-07 7.21E-05
0079 0.00E+00 1.04E-06 0.00E+00 9.78E-07 1.78E-08 3.05E-08 4.82E-08 0.00E+00
4.82E-08 0.00E+00 7.20E-05 0.00E+00 3.70E-07 7.20E-05
0080 0.00E+00 9.57E-07 0.00E+00 9.03E-07 1.64E-08 2.81E-08 4.45E-08 0.00E+00
4.45E-08 0.00E+00 6.68E-05 0.00E+00 3.41E-07 6.68E-05
0081 0.00E+00 9.10E-07 0.00E+00 8.59E-07 1.56E-08 2.68E-08 4.23E-08 0.00E+00
4.23E-08 0.00E+00 6.18E-05 0.00E+00 3.25E-07 6.18E-05
0082 0.00E+00 9.62E-07 0.00E+00 9.08E-07 1.65E-08 2.83E-08 4.47E-08 0.00E+00
4.47E-08 0.00E+00 6.25E-05 0.00E+00 3.43E-07 6.25E-05
0083 0.00E+00 1.04E-06 0.00E+00 9.78E-07 1.77E-08 3.04E-08 4.82E-08 0.00E+00
4.82E-08 0.00E+00 6.62E-05 0.00E+00 3.69E-07 6.62E-05
0084 0.00E+00 9.97E-07 0.00E+00 9.41E-07 1.71E-08 2.93E-08 4.64E-08 0.00E+00
4.64E-08 0.00E+00 6.41E-05 0.00E+00 3.56E-07 6.41E-05
0085 0.00E+00 8.71E-07 0.00E+00 8.22E-07 1.49E-08 2.56E-08 4.05E-08 0.00E+00
4.05E-08 0.00E+00 5.53E-05 0.00E+00 3.11E-07 5.53E-05
0086 0.00E+00 8.16E-07 0.00E+00 7.70E-07 1.40E-08 2.40E-08 3.80E-08 0.00E+00
3.80E-08 0.00E+00 4.92E-05 0.00E+00 2.91E-07 4.92E-05
0087 0.00E+00 8.30E-07 0.00E+00 7.84E-07 1.42E-08 2.44E-08 3.86E-08 0.00E+00
3.86E-08 0.00E+00 4.86E-05 0.00E+00 2.96E-07 4.86E-05
0088 0.00E+00 7.81E-07 0.00E+00 7.37E-07 1.34E-08 2.29E-08 3.63E-08 0.00E+00
3.63E-08 0.00E+00 4.55E-05 0.00E+00 2.78E-07 4.55E-05
0089 0.00E+00 7.25E-07 0.00E+00 6.84E-07 1.24E-08 2.13E-08 3.37E-08 0.00E+00
3.37E-08 0.00E+00 4.19E-05 0.00E+00 2.59E-07 4.19E-05
0090 0.00E+00 7.40E-07 0.00E+00 6.98E-07 1.27E-08 2.17E-08 3.44E-08 0.00E+00
3.44E-08 0.00E+00 4.30E-05 0.00E+00 2.64E-07 4.30E-05
0091 0.00E+00 9.04E-07 0.00E+00 8.53E-07 1.55E-08 2.66E-08 4.21E-08 0.00E+00
4.21E-08 0.00E+00 6.32E-05 0.00E+00 3.22E-07 6.32E-05
0092 0.00E+00 9.54E-07 0.00E+00 9.01E-07 1.63E-08 2.80E-08 4.44E-08 0.00E+00
4.44E-08 0.00E+00 6.71E-05 0.00E+00 3.40E-07 6.71E-05
0093 0.00E+00 9.23E-07 0.00E+00 8.71E-07 1.58E-08 2.71E-08 4.29E-08 0.00E+00
4.29E-08 0.00E+00 6.58E-05 0.00E+00 3.29E-07 6.58E-05
0094 0.00E+00 8.45E-07 0.00E+00 7.98E-07 1.45E-08 2.48E-08 3.93E-08 0.00E+00
3.93E-08 0.00E+00 6.03E-05 0.00E+00 3.02E-07 6.03E-05
0095 0.00E+00 8.06E-07 0.00E+00 7.61E-07 1.38E-08 2.37E-08 3.75E-08 0.00E+00
3.75E-08 0.00E+00 5.60E-05 0.00E+00 2.88E-07 5.60E-05
0096 0.00E+00 8.55E-07 0.00E+00 8.07E-07 1.46E-08 2.51E-08 3.98E-08 0.00E+00
3.98E-08 0.00E+00 5.69E-05 0.00E+00 3.05E-07 5.69E-05
0097 0.00E+00 9.29E-07 0.00E+00 8.77E-07 1.59E-08 2.73E-08 4.32E-08 0.00E+00
4.32E-08 0.00E+00 6.07E-05 0.00E+00 3.31E-07 6.07E-05
0098 0.00E+00 9.13E-07 0.00E+00 8.62E-07 1.56E-08 2.68E-08 4.25E-08 0.00E+00
4.25E-08 0.00E+00 6.01E-05 0.00E+00 3.26E-07 6.01E-05
0099 0.00E+00 8.02E-07 0.00E+00 7.57E-07 1.37E-08 2.36E-08 3.73E-08 0.00E+00
3.73E-08 0.00E+00 5.25E-05 0.00E+00 2.86E-07 5.25E-05
0100 0.00E+00 7.27E-07 0.00E+00 6.87E-07 1.25E-08 2.14E-08 3.38E-08 0.00E+00
3.38E-08 0.00E+00 4.56E-05 0.00E+00 2.59E-07 4.56E-05
0101 0.00E+00 7.41E-07 0.00E+00 6.99E-07 1.27E-08 2.18E-08 3.44E-08 0.00E+00
3.44E-08 0.00E+00 4.46E-05 0.00E+00 2.64E-07 4.46E-05
0102 0.00E+00 7.29E-07 0.00E+00 6.88E-07 1.25E-08 2.14E-08 3.39E-08 0.00E+00
3.39E-08 0.00E+00 4.36E-05 0.00E+00 2.60E-07 4.36E-05
0103 0.00E+00 6.61E-07 0.00E+00 6.24E-07 1.13E-08 1.94E-08 3.08E-08 0.00E+00
3.08E-08 0.00E+00 3.93E-05 0.00E+00 2.36E-07 3.93E-05
0104 0.00E+00 6.50E-07 0.00E+00 6.14E-07 1.11E-08 1.91E-08 3.02E-08 0.00E+00
3.02E-08 0.00E+00 3.84E-05 0.00E+00 2.32E-07 3.84E-05
0105 0.00E+00 6.62E-07 0.00E+00 6.24E-07 1.13E-08 1.94E-08 3.08E-08 0.00E+00
3.08E-08 0.00E+00 3.94E-05 0.00E+00 2.36E-07 3.94E-05
0106 0.00E+00 8.68E-07 0.00E+00 8.19E-07 1.49E-08 2.55E-08 4.04E-08 0.00E+00
4.04E-08 0.00E+00 6.25E-05 0.00E+00 3.10E-07 6.25E-05

0107 0.00E+00 8.25E-07 0.00E+00 7.79E-07 1.41E-08 2.43E-08 3.84E-08 0.00E+00
3.84E-08 0.00E+00 6.02E-05 0.00E+00 2.94E-07 6.02E-05
0108 0.00E+00 7.52E-07 0.00E+00 7.10E-07 1.29E-08 2.21E-08 3.50E-08 0.00E+00
3.50E-08 0.00E+00 5.48E-05 0.00E+00 2.68E-07 5.48E-05
0109 0.00E+00 7.19E-07 0.00E+00 6.79E-07 1.23E-08 2.11E-08 3.35E-08 0.00E+00
3.35E-08 0.00E+00 5.09E-05 0.00E+00 2.57E-07 5.09E-05
0110 0.00E+00 7.65E-07 0.00E+00 7.22E-07 1.31E-08 2.25E-08 3.56E-08 0.00E+00
3.56E-08 0.00E+00 5.19E-05 0.00E+00 2.73E-07 5.19E-05
0111 0.00E+00 8.37E-07 0.00E+00 7.90E-07 1.43E-08 2.46E-08 3.90E-08 0.00E+00
3.90E-08 0.00E+00 5.59E-05 0.00E+00 2.99E-07 5.59E-05
0112 0.00E+00 8.38E-07 0.00E+00 7.91E-07 1.44E-08 2.46E-08 3.90E-08 0.00E+00
3.90E-08 0.00E+00 5.63E-05 0.00E+00 2.99E-07 5.63E-05
0113 0.00E+00 7.46E-07 0.00E+00 7.04E-07 1.28E-08 2.19E-08 3.47E-08 0.00E+00
3.47E-08 0.00E+00 5.02E-05 0.00E+00 2.66E-07 5.02E-05
0114 0.00E+00 6.59E-07 0.00E+00 6.22E-07 1.13E-08 1.94E-08 3.07E-08 0.00E+00
3.07E-08 0.00E+00 4.29E-05 0.00E+00 2.35E-07 4.29E-05
0115 0.00E+00 6.58E-07 0.00E+00 6.21E-07 1.13E-08 1.93E-08 3.06E-08 0.00E+00
3.06E-08 0.00E+00 4.08E-05 0.00E+00 2.35E-07 4.08E-05
0116 0.00E+00 6.73E-07 0.00E+00 6.35E-07 1.15E-08 1.98E-08 3.13E-08 0.00E+00
3.13E-08 0.00E+00 4.12E-05 0.00E+00 2.40E-07 4.12E-05
0117 0.00E+00 6.24E-07 0.00E+00 5.89E-07 1.07E-08 1.83E-08 2.90E-08 0.00E+00
2.90E-08 0.00E+00 3.81E-05 0.00E+00 2.22E-07 3.81E-05
0118 0.00E+00 5.78E-07 0.00E+00 5.46E-07 9.90E-09 1.70E-08 2.69E-08 0.00E+00
2.69E-08 0.00E+00 3.49E-05 0.00E+00 2.06E-07 3.49E-05
0119 0.00E+00 5.97E-07 0.00E+00 5.63E-07 1.02E-08 1.75E-08 2.78E-08 0.00E+00
2.78E-08 0.00E+00 3.60E-05 0.00E+00 2.13E-07 3.60E-05
0120 0.00E+00 5.85E-07 0.00E+00 5.52E-07 1.00E-08 1.72E-08 2.72E-08 0.00E+00
2.72E-08 0.00E+00 3.55E-05 0.00E+00 2.09E-07 3.55E-05
0121 0.00E+00 7.41E-07 0.00E+00 7.00E-07 1.27E-08 2.18E-08 3.45E-08 0.00E+00
3.45E-08 0.00E+00 5.51E-05 0.00E+00 2.64E-07 5.51E-05
0122 0.00E+00 6.73E-07 0.00E+00 6.35E-07 1.15E-08 1.98E-08 3.13E-08 0.00E+00
3.13E-08 0.00E+00 4.99E-05 0.00E+00 2.40E-07 4.99E-05
0123 0.00E+00 6.46E-07 0.00E+00 6.10E-07 1.11E-08 1.90E-08 3.00E-08 0.00E+00
3.00E-08 0.00E+00 4.65E-05 0.00E+00 2.30E-07 4.65E-05
0124 0.00E+00 6.88E-07 0.00E+00 6.50E-07 1.18E-08 2.02E-08 3.20E-08 0.00E+00
3.20E-08 0.00E+00 4.76E-05 0.00E+00 2.46E-07 4.76E-05
0125 0.00E+00 7.58E-07 0.00E+00 7.16E-07 1.30E-08 2.23E-08 3.53E-08 0.00E+00
3.53E-08 0.00E+00 5.16E-05 0.00E+00 2.71E-07 5.16E-05
0126 0.00E+00 7.72E-07 0.00E+00 7.29E-07 1.32E-08 2.27E-08 3.59E-08 0.00E+00
3.59E-08 0.00E+00 5.28E-05 0.00E+00 2.75E-07 5.28E-05
0127 0.00E+00 6.98E-07 0.00E+00 6.59E-07 1.20E-08 2.05E-08 3.25E-08 0.00E+00
3.25E-08 0.00E+00 4.80E-05 0.00E+00 2.49E-07 4.80E-05
0128 0.00E+00 6.08E-07 0.00E+00 5.73E-07 1.04E-08 1.79E-08 2.83E-08 0.00E+00
2.83E-08 0.00E+00 4.08E-05 0.00E+00 2.17E-07 4.08E-05
0129 0.00E+00 5.87E-07 0.00E+00 5.54E-07 1.00E-08 1.72E-08 2.73E-08 0.00E+00
2.73E-08 0.00E+00 3.76E-05 0.00E+00 2.09E-07 3.76E-05
0130 0.00E+00 6.12E-07 0.00E+00 5.78E-07 1.05E-08 1.80E-08 2.85E-08 0.00E+00
2.85E-08 0.00E+00 3.83E-05 0.00E+00 2.18E-07 3.83E-05
0131 0.00E+00 5.93E-07 0.00E+00 5.59E-07 1.02E-08 1.74E-08 2.76E-08 0.00E+00
2.76E-08 0.00E+00 3.70E-05 0.00E+00 2.11E-07 3.70E-05
0132 0.00E+00 5.35E-07 0.00E+00 5.05E-07 9.16E-09 1.57E-08 2.49E-08 0.00E+00
2.49E-08 0.00E+00 3.31E-05 0.00E+00 1.91E-07 3.31E-05
0133 0.00E+00 5.26E-07 0.00E+00 4.96E-07 9.01E-09 1.55E-08 2.45E-08 0.00E+00
2.45E-08 0.00E+00 3.22E-05 0.00E+00 1.88E-07 3.22E-05
0134 0.00E+00 5.48E-07 0.00E+00 5.17E-07 9.39E-09 1.61E-08 2.55E-08 0.00E+00
2.55E-08 0.00E+00 3.38E-05 0.00E+00 1.95E-07 3.38E-05
0135 0.00E+00 5.12E-07 0.00E+00 4.84E-07 8.77E-09 1.51E-08 2.38E-08 0.00E+00
2.38E-08 0.00E+00 3.16E-05 0.00E+00 1.83E-07 3.16E-05
0136 0.00E+00 6.06E-07 0.00E+00 5.72E-07 1.04E-08 1.78E-08 2.82E-08 0.00E+00
2.82E-08 0.00E+00 4.56E-05 0.00E+00 2.16E-07 4.56E-05
0137 0.00E+00 5.83E-07 0.00E+00 5.50E-07 9.99E-09 1.71E-08 2.71E-08 0.00E+00
2.71E-08 0.00E+00 4.26E-05 0.00E+00 2.08E-07 4.26E-05
0138 0.00E+00 6.23E-07 0.00E+00 5.88E-07 1.07E-08 1.83E-08 2.90E-08 0.00E+00
2.90E-08 0.00E+00 4.39E-05 0.00E+00 2.22E-07 4.39E-05
0139 0.00E+00 6.90E-07 0.00E+00 6.51E-07 1.18E-08 2.03E-08 3.21E-08 0.00E+00
3.21E-08 0.00E+00 4.77E-05 0.00E+00 2.46E-07 4.77E-05
0140 0.00E+00 7.13E-07 0.00E+00 6.73E-07 1.22E-08 2.10E-08 3.32E-08 0.00E+00
3.32E-08 0.00E+00 4.96E-05 0.00E+00 2.54E-07 4.96E-05
0141 0.00E+00 6.56E-07 0.00E+00 6.19E-07 1.12E-08 1.93E-08 3.05E-08 0.00E+00

3.05E-08 0.00E+00 4.59E-05 0.00E+00 2.34E-07 4.59E-05
0142 0.00E+00 5.67E-07 0.00E+00 5.35E-07 9.72E-09 1.67E-08 2.64E-08 0.00E+00
2.64E-08 0.00E+00 3.92E-05 0.00E+00 2.02E-07 3.92E-05
0143 0.00E+00 5.29E-07 0.00E+00 4.99E-07 9.06E-09 1.55E-08 2.46E-08 0.00E+00
2.46E-08 0.00E+00 3.50E-05 0.00E+00 1.89E-07 3.50E-05
0144 0.00E+00 5.51E-07 0.00E+00 5.20E-07 9.44E-09 1.62E-08 2.56E-08 0.00E+00
2.56E-08 0.00E+00 3.52E-05 0.00E+00 1.97E-07 3.52E-05
0145 0.00E+00 5.58E-07 0.00E+00 5.27E-07 9.56E-09 1.64E-08 2.60E-08 0.00E+00
2.60E-08 0.00E+00 3.55E-05 0.00E+00 1.99E-07 3.55E-05
0146 0.00E+00 5.11E-07 0.00E+00 4.82E-07 8.75E-09 1.50E-08 2.38E-08 0.00E+00
2.38E-08 0.00E+00 3.24E-05 0.00E+00 1.82E-07 3.24E-05
0147 0.00E+00 4.73E-07 0.00E+00 4.46E-07 8.10E-09 1.39E-08 2.20E-08 0.00E+00
2.20E-08 0.00E+00 2.96E-05 0.00E+00 1.69E-07 2.96E-05
0148 0.00E+00 4.90E-07 0.00E+00 4.63E-07 8.40E-09 1.44E-08 2.28E-08 0.00E+00
2.28E-08 0.00E+00 3.06E-05 0.00E+00 1.75E-07 3.06E-05
0149 0.00E+00 4.98E-07 0.00E+00 4.70E-07 8.53E-09 1.46E-08 2.32E-08 0.00E+00
2.32E-08 0.00E+00 3.13E-05 0.00E+00 1.78E-07 3.13E-05
0150 0.00E+00 4.47E-07 0.00E+00 4.22E-07 7.66E-09 1.32E-08 2.08E-08 0.00E+00
2.08E-08 0.00E+00 2.79E-05 0.00E+00 1.60E-07 2.79E-05
0151 0.00E+00 5.29E-07 0.00E+00 5.00E-07 9.07E-09 1.56E-08 2.46E-08 0.00E+00
2.46E-08 0.00E+00 3.92E-05 0.00E+00 1.89E-07 3.92E-05
0152 0.00E+00 5.66E-07 0.00E+00 5.35E-07 9.70E-09 1.66E-08 2.63E-08 0.00E+00
2.63E-08 0.00E+00 4.05E-05 0.00E+00 2.02E-07 4.05E-05
0153 0.00E+00 6.30E-07 0.00E+00 5.95E-07 1.08E-08 1.85E-08 2.93E-08 0.00E+00
2.93E-08 0.00E+00 4.43E-05 0.00E+00 2.25E-07 4.43E-05
0154 0.00E+00 6.60E-07 0.00E+00 6.23E-07 1.13E-08 1.94E-08 3.07E-08 0.00E+00
3.07E-08 0.00E+00 4.66E-05 0.00E+00 2.35E-07 4.66E-05
0155 0.00E+00 6.18E-07 0.00E+00 5.83E-07 1.06E-08 1.82E-08 2.87E-08 0.00E+00
2.87E-08 0.00E+00 4.40E-05 0.00E+00 2.20E-07 4.40E-05
0156 0.00E+00 5.35E-07 0.00E+00 5.05E-07 9.17E-09 1.57E-08 2.49E-08 0.00E+00
2.49E-08 0.00E+00 3.78E-05 0.00E+00 1.91E-07 3.78E-05
0157 0.00E+00 4.84E-07 0.00E+00 4.56E-07 8.28E-09 1.42E-08 2.25E-08 0.00E+00
2.25E-08 0.00E+00 3.29E-05 0.00E+00 1.73E-07 3.29E-05
0158 0.00E+00 4.94E-07 0.00E+00 4.66E-07 8.46E-09 1.45E-08 2.30E-08 0.00E+00
2.30E-08 0.00E+00 3.23E-05 0.00E+00 1.76E-07 3.23E-05
0159 0.00E+00 5.17E-07 0.00E+00 4.88E-07 8.86E-09 1.52E-08 2.41E-08 0.00E+00
2.41E-08 0.00E+00 3.35E-05 0.00E+00 1.84E-07 3.35E-05
0160 0.00E+00 4.92E-07 0.00E+00 4.65E-07 8.43E-09 1.45E-08 2.29E-08 0.00E+00
2.29E-08 0.00E+00 3.19E-05 0.00E+00 1.76E-07 3.19E-05
0161 0.00E+00 4.42E-07 0.00E+00 4.18E-07 7.58E-09 1.30E-08 2.06E-08 0.00E+00
2.06E-08 0.00E+00 2.84E-05 0.00E+00 1.58E-07 2.84E-05
0162 0.00E+00 4.34E-07 0.00E+00 4.10E-07 7.44E-09 1.28E-08 2.02E-08 0.00E+00
2.02E-08 0.00E+00 2.75E-05 0.00E+00 1.55E-07 2.75E-05
0163 0.00E+00 4.60E-07 0.00E+00 4.34E-07 7.87E-09 1.35E-08 2.14E-08 0.00E+00
2.14E-08 0.00E+00 2.92E-05 0.00E+00 1.64E-07 2.92E-05
0164 0.00E+00 4.47E-07 0.00E+00 4.22E-07 7.65E-09 1.31E-08 2.08E-08 0.00E+00
2.08E-08 0.00E+00 2.85E-05 0.00E+00 1.59E-07 2.85E-05
0165 0.00E+00 3.93E-07 0.00E+00 3.71E-07 6.72E-09 1.15E-08 1.83E-08 0.00E+00
1.83E-08 0.00E+00 2.47E-05 0.00E+00 1.40E-07 2.47E-05
0166 0.00E+00 5.17E-07 0.00E+00 4.88E-07 8.86E-09 1.52E-08 2.41E-08 0.00E+00
2.41E-08 0.00E+00 3.76E-05 0.00E+00 1.85E-07 3.76E-05
0167 0.00E+00 5.77E-07 0.00E+00 5.45E-07 9.89E-09 1.70E-08 2.69E-08 0.00E+00
2.69E-08 0.00E+00 4.12E-05 0.00E+00 2.06E-07 4.12E-05
0168 0.00E+00 6.12E-07 0.00E+00 5.77E-07 1.05E-08 1.80E-08 2.84E-08 0.00E+00
2.84E-08 0.00E+00 4.38E-05 0.00E+00 2.18E-07 4.38E-05
0169 0.00E+00 5.83E-07 0.00E+00 5.50E-07 9.99E-09 1.71E-08 2.71E-08 0.00E+00
2.71E-08 0.00E+00 4.21E-05 0.00E+00 2.08E-07 4.21E-05
0170 0.00E+00 5.09E-07 0.00E+00 4.80E-07 8.71E-09 1.50E-08 2.37E-08 0.00E+00
2.37E-08 0.00E+00 3.67E-05 0.00E+00 1.81E-07 3.67E-05
0171 0.00E+00 4.49E-07 0.00E+00 4.24E-07 7.69E-09 1.32E-08 2.09E-08 0.00E+00
2.09E-08 0.00E+00 3.14E-05 0.00E+00 1.60E-07 3.14E-05
0172 0.00E+00 4.45E-07 0.00E+00 4.20E-07 7.62E-09 1.31E-08 2.07E-08 0.00E+00
2.07E-08 0.00E+00 2.99E-05 0.00E+00 1.59E-07 2.99E-05
0173 0.00E+00 4.73E-07 0.00E+00 4.46E-07 8.09E-09 1.39E-08 2.20E-08 0.00E+00
2.20E-08 0.00E+00 3.11E-05 0.00E+00 1.69E-07 3.11E-05
0174 0.00E+00 4.71E-07 0.00E+00 4.44E-07 8.07E-09 1.38E-08 2.19E-08 0.00E+00
2.19E-08 0.00E+00 3.10E-05 0.00E+00 1.68E-07 3.10E-05
0175 0.00E+00 4.27E-07 0.00E+00 4.03E-07 7.31E-09 1.25E-08 1.99E-08 0.00E+00
1.99E-08 0.00E+00 2.80E-05 0.00E+00 1.52E-07 2.80E-05

0176 0.00E+00 3.95E-07 0.00E+00 3.72E-07 6.76E-09 1.16E-08 1.84E-08 0.00E+00
1.84E-08 0.00E+00 2.55E-05 0.00E+00 1.41E-07 2.55E-05
0177 0.00E+00 4.10E-07 0.00E+00 3.87E-07 7.02E-09 1.20E-08 1.91E-08 0.00E+00
1.91E-08 0.00E+00 2.63E-05 0.00E+00 1.46E-07 2.63E-05
0178 0.00E+00 4.27E-07 0.00E+00 4.03E-07 7.32E-09 1.26E-08 1.99E-08 0.00E+00
1.99E-08 0.00E+00 2.77E-05 0.00E+00 1.52E-07 2.77E-05
0179 0.00E+00 3.97E-07 0.00E+00 3.75E-07 6.80E-09 1.17E-08 1.85E-08 0.00E+00
1.85E-08 0.00E+00 2.57E-05 0.00E+00 1.42E-07 2.57E-05
0180 0.00E+00 3.48E-07 0.00E+00 3.28E-07 5.96E-09 1.02E-08 1.62E-08 0.00E+00
1.62E-08 0.00E+00 2.21E-05 0.00E+00 1.24E-07 2.21E-05
0181 0.00E+00 5.31E-07 0.00E+00 5.01E-07 9.09E-09 1.56E-08 2.47E-08 0.00E+00
2.47E-08 0.00E+00 3.84E-05 0.00E+00 1.89E-07 3.84E-05
0182 0.00E+00 5.68E-07 0.00E+00 5.36E-07 9.73E-09 1.67E-08 2.64E-08 0.00E+00
2.64E-08 0.00E+00 4.12E-05 0.00E+00 2.03E-07 4.12E-05
0183 0.00E+00 5.51E-07 0.00E+00 5.20E-07 9.43E-09 1.62E-08 2.56E-08 0.00E+00
2.56E-08 0.00E+00 4.03E-05 0.00E+00 1.96E-07 4.03E-05
0184 0.00E+00 4.86E-07 0.00E+00 4.58E-07 8.32E-09 1.43E-08 2.26E-08 0.00E+00
2.26E-08 0.00E+00 3.56E-05 0.00E+00 1.73E-07 3.56E-05
0185 0.00E+00 4.22E-07 0.00E+00 3.98E-07 7.23E-09 1.24E-08 1.96E-08 0.00E+00
1.96E-08 0.00E+00 3.03E-05 0.00E+00 1.50E-07 3.03E-05
0186 0.00E+00 4.04E-07 0.00E+00 3.82E-07 6.92E-09 1.19E-08 1.88E-08 0.00E+00
1.88E-08 0.00E+00 2.78E-05 0.00E+00 1.44E-07 2.78E-05
0187 0.00E+00 4.28E-07 0.00E+00 4.04E-07 7.33E-09 1.26E-08 1.99E-08 0.00E+00
1.99E-08 0.00E+00 2.87E-05 0.00E+00 1.53E-07 2.87E-05
0188 0.00E+00 4.44E-07 0.00E+00 4.19E-07 7.60E-09 1.30E-08 2.06E-08 0.00E+00
2.06E-08 0.00E+00 2.96E-05 0.00E+00 1.58E-07 2.96E-05
0189 0.00E+00 4.16E-07 0.00E+00 3.93E-07 7.12E-09 1.22E-08 1.93E-08 0.00E+00
1.93E-08 0.00E+00 2.78E-05 0.00E+00 1.48E-07 2.78E-05
0190 0.00E+00 3.73E-07 0.00E+00 3.52E-07 6.38E-09 1.10E-08 1.73E-08 0.00E+00
1.73E-08 0.00E+00 2.46E-05 0.00E+00 1.33E-07 2.46E-05
0191 0.00E+00 3.65E-07 0.00E+00 3.45E-07 6.25E-09 1.07E-08 1.70E-08 0.00E+00
1.70E-08 0.00E+00 2.38E-05 0.00E+00 1.30E-07 2.38E-05
0192 0.00E+00 3.90E-07 0.00E+00 3.68E-07 6.68E-09 1.15E-08 1.81E-08 0.00E+00
1.81E-08 0.00E+00 2.54E-05 0.00E+00 1.39E-07 2.54E-05
0193 0.00E+00 3.92E-07 0.00E+00 3.70E-07 6.72E-09 1.15E-08 1.82E-08 0.00E+00
1.82E-08 0.00E+00 2.58E-05 0.00E+00 1.40E-07 2.58E-05
0194 0.00E+00 3.52E-07 0.00E+00 3.32E-07 6.03E-09 1.03E-08 1.64E-08 0.00E+00
1.64E-08 0.00E+00 2.29E-05 0.00E+00 1.26E-07 2.29E-05
0195 0.00E+00 3.12E-07 0.00E+00 2.95E-07 5.35E-09 9.18E-09 1.45E-08 0.00E+00
1.45E-08 0.00E+00 1.99E-05 0.00E+00 1.11E-07 1.99E-05
0196 0.00E+00 5.29E-07 0.00E+00 4.99E-07 9.05E-09 1.55E-08 2.46E-08 0.00E+00
2.46E-08 0.00E+00 3.88E-05 0.00E+00 1.89E-07 3.88E-05
0197 0.00E+00 5.20E-07 0.00E+00 4.91E-07 8.91E-09 1.53E-08 2.42E-08 0.00E+00
2.42E-08 0.00E+00 3.85E-05 0.00E+00 1.86E-07 3.85E-05
0198 0.00E+00 4.65E-07 0.00E+00 4.39E-07 7.97E-09 1.37E-08 2.16E-08 0.00E+00
2.16E-08 0.00E+00 3.46E-05 0.00E+00 1.66E-07 3.46E-05
0199 0.00E+00 4.01E-07 0.00E+00 3.78E-07 6.87E-09 1.18E-08 1.87E-08 0.00E+00
1.87E-08 0.00E+00 2.94E-05 0.00E+00 1.43E-07 2.94E-05
0200 0.00E+00 3.72E-07 0.00E+00 3.51E-07 6.36E-09 1.09E-08 1.73E-08 0.00E+00
1.73E-08 0.00E+00 2.62E-05 0.00E+00 1.33E-07 2.62E-05
0201 0.00E+00 3.87E-07 0.00E+00 3.65E-07 6.63E-09 1.14E-08 1.80E-08 0.00E+00
1.80E-08 0.00E+00 2.64E-05 0.00E+00 1.38E-07 2.64E-05
0202 0.00E+00 4.12E-07 0.00E+00 3.89E-07 7.05E-09 1.21E-08 1.92E-08 0.00E+00
1.92E-08 0.00E+00 2.78E-05 0.00E+00 1.47E-07 2.78E-05
0203 0.00E+00 4.03E-07 0.00E+00 3.80E-07 6.90E-09 1.18E-08 1.87E-08 0.00E+00
1.87E-08 0.00E+00 2.73E-05 0.00E+00 1.44E-07 2.73E-05
0204 0.00E+00 3.62E-07 0.00E+00 3.42E-07 6.21E-09 1.07E-08 1.69E-08 0.00E+00
1.69E-08 0.00E+00 2.44E-05 0.00E+00 1.29E-07 2.44E-05
0205 0.00E+00 3.35E-07 0.00E+00 3.16E-07 5.73E-09 9.84E-09 1.56E-08 0.00E+00
1.56E-08 0.00E+00 2.22E-05 0.00E+00 1.19E-07 2.22E-05
0206 0.00E+00 3.47E-07 0.00E+00 3.28E-07 5.95E-09 1.02E-08 1.62E-08 0.00E+00
1.62E-08 0.00E+00 2.28E-05 0.00E+00 1.24E-07 2.28E-05
0207 0.00E+00 3.69E-07 0.00E+00 3.49E-07 6.32E-09 1.09E-08 1.72E-08 0.00E+00
1.72E-08 0.00E+00 2.45E-05 0.00E+00 1.32E-07 2.45E-05
0208 0.00E+00 3.56E-07 0.00E+00 3.36E-07 6.09E-09 1.04E-08 1.65E-08 0.00E+00
1.65E-08 0.00E+00 2.36E-05 0.00E+00 1.27E-07 2.36E-05
0209 0.00E+00 3.13E-07 0.00E+00 2.95E-07 5.35E-09 9.19E-09 1.45E-08 0.00E+00
1.45E-08 0.00E+00 2.05E-05 0.00E+00 1.11E-07 2.05E-05
0210 0.00E+00 2.84E-07 0.00E+00 2.68E-07 4.87E-09 8.35E-09 1.32E-08 0.00E+00

1.32E-08 0.00E+00 1.82E-05 0.00E+00 1.01E-07 1.82E-05
0211 0.00E+00 4.92E-07 0.00E+00 4.64E-07 8.42E-09 1.45E-08 2.29E-08 0.00E+00
2.29E-08 0.00E+00 3.68E-05 0.00E+00 1.75E-07 3.68E-05
0212 0.00E+00 4.46E-07 0.00E+00 4.21E-07 7.64E-09 1.31E-08 2.08E-08 0.00E+00
2.08E-08 0.00E+00 3.36E-05 0.00E+00 1.59E-07 3.36E-05
0213 0.00E+00 3.84E-07 0.00E+00 3.63E-07 6.58E-09 1.13E-08 1.79E-08 0.00E+00
1.79E-08 0.00E+00 2.86E-05 0.00E+00 1.37E-07 2.86E-05
0214 0.00E+00 3.46E-07 0.00E+00 3.27E-07 5.93E-09 1.02E-08 1.61E-08 0.00E+00
1.61E-08 0.00E+00 2.50E-05 0.00E+00 1.23E-07 2.50E-05
0215 0.00E+00 3.51E-07 0.00E+00 3.31E-07 6.01E-09 1.03E-08 1.63E-08 0.00E+00
1.63E-08 0.00E+00 2.44E-05 0.00E+00 1.25E-07 2.44E-05
0216 0.00E+00 3.78E-07 0.00E+00 3.56E-07 6.47E-09 1.11E-08 1.76E-08 0.00E+00
1.76E-08 0.00E+00 2.59E-05 0.00E+00 1.35E-07 2.59E-05
0217 0.00E+00 3.85E-07 0.00E+00 3.64E-07 6.60E-09 1.13E-08 1.79E-08 0.00E+00
1.79E-08 0.00E+00 2.64E-05 0.00E+00 1.37E-07 2.64E-05
0218 0.00E+00 3.56E-07 0.00E+00 3.36E-07 6.10E-09 1.05E-08 1.66E-08 0.00E+00
1.66E-08 0.00E+00 2.44E-05 0.00E+00 1.27E-07 2.44E-05
0219 0.00E+00 3.19E-07 0.00E+00 3.01E-07 5.46E-09 9.37E-09 1.48E-08 0.00E+00
1.48E-08 0.00E+00 2.16E-05 0.00E+00 1.14E-07 2.16E-05
0220 0.00E+00 3.11E-07 0.00E+00 2.94E-07 5.33E-09 9.15E-09 1.45E-08 0.00E+00
1.45E-08 0.00E+00 2.08E-05 0.00E+00 1.11E-07 2.08E-05
0221 0.00E+00 3.34E-07 0.00E+00 3.15E-07 5.72E-09 9.82E-09 1.55E-08 0.00E+00
1.55E-08 0.00E+00 2.23E-05 0.00E+00 1.19E-07 2.23E-05
0222 0.00E+00 3.46E-07 0.00E+00 3.26E-07 5.92E-09 1.02E-08 1.61E-08 0.00E+00
1.61E-08 0.00E+00 2.32E-05 0.00E+00 1.23E-07 2.32E-05
0223 0.00E+00 3.19E-07 0.00E+00 3.02E-07 5.47E-09 9.39E-09 1.49E-08 0.00E+00
1.49E-08 0.00E+00 2.14E-05 0.00E+00 1.14E-07 2.14E-05
0224 0.00E+00 2.80E-07 0.00E+00 2.64E-07 4.79E-09 8.22E-09 1.30E-08 0.00E+00
1.30E-08 0.00E+00 1.84E-05 0.00E+00 9.98E-08 1.84E-05
0225 0.00E+00 2.62E-07 0.00E+00 2.47E-07 4.48E-09 7.69E-09 1.22E-08 0.00E+00
1.22E-08 0.00E+00 1.68E-05 0.00E+00 9.33E-08 1.68E-05
0226 0.00E+00 1.64E-05 0.00E+00 1.55E-05 2.81E-07 4.83E-07 7.64E-07 0.00E+00
7.64E-07 0.00E+00 3.34E-04 0.00E+00 5.86E-06 3.34E-04
0227 0.00E+00 1.46E-05 0.00E+00 1.38E-05 2.51E-07 4.31E-07 6.81E-07 0.00E+00
6.81E-07 0.00E+00 2.93E-04 0.00E+00 5.23E-06 2.93E-04
0228 0.00E+00 1.37E-05 0.00E+00 1.30E-05 2.35E-07 4.03E-07 6.38E-07 0.00E+00
6.38E-07 0.00E+00 2.78E-04 0.00E+00 4.90E-06 2.78E-04
0229 0.00E+00 1.19E-05 0.00E+00 1.12E-05 2.03E-07 3.49E-07 5.52E-07 0.00E+00
5.52E-07 0.00E+00 2.59E-04 0.00E+00 4.24E-06 2.59E-04
0230 0.00E+00 1.10E-05 0.00E+00 1.03E-05 1.88E-07 3.22E-07 5.10E-07 0.00E+00
5.10E-07 0.00E+00 2.61E-04 0.00E+00 3.91E-06 2.61E-04
0231 0.00E+00 1.84E-05 0.00E+00 1.73E-05 3.15E-07 5.40E-07 8.55E-07 0.00E+00
8.55E-07 0.00E+00 3.78E-04 0.00E+00 6.56E-06 3.78E-04
0232 0.00E+00 1.81E-05 0.00E+00 1.71E-05 3.09E-07 5.31E-07 8.41E-07 0.00E+00
8.41E-07 0.00E+00 3.93E-04 0.00E+00 6.45E-06 3.93E-04
0233 0.00E+00 1.64E-05 0.00E+00 1.55E-05 2.81E-07 4.82E-07 7.63E-07 0.00E+00
7.63E-07 0.00E+00 3.84E-04 0.00E+00 5.85E-06 3.84E-04
0234 0.00E+00 6.81E-06 0.00E+00 6.43E-06 1.17E-07 2.00E-07 3.17E-07 0.00E+00
3.17E-07 0.00E+00 2.87E-04 0.00E+00 2.43E-06 2.87E-04
0235 0.00E+00 7.08E-06 0.00E+00 6.68E-06 1.21E-07 2.08E-07 3.29E-07 0.00E+00
3.29E-07 0.00E+00 3.02E-04 0.00E+00 2.53E-06 3.02E-04
0236 0.00E+00 7.08E-06 0.00E+00 6.68E-06 1.21E-07 2.08E-07 3.29E-07 0.00E+00
3.29E-07 0.00E+00 3.06E-04 0.00E+00 2.52E-06 3.06E-04
0237 0.00E+00 6.67E-06 0.00E+00 6.30E-06 1.14E-07 1.96E-07 3.10E-07 0.00E+00
3.10E-07 0.00E+00 2.91E-04 0.00E+00 2.38E-06 2.91E-04
0238 0.00E+00 5.44E-06 0.00E+00 5.13E-06 9.31E-08 1.60E-07 2.53E-07 0.00E+00
2.53E-07 0.00E+00 2.42E-04 0.00E+00 1.94E-06 2.42E-04
0239 0.00E+00 5.44E-06 0.00E+00 5.14E-06 9.32E-08 1.60E-07 2.53E-07 0.00E+00
2.53E-07 0.00E+00 2.42E-04 0.00E+00 1.94E-06 2.42E-04
0240 0.00E+00 5.22E-06 0.00E+00 4.92E-06 8.93E-08 1.53E-07 2.43E-07 0.00E+00
2.43E-07 0.00E+00 2.30E-04 0.00E+00 1.86E-06 2.30E-04
0241 0.00E+00 4.72E-06 0.00E+00 4.46E-06 8.09E-08 1.39E-07 2.20E-07 0.00E+00
2.20E-07 0.00E+00 2.06E-04 0.00E+00 1.68E-06 2.06E-04
0242 0.00E+00 4.33E-06 0.00E+00 4.09E-06 7.42E-08 1.27E-07 2.02E-07 0.00E+00
2.02E-07 0.00E+00 2.00E-04 0.00E+00 1.55E-06 2.00E-04
0243 0.00E+00 4.21E-06 0.00E+00 3.97E-06 7.21E-08 1.24E-07 1.96E-07 0.00E+00
1.96E-07 0.00E+00 1.91E-04 0.00E+00 1.50E-06 1.91E-04
0244 0.00E+00 3.84E-06 0.00E+00 3.62E-06 6.57E-08 1.13E-07 1.78E-07 0.00E+00
1.78E-07 0.00E+00 1.71E-04 0.00E+00 1.37E-06 1.71E-04

0245 0.00E+00 3.56E-06 0.00E+00 3.36E-06 6.10E-08 1.05E-07 1.66E-07 0.00E+00
1.66E-07 0.00E+00 1.54E-04 0.00E+00 1.27E-06 1.54E-04
0246 0.00E+00 3.49E-06 0.00E+00 3.29E-06 5.97E-08 1.02E-07 1.62E-07 0.00E+00
1.62E-07 0.00E+00 1.64E-04 0.00E+00 1.24E-06 1.64E-04
0247 0.00E+00 3.20E-06 0.00E+00 3.02E-06 5.47E-08 9.39E-08 1.49E-07 0.00E+00
1.49E-07 0.00E+00 1.48E-04 0.00E+00 1.14E-06 1.48E-04
0248 0.00E+00 2.98E-06 0.00E+00 2.81E-06 5.11E-08 8.76E-08 1.39E-07 0.00E+00
1.39E-07 0.00E+00 1.33E-04 0.00E+00 1.06E-06 1.33E-04
0249 0.00E+00 2.79E-06 0.00E+00 2.63E-06 4.77E-08 8.19E-08 1.30E-07 0.00E+00
1.30E-07 0.00E+00 1.23E-04 0.00E+00 9.94E-07 1.23E-04
0250 0.00E+00 3.04E-06 0.00E+00 2.87E-06 5.21E-08 8.94E-08 1.42E-07 0.00E+00
1.42E-07 0.00E+00 1.51E-04 0.00E+00 1.09E-06 1.51E-04
0251 0.00E+00 3.38E-06 0.00E+00 3.19E-06 5.78E-08 9.93E-08 1.57E-07 0.00E+00
1.57E-07 0.00E+00 1.62E-04 0.00E+00 1.20E-06 1.62E-04
0252 0.00E+00 3.81E-06 0.00E+00 3.60E-06 6.53E-08 1.12E-07 1.77E-07 0.00E+00
1.77E-07 0.00E+00 1.76E-04 0.00E+00 1.36E-06 1.76E-04
0253 0.00E+00 4.36E-06 0.00E+00 4.11E-06 7.46E-08 1.28E-07 2.03E-07 0.00E+00
2.03E-07 0.00E+00 1.94E-04 0.00E+00 1.55E-06 1.94E-04
0254 0.00E+00 5.03E-06 0.00E+00 4.74E-06 8.61E-08 1.48E-07 2.34E-07 0.00E+00
2.34E-07 0.00E+00 2.15E-04 0.00E+00 1.79E-06 2.15E-04
0255 0.00E+00 5.87E-06 0.00E+00 5.54E-06 1.00E-07 1.72E-07 2.73E-07 0.00E+00
2.73E-07 0.00E+00 2.40E-04 0.00E+00 2.09E-06 2.40E-04
0256 0.00E+00 7.04E-06 0.00E+00 6.64E-06 1.21E-07 2.07E-07 3.27E-07 0.00E+00
3.27E-07 0.00E+00 2.75E-04 0.00E+00 2.51E-06 2.75E-04
0257 0.00E+00 8.68E-06 0.00E+00 8.20E-06 1.49E-07 2.55E-07 4.04E-07 0.00E+00
4.04E-07 0.00E+00 3.26E-04 0.00E+00 3.10E-06 3.26E-04
0258 0.00E+00 2.94E-06 0.00E+00 2.78E-06 5.04E-08 8.65E-08 1.37E-07 0.00E+00
1.37E-07 0.00E+00 1.51E-04 0.00E+00 1.05E-06 1.51E-04
0259 0.00E+00 3.29E-06 0.00E+00 3.10E-06 5.63E-08 9.67E-08 1.53E-07 0.00E+00
1.53E-07 0.00E+00 1.63E-04 0.00E+00 1.17E-06 1.63E-04
0260 0.00E+00 3.68E-06 0.00E+00 3.47E-06 6.30E-08 1.08E-07 1.71E-07 0.00E+00
1.71E-07 0.00E+00 1.75E-04 0.00E+00 1.31E-06 1.75E-04
0261 0.00E+00 4.18E-06 0.00E+00 3.94E-06 7.15E-08 1.23E-07 1.94E-07 0.00E+00
1.94E-07 0.00E+00 1.89E-04 0.00E+00 1.49E-06 1.89E-04
0262 0.00E+00 4.89E-06 0.00E+00 4.62E-06 8.38E-08 1.44E-07 2.28E-07 0.00E+00
2.28E-07 0.00E+00 2.10E-04 0.00E+00 1.74E-06 2.10E-04
0263 0.00E+00 5.83E-06 0.00E+00 5.50E-06 9.99E-08 1.71E-07 2.71E-07 0.00E+00
2.71E-07 0.00E+00 2.40E-04 0.00E+00 2.08E-06 2.40E-04
0264 0.00E+00 6.79E-06 0.00E+00 6.41E-06 1.16E-07 2.00E-07 3.16E-07 0.00E+00
3.16E-07 0.00E+00 2.71E-04 0.00E+00 2.42E-06 2.71E-04
0265 0.00E+00 7.65E-06 0.00E+00 7.22E-06 1.31E-07 2.25E-07 3.56E-07 0.00E+00
3.56E-07 0.00E+00 3.03E-04 0.00E+00 2.73E-06 3.03E-04
0266 0.00E+00 2.81E-06 0.00E+00 2.65E-06 4.81E-08 8.25E-08 1.31E-07 0.00E+00
1.31E-07 0.00E+00 1.45E-04 0.00E+00 1.00E-06 1.45E-04
0267 0.00E+00 3.15E-06 0.00E+00 2.97E-06 5.39E-08 9.25E-08 1.46E-07 0.00E+00
1.46E-07 0.00E+00 1.57E-04 0.00E+00 1.12E-06 1.57E-04
0268 0.00E+00 3.64E-06 0.00E+00 3.44E-06 6.24E-08 1.07E-07 1.69E-07 0.00E+00
1.69E-07 0.00E+00 1.74E-04 0.00E+00 1.30E-06 1.74E-04
0269 0.00E+00 4.25E-06 0.00E+00 4.01E-06 7.27E-08 1.25E-07 1.98E-07 0.00E+00
1.98E-07 0.00E+00 1.94E-04 0.00E+00 1.52E-06 1.94E-04
0270 0.00E+00 4.81E-06 0.00E+00 4.54E-06 8.24E-08 1.41E-07 2.24E-07 0.00E+00
2.24E-07 0.00E+00 2.13E-04 0.00E+00 1.72E-06 2.13E-04
0271 0.00E+00 5.25E-06 0.00E+00 4.96E-06 8.99E-08 1.54E-07 2.44E-07 0.00E+00
2.44E-07 0.00E+00 2.27E-04 0.00E+00 1.87E-06 2.27E-04
0272 0.00E+00 5.77E-06 0.00E+00 5.44E-06 9.88E-08 1.70E-07 2.68E-07 0.00E+00
2.68E-07 0.00E+00 2.47E-04 0.00E+00 2.06E-06 2.47E-04
0273 0.00E+00 6.32E-06 0.00E+00 5.97E-06 1.08E-07 1.86E-07 2.94E-07 0.00E+00
2.94E-07 0.00E+00 2.72E-04 0.00E+00 2.26E-06 2.72E-04
0274 0.00E+00 2.85E-06 0.00E+00 2.69E-06 4.87E-08 8.36E-08 1.32E-07 0.00E+00
1.32E-07 0.00E+00 1.48E-04 0.00E+00 1.02E-06 1.48E-04
0275 0.00E+00 3.27E-06 0.00E+00 3.08E-06 5.60E-08 9.60E-08 1.52E-07 0.00E+00
1.52E-07 0.00E+00 1.64E-04 0.00E+00 1.17E-06 1.64E-04
0276 0.00E+00 3.63E-06 0.00E+00 3.42E-06 6.21E-08 1.07E-07 1.69E-07 0.00E+00
1.69E-07 0.00E+00 1.77E-04 0.00E+00 1.29E-06 1.77E-04
0277 0.00E+00 3.87E-06 0.00E+00 3.66E-06 6.63E-08 1.14E-07 1.80E-07 0.00E+00
1.80E-07 0.00E+00 1.85E-04 0.00E+00 1.38E-06 1.85E-04
0278 0.00E+00 4.14E-06 0.00E+00 3.91E-06 7.09E-08 1.22E-07 1.93E-07 0.00E+00
1.93E-07 0.00E+00 1.95E-04 0.00E+00 1.48E-06 1.95E-04
0279 0.00E+00 4.55E-06 0.00E+00 4.30E-06 7.80E-08 1.34E-07 2.12E-07 0.00E+00

2.12E-07 0.00E+00 2.11E-04 0.00E+00 1.62E-06 2.11E-04
0280 0.00E+00 4.85E-06 0.00E+00 4.57E-06 8.30E-08 1.42E-07 2.25E-07 0.00E+00
2.25E-07 0.00E+00 2.22E-04 0.00E+00 1.73E-06 2.22E-04
0281 0.00E+00 4.87E-06 0.00E+00 4.59E-06 8.33E-08 1.43E-07 2.26E-07 0.00E+00
2.26E-07 0.00E+00 2.21E-04 0.00E+00 1.74E-06 2.21E-04
0282 0.00E+00 2.86E-06 0.00E+00 2.70E-06 4.90E-08 8.41E-08 1.33E-07 0.00E+00
1.33E-07 0.00E+00 1.50E-04 0.00E+00 1.02E-06 1.50E-04
0283 0.00E+00 3.01E-06 0.00E+00 2.84E-06 5.15E-08 8.84E-08 1.40E-07 0.00E+00
1.40E-07 0.00E+00 1.56E-04 0.00E+00 1.07E-06 1.56E-04
0284 0.00E+00 3.14E-06 0.00E+00 2.96E-06 5.38E-08 9.23E-08 1.46E-07 0.00E+00
1.46E-07 0.00E+00 1.62E-04 0.00E+00 1.12E-06 1.62E-04
0285 0.00E+00 3.39E-06 0.00E+00 3.20E-06 5.81E-08 9.98E-08 1.58E-07 0.00E+00
1.58E-07 0.00E+00 1.72E-04 0.00E+00 1.21E-06 1.72E-04
0286 0.00E+00 3.71E-06 0.00E+00 3.50E-06 6.35E-08 1.09E-07 1.73E-07 0.00E+00
1.73E-07 0.00E+00 1.83E-04 0.00E+00 1.32E-06 1.83E-04
0287 0.00E+00 3.82E-06 0.00E+00 3.61E-06 6.54E-08 1.12E-07 1.78E-07 0.00E+00
1.78E-07 0.00E+00 1.86E-04 0.00E+00 1.36E-06 1.86E-04
0288 0.00E+00 3.79E-06 0.00E+00 3.58E-06 6.49E-08 1.11E-07 1.76E-07 0.00E+00
1.76E-07 0.00E+00 1.83E-04 0.00E+00 1.35E-06 1.83E-04
0289 0.00E+00 3.82E-06 0.00E+00 3.61E-06 6.55E-08 1.12E-07 1.78E-07 0.00E+00
1.78E-07 0.00E+00 1.80E-04 0.00E+00 1.36E-06 1.80E-04
0290 0.00E+00 2.48E-06 0.00E+00 2.34E-06 4.25E-08 7.30E-08 1.16E-07 0.00E+00
1.16E-07 0.00E+00 1.38E-04 0.00E+00 8.86E-07 1.38E-04
0291 0.00E+00 2.62E-06 0.00E+00 2.48E-06 4.49E-08 7.71E-08 1.22E-07 0.00E+00
1.22E-07 0.00E+00 1.43E-04 0.00E+00 9.36E-07 1.43E-04
0292 0.00E+00 2.87E-06 0.00E+00 2.71E-06 4.92E-08 8.45E-08 1.34E-07 0.00E+00
1.34E-07 0.00E+00 1.53E-04 0.00E+00 1.03E-06 1.53E-04
0293 0.00E+00 3.08E-06 0.00E+00 2.90E-06 5.27E-08 9.04E-08 1.43E-07 0.00E+00
1.43E-07 0.00E+00 1.61E-04 0.00E+00 1.10E-06 1.61E-04
0294 0.00E+00 3.08E-06 0.00E+00 2.91E-06 5.27E-08 9.05E-08 1.43E-07 0.00E+00
1.43E-07 0.00E+00 1.60E-04 0.00E+00 1.10E-06 1.60E-04
0295 0.00E+00 3.05E-06 0.00E+00 2.87E-06 5.22E-08 8.95E-08 1.42E-07 0.00E+00
1.42E-07 0.00E+00 1.55E-04 0.00E+00 1.09E-06 1.55E-04
0296 0.00E+00 3.10E-06 0.00E+00 2.92E-06 5.31E-08 9.10E-08 1.44E-07 0.00E+00
1.44E-07 0.00E+00 1.52E-04 0.00E+00 1.10E-06 1.52E-04
0297 0.00E+00 2.95E-06 0.00E+00 2.78E-06 5.04E-08 8.66E-08 1.37E-07 0.00E+00
1.37E-07 0.00E+00 1.42E-04 0.00E+00 1.05E-06 1.42E-04
0298 0.00E+00 2.27E-06 0.00E+00 2.14E-06 3.88E-08 6.66E-08 1.05E-07 0.00E+00
1.05E-07 0.00E+00 1.28E-04 0.00E+00 8.09E-07 1.28E-04
0299 0.00E+00 2.48E-06 0.00E+00 2.34E-06 4.25E-08 7.30E-08 1.15E-07 0.00E+00
1.15E-07 0.00E+00 1.37E-04 0.00E+00 8.85E-07 1.37E-04
0300 0.00E+00 2.58E-06 0.00E+00 2.44E-06 4.42E-08 7.59E-08 1.20E-07 0.00E+00
1.20E-07 0.00E+00 1.42E-04 0.00E+00 9.21E-07 1.42E-04
0301 0.00E+00 2.53E-06 0.00E+00 2.39E-06 4.33E-08 7.43E-08 1.18E-07 0.00E+00
1.18E-07 0.00E+00 1.39E-04 0.00E+00 9.02E-07 1.39E-04
0302 0.00E+00 2.51E-06 0.00E+00 2.37E-06 4.30E-08 7.38E-08 1.17E-07 0.00E+00
1.17E-07 0.00E+00 1.34E-04 0.00E+00 8.95E-07 1.34E-04
0303 0.00E+00 2.57E-06 0.00E+00 2.43E-06 4.41E-08 7.56E-08 1.20E-07 0.00E+00
1.20E-07 0.00E+00 1.33E-04 0.00E+00 9.18E-07 1.33E-04
0304 0.00E+00 2.47E-06 0.00E+00 2.33E-06 4.22E-08 7.25E-08 1.15E-07 0.00E+00
1.15E-07 0.00E+00 1.25E-04 0.00E+00 8.80E-07 1.25E-04
0305 0.00E+00 2.24E-06 0.00E+00 2.11E-06 3.84E-08 6.58E-08 1.04E-07 0.00E+00
1.04E-07 0.00E+00 1.10E-04 0.00E+00 7.99E-07 1.10E-04
0306 0.00E+00 2.16E-06 0.00E+00 2.04E-06 3.70E-08 6.36E-08 1.01E-07 0.00E+00
1.01E-07 0.00E+00 1.24E-04 0.00E+00 7.71E-07 1.24E-04
0307 0.00E+00 2.18E-06 0.00E+00 2.06E-06 3.74E-08 6.42E-08 1.02E-07 0.00E+00
1.02E-07 0.00E+00 1.26E-04 0.00E+00 7.79E-07 1.26E-04
0308 0.00E+00 2.11E-06 0.00E+00 1.99E-06 3.61E-08 6.20E-08 9.82E-08 0.00E+00
9.82E-08 0.00E+00 1.21E-04 0.00E+00 7.53E-07 1.21E-04
0309 0.00E+00 2.11E-06 0.00E+00 1.99E-06 3.61E-08 6.20E-08 9.82E-08 0.00E+00
9.82E-08 0.00E+00 1.17E-04 0.00E+00 7.53E-07 1.17E-04
0310 0.00E+00 2.18E-06 0.00E+00 2.06E-06 3.73E-08 6.41E-08 1.01E-07 0.00E+00
1.01E-07 0.00E+00 1.17E-04 0.00E+00 7.78E-07 1.17E-04
0311 0.00E+00 2.10E-06 0.00E+00 1.99E-06 3.60E-08 6.19E-08 9.79E-08 0.00E+00
9.79E-08 0.00E+00 1.12E-04 0.00E+00 7.51E-07 1.12E-04
0312 0.00E+00 1.91E-06 0.00E+00 1.80E-06 3.27E-08 5.61E-08 8.88E-08 0.00E+00
8.88E-08 0.00E+00 9.92E-05 0.00E+00 6.81E-07 9.92E-05
0313 0.00E+00 1.82E-06 0.00E+00 1.71E-06 3.11E-08 5.34E-08 8.44E-08 0.00E+00
8.44E-08 0.00E+00 8.97E-05 0.00E+00 6.48E-07 8.97E-05

0314 0.00E+00 6.98E-06 0.00E+00 6.59E-06 1.20E-07 2.05E-07 3.25E-07 0.00E+00
3.25E-07 0.00E+00 2.53E-04 0.00E+00 2.49E-06 2.53E-04
0315 0.00E+00 8.43E-06 0.00E+00 7.96E-06 1.44E-07 2.48E-07 3.92E-07 0.00E+00
3.92E-07 0.00E+00 2.90E-04 0.00E+00 3.01E-06 2.90E-04
0316 0.00E+00 1.04E-05 0.00E+00 9.83E-06 1.78E-07 3.06E-07 4.85E-07 0.00E+00
4.85E-07 0.00E+00 3.41E-04 0.00E+00 3.72E-06 3.41E-04
0317 0.00E+00 6.11E-06 0.00E+00 5.77E-06 1.05E-07 1.80E-07 2.84E-07 0.00E+00
2.84E-07 0.00E+00 2.40E-04 0.00E+00 2.18E-06 2.40E-04
0318 0.00E+00 7.28E-06 0.00E+00 6.87E-06 1.25E-07 2.14E-07 3.38E-07 0.00E+00
3.38E-07 0.00E+00 2.76E-04 0.00E+00 2.60E-06 2.76E-04
0319 0.00E+00 8.97E-06 0.00E+00 8.47E-06 1.54E-07 2.64E-07 4.17E-07 0.00E+00
4.17E-07 0.00E+00 3.31E-04 0.00E+00 3.20E-06 3.31E-04
0320 0.00E+00 5.60E-06 0.00E+00 5.28E-06 9.58E-08 1.64E-07 2.60E-07 0.00E+00
2.60E-07 0.00E+00 2.31E-04 0.00E+00 2.00E-06 2.31E-04
0321 0.00E+00 6.79E-06 0.00E+00 6.41E-06 1.16E-07 2.00E-07 3.16E-07 0.00E+00
3.16E-07 0.00E+00 2.68E-04 0.00E+00 2.42E-06 2.68E-04
0322 0.00E+00 8.55E-06 0.00E+00 8.07E-06 1.46E-07 2.51E-07 3.98E-07 0.00E+00
3.98E-07 0.00E+00 3.21E-04 0.00E+00 3.05E-06 3.21E-04
0323 0.00E+00 1.40E-05 0.00E+00 1.32E-05 2.40E-07 4.12E-07 6.52E-07 0.00E+00
6.52E-07 0.00E+00 3.57E-04 0.00E+00 5.00E-06 3.57E-04
0324 0.00E+00 1.92E-05 0.00E+00 1.81E-05 3.29E-07 5.64E-07 8.93E-07 0.00E+00
8.93E-07 0.00E+00 4.35E-04 0.00E+00 6.85E-06 4.35E-04
0325 0.00E+00 2.81E-05 0.00E+00 2.66E-05 4.82E-07 8.27E-07 1.31E-06 0.00E+00
1.31E-06 0.00E+00 5.66E-04 0.00E+00 1.00E-05 5.66E-04
0326 0.00E+00 4.52E-05 0.00E+00 4.27E-05 7.75E-07 1.33E-06 2.10E-06 0.00E+00
2.10E-06 0.00E+00 8.24E-04 0.00E+00 1.61E-05 8.24E-04
0327 0.00E+00 7.85E-05 0.00E+00 7.41E-05 1.34E-06 2.31E-06 3.65E-06 0.00E+00
3.65E-06 0.00E+00 1.46E-03 0.00E+00 2.80E-05 1.46E-03
0328 0.00E+00 1.18E-05 0.00E+00 1.11E-05 2.02E-07 3.47E-07 5.49E-07 0.00E+00
5.49E-07 0.00E+00 3.71E-04 0.00E+00 4.21E-06 3.71E-04
0329 0.00E+00 1.58E-05 0.00E+00 1.49E-05 2.70E-07 4.64E-07 7.34E-07 0.00E+00
7.34E-07 0.00E+00 4.77E-04 0.00E+00 5.63E-06 4.77E-04
0330 0.00E+00 2.27E-05 0.00E+00 2.14E-05 3.88E-07 6.66E-07 1.05E-06 0.00E+00
1.05E-06 0.00E+00 6.77E-04 0.00E+00 8.09E-06 6.77E-04
0331 0.00E+00 3.76E-05 0.00E+00 3.55E-05 6.45E-07 1.11E-06 1.75E-06 0.00E+00
1.75E-06 0.00E+00 1.14E-03 0.00E+00 1.34E-05 1.14E-03
0332 0.00E+00 7.33E-05 0.00E+00 6.92E-05 1.26E-06 2.16E-06 3.41E-06 0.00E+00
3.41E-06 0.00E+00 2.47E-03 0.00E+00 2.62E-05 2.47E-03
0333 0.00E+00 9.78E-06 0.00E+00 9.23E-06 1.68E-07 2.88E-07 4.55E-07 0.00E+00
4.55E-07 0.00E+00 3.62E-04 0.00E+00 3.49E-06 3.62E-04
0334 0.00E+00 1.35E-05 0.00E+00 1.28E-05 2.31E-07 3.97E-07 6.29E-07 0.00E+00
6.29E-07 0.00E+00 4.80E-04 0.00E+00 4.82E-06 4.80E-04
0335 0.00E+00 1.92E-05 0.00E+00 1.81E-05 3.28E-07 5.64E-07 8.92E-07 0.00E+00
8.92E-07 0.00E+00 6.83E-04 0.00E+00 6.84E-06 6.83E-04
0336 0.00E+00 2.46E-05 0.00E+00 2.32E-05 4.21E-07 7.22E-07 1.14E-06 0.00E+00
1.14E-06 0.00E+00 1.00E-03 0.00E+00 8.76E-06 1.00E-03
0337 0.00E+00 2.28E-05 0.00E+00 2.15E-05 3.90E-07 6.70E-07 1.06E-06 0.00E+00
1.06E-06 0.00E+00 1.56E-03 0.00E+00 8.13E-06 1.56E-03
0338 0.00E+00 9.13E-06 0.00E+00 8.61E-06 1.56E-07 2.68E-07 4.25E-07 0.00E+00
4.25E-07 0.00E+00 3.42E-04 0.00E+00 3.26E-06 3.42E-04
0339 0.00E+00 1.10E-05 0.00E+00 1.03E-05 1.88E-07 3.22E-07 5.10E-07 0.00E+00
5.10E-07 0.00E+00 4.17E-04 0.00E+00 3.91E-06 4.17E-04
0340 0.00E+00 1.22E-05 0.00E+00 1.15E-05 2.09E-07 3.58E-07 5.67E-07 0.00E+00
5.67E-07 0.00E+00 4.96E-04 0.00E+00 4.35E-06 4.96E-04
0341 0.00E+00 1.14E-05 0.00E+00 1.08E-05 1.96E-07 3.36E-07 5.31E-07 0.00E+00
5.31E-07 0.00E+00 5.27E-04 0.00E+00 4.07E-06 5.27E-04
0342 0.00E+00 9.33E-06 0.00E+00 8.81E-06 1.60E-07 2.74E-07 4.34E-07 0.00E+00
4.34E-07 0.00E+00 4.55E-04 0.00E+00 3.33E-06 4.55E-04
0343 0.00E+00 7.07E-06 0.00E+00 6.67E-06 1.21E-07 2.08E-07 3.29E-07 0.00E+00
3.29E-07 0.00E+00 2.96E-04 0.00E+00 2.52E-06 2.96E-04
0344 0.00E+00 7.35E-06 0.00E+00 6.93E-06 1.26E-07 2.16E-07 3.42E-07 0.00E+00
3.42E-07 0.00E+00 3.14E-04 0.00E+00 2.62E-06 3.14E-04
0345 0.00E+00 6.99E-06 0.00E+00 6.60E-06 1.20E-07 2.06E-07 3.25E-07 0.00E+00
3.25E-07 0.00E+00 3.05E-04 0.00E+00 2.49E-06 3.05E-04
0346 0.00E+00 6.02E-06 0.00E+00 5.68E-06 1.03E-07 1.77E-07 2.80E-07 0.00E+00
2.80E-07 0.00E+00 2.62E-04 0.00E+00 2.15E-06 2.62E-04
0347 0.00E+00 5.06E-06 0.00E+00 4.78E-06 8.67E-08 1.49E-07 2.36E-07 0.00E+00
2.36E-07 0.00E+00 2.24E-04 0.00E+00 1.81E-06 2.24E-04
0348 0.00E+00 1.21E-06 0.00E+00 1.14E-06 2.07E-08 3.55E-08 5.61E-08 0.00E+00

5.61E-08 0.00E+00 7.91E-05 0.00E+00 4.31E-07 7.91E-05
0349 0.00E+00 1.27E-06 0.00E+00 1.20E-06 2.17E-08 3.72E-08 5.89E-08 0.00E+00
5.89E-08 0.00E+00 8.19E-05 0.00E+00 4.52E-07 8.19E-05
0350 0.00E+00 1.35E-06 0.00E+00 1.27E-06 2.31E-08 3.97E-08 6.28E-08 0.00E+00
6.28E-08 0.00E+00 8.58E-05 0.00E+00 4.82E-07 8.58E-05
0351 0.00E+00 1.47E-06 0.00E+00 1.39E-06 2.52E-08 4.33E-08 6.85E-08 0.00E+00
6.85E-08 0.00E+00 9.13E-05 0.00E+00 5.25E-07 9.13E-05
0352 0.00E+00 1.64E-06 0.00E+00 1.55E-06 2.81E-08 4.82E-08 7.63E-08 0.00E+00
7.63E-08 0.00E+00 9.87E-05 0.00E+00 5.85E-07 9.87E-05
0353 0.00E+00 1.86E-06 0.00E+00 1.75E-06 3.18E-08 5.46E-08 8.63E-08 0.00E+00
8.63E-08 0.00E+00 1.08E-04 0.00E+00 6.62E-07 1.08E-04
0354 0.00E+00 2.11E-06 0.00E+00 1.99E-06 3.61E-08 6.20E-08 9.81E-08 0.00E+00
9.81E-08 0.00E+00 1.19E-04 0.00E+00 7.52E-07 1.19E-04
0355 0.00E+00 2.38E-06 0.00E+00 2.24E-06 4.07E-08 6.98E-08 1.11E-07 0.00E+00
1.11E-07 0.00E+00 1.30E-04 0.00E+00 8.48E-07 1.30E-04
0356 0.00E+00 2.65E-06 0.00E+00 2.50E-06 4.55E-08 7.80E-08 1.23E-07 0.00E+00
1.23E-07 0.00E+00 1.40E-04 0.00E+00 9.47E-07 1.40E-04
0357 0.00E+00 1.09E-06 0.00E+00 1.03E-06 1.87E-08 3.21E-08 5.08E-08 0.00E+00
5.08E-08 0.00E+00 7.27E-05 0.00E+00 3.89E-07 7.27E-05
0358 0.00E+00 1.21E-06 0.00E+00 1.14E-06 2.07E-08 3.55E-08 5.62E-08 0.00E+00
5.62E-08 0.00E+00 7.83E-05 0.00E+00 4.31E-07 7.83E-05
0359 0.00E+00 1.35E-06 0.00E+00 1.28E-06 2.32E-08 3.98E-08 6.30E-08 0.00E+00
6.30E-08 0.00E+00 8.52E-05 0.00E+00 4.83E-07 8.52E-05
0360 0.00E+00 1.52E-06 0.00E+00 1.44E-06 2.61E-08 4.47E-08 7.08E-08 0.00E+00
7.08E-08 0.00E+00 9.31E-05 0.00E+00 5.43E-07 9.31E-05
0361 0.00E+00 1.69E-06 0.00E+00 1.60E-06 2.90E-08 4.98E-08 7.88E-08 0.00E+00
7.88E-08 0.00E+00 1.01E-04 0.00E+00 6.04E-07 1.01E-04
0362 0.00E+00 1.86E-06 0.00E+00 1.75E-06 3.18E-08 5.46E-08 8.64E-08 0.00E+00
8.64E-08 0.00E+00 1.08E-04 0.00E+00 6.62E-07 1.08E-04
0363 0.00E+00 2.02E-06 0.00E+00 1.90E-06 3.45E-08 5.93E-08 9.38E-08 0.00E+00
9.38E-08 0.00E+00 1.15E-04 0.00E+00 7.19E-07 1.15E-04
0364 0.00E+00 2.23E-06 0.00E+00 2.10E-06 3.82E-08 6.55E-08 1.04E-07 0.00E+00
1.04E-07 0.00E+00 1.24E-04 0.00E+00 7.95E-07 1.24E-04
0365 0.00E+00 2.59E-06 0.00E+00 2.44E-06 4.43E-08 7.60E-08 1.20E-07 0.00E+00
1.20E-07 0.00E+00 1.38E-04 0.00E+00 9.23E-07 1.38E-04
0366 0.00E+00 1.16E-06 0.00E+00 1.09E-06 1.98E-08 3.40E-08 5.39E-08 0.00E+00
5.39E-08 0.00E+00 7.54E-05 0.00E+00 4.13E-07 7.54E-05
0367 0.00E+00 1.28E-06 0.00E+00 1.21E-06 2.19E-08 3.77E-08 5.96E-08 0.00E+00
5.96E-08 0.00E+00 8.18E-05 0.00E+00 4.57E-07 8.18E-05
0368 0.00E+00 1.39E-06 0.00E+00 1.32E-06 2.39E-08 4.10E-08 6.49E-08 0.00E+00
6.49E-08 0.00E+00 8.76E-05 0.00E+00 4.98E-07 8.76E-05
0369 0.00E+00 1.49E-06 0.00E+00 1.41E-06 2.55E-08 4.38E-08 6.94E-08 0.00E+00
6.94E-08 0.00E+00 9.25E-05 0.00E+00 5.32E-07 9.25E-05
0370 0.00E+00 1.59E-06 0.00E+00 1.50E-06 2.72E-08 4.66E-08 7.38E-08 0.00E+00
7.38E-08 0.00E+00 9.71E-05 0.00E+00 5.66E-07 9.71E-05
0371 0.00E+00 1.72E-06 0.00E+00 1.62E-06 2.95E-08 5.06E-08 8.01E-08 0.00E+00
8.01E-08 0.00E+00 1.03E-04 0.00E+00 6.14E-07 1.03E-04
0372 0.00E+00 1.96E-06 0.00E+00 1.85E-06 3.35E-08 5.76E-08 9.11E-08 0.00E+00
9.11E-08 0.00E+00 1.13E-04 0.00E+00 6.99E-07 1.13E-04
0373 0.00E+00 2.32E-06 0.00E+00 2.19E-06 3.97E-08 6.82E-08 1.08E-07 0.00E+00
1.08E-07 0.00E+00 1.28E-04 0.00E+00 8.28E-07 1.28E-04
0374 0.00E+00 2.71E-06 0.00E+00 2.56E-06 4.64E-08 7.97E-08 1.26E-07 0.00E+00
1.26E-07 0.00E+00 1.44E-04 0.00E+00 9.67E-07 1.44E-04
0375 0.00E+00 1.17E-06 0.00E+00 1.10E-06 2.00E-08 3.43E-08 5.43E-08 0.00E+00
5.43E-08 0.00E+00 7.69E-05 0.00E+00 4.16E-07 7.69E-05
0376 0.00E+00 1.22E-06 0.00E+00 1.16E-06 2.10E-08 3.60E-08 5.70E-08 0.00E+00
5.70E-08 0.00E+00 8.01E-05 0.00E+00 4.37E-07 8.01E-05
0377 0.00E+00 1.28E-06 0.00E+00 1.21E-06 2.19E-08 3.76E-08 5.96E-08 0.00E+00
5.96E-08 0.00E+00 8.31E-05 0.00E+00 4.57E-07 8.31E-05
0378 0.00E+00 1.37E-06 0.00E+00 1.29E-06 2.35E-08 4.03E-08 6.37E-08 0.00E+00
6.37E-08 0.00E+00 8.73E-05 0.00E+00 4.89E-07 8.73E-05
0379 0.00E+00 1.54E-06 0.00E+00 1.45E-06 2.63E-08 4.51E-08 7.15E-08 0.00E+00
7.15E-08 0.00E+00 9.46E-05 0.00E+00 5.48E-07 9.46E-05
0380 0.00E+00 1.80E-06 0.00E+00 1.70E-06 3.08E-08 5.28E-08 8.36E-08 0.00E+00
8.36E-08 0.00E+00 1.06E-04 0.00E+00 6.41E-07 1.06E-04
0381 0.00E+00 2.10E-06 0.00E+00 1.99E-06 3.60E-08 6.19E-08 9.79E-08 0.00E+00
9.79E-08 0.00E+00 1.20E-04 0.00E+00 7.51E-07 1.20E-04
0382 0.00E+00 2.34E-06 0.00E+00 2.21E-06 4.00E-08 6.87E-08 1.09E-07 0.00E+00
1.09E-07 0.00E+00 1.31E-04 0.00E+00 8.34E-07 1.31E-04

0383 0.00E+00 2.44E-06 0.00E+00 2.30E-06 4.18E-08 7.17E-08 1.13E-07 0.00E+00
1.13E-07 0.00E+00 1.36E-04 0.00E+00 8.70E-07 1.36E-04
0384 0.00E+00 1.06E-06 0.00E+00 9.96E-07 1.81E-08 3.10E-08 4.91E-08 0.00E+00
4.91E-08 0.00E+00 7.18E-05 0.00E+00 3.76E-07 7.18E-05
0385 0.00E+00 1.12E-06 0.00E+00 1.05E-06 1.91E-08 3.28E-08 5.20E-08 0.00E+00
5.20E-08 0.00E+00 7.48E-05 0.00E+00 3.98E-07 7.48E-05
0386 0.00E+00 1.24E-06 0.00E+00 1.17E-06 2.12E-08 3.64E-08 5.76E-08 0.00E+00
5.76E-08 0.00E+00 8.04E-05 0.00E+00 4.41E-07 8.04E-05
0387 0.00E+00 1.43E-06 0.00E+00 1.35E-06 2.45E-08 4.21E-08 6.67E-08 0.00E+00
6.67E-08 0.00E+00 8.95E-05 0.00E+00 5.11E-07 8.95E-05
0388 0.00E+00 1.68E-06 0.00E+00 1.58E-06 2.87E-08 4.93E-08 7.80E-08 0.00E+00
7.80E-08 0.00E+00 1.01E-04 0.00E+00 5.98E-07 1.01E-04
0389 0.00E+00 1.89E-06 0.00E+00 1.78E-06 3.23E-08 5.55E-08 8.78E-08 0.00E+00
8.78E-08 0.00E+00 1.12E-04 0.00E+00 6.74E-07 1.12E-04
0390 0.00E+00 1.99E-06 0.00E+00 1.88E-06 3.41E-08 5.85E-08 9.26E-08 0.00E+00
9.26E-08 0.00E+00 1.17E-04 0.00E+00 7.10E-07 1.17E-04
0391 0.00E+00 2.02E-06 0.00E+00 1.91E-06 3.46E-08 5.94E-08 9.39E-08 0.00E+00
9.39E-08 0.00E+00 1.19E-04 0.00E+00 7.20E-07 1.19E-04
0392 0.00E+00 2.14E-06 0.00E+00 2.02E-06 3.66E-08 6.28E-08 9.94E-08 0.00E+00
9.94E-08 0.00E+00 1.23E-04 0.00E+00 7.62E-07 1.23E-04
0393 0.00E+00 1.02E-06 0.00E+00 9.61E-07 1.74E-08 2.99E-08 4.74E-08 0.00E+00
4.74E-08 0.00E+00 6.91E-05 0.00E+00 3.63E-07 6.91E-05
0394 0.00E+00 1.17E-06 0.00E+00 1.10E-06 2.00E-08 3.43E-08 5.43E-08 0.00E+00
5.43E-08 0.00E+00 7.65E-05 0.00E+00 4.17E-07 7.65E-05
0395 0.00E+00 1.36E-06 0.00E+00 1.29E-06 2.33E-08 4.01E-08 6.34E-08 0.00E+00
6.34E-08 0.00E+00 8.63E-05 0.00E+00 4.86E-07 8.63E-05
0396 0.00E+00 1.55E-06 0.00E+00 1.46E-06 2.66E-08 4.56E-08 7.22E-08 0.00E+00
7.22E-08 0.00E+00 9.63E-05 0.00E+00 5.53E-07 9.63E-05
0397 0.00E+00 1.67E-06 0.00E+00 1.57E-06 2.85E-08 4.90E-08 7.75E-08 0.00E+00
7.75E-08 0.00E+00 1.03E-04 0.00E+00 5.94E-07 1.03E-04
0398 0.00E+00 1.69E-06 0.00E+00 1.59E-06 2.89E-08 4.96E-08 7.85E-08 0.00E+00
7.85E-08 0.00E+00 1.05E-04 0.00E+00 6.02E-07 1.05E-04
0399 0.00E+00 1.70E-06 0.00E+00 1.60E-06 2.91E-08 4.99E-08 7.90E-08 0.00E+00
7.90E-08 0.00E+00 1.05E-04 0.00E+00 6.06E-07 1.05E-04
0400 0.00E+00 1.83E-06 0.00E+00 1.73E-06 3.14E-08 5.38E-08 8.52E-08 0.00E+00
8.52E-08 0.00E+00 1.09E-04 0.00E+00 6.53E-07 1.09E-04
0401 0.00E+00 2.06E-06 0.00E+00 1.95E-06 3.54E-08 6.07E-08 9.60E-08 0.00E+00
9.60E-08 0.00E+00 1.19E-04 0.00E+00 7.36E-07 1.19E-04
0402 0.00E+00 1.79E-06 0.00E+00 1.69E-06 3.07E-08 5.27E-08 8.34E-08 0.00E+00
8.34E-08 0.00E+00 8.80E-05 0.00E+00 6.40E-07 8.80E-05
0403 0.00E+00 1.63E-06 0.00E+00 1.54E-06 2.79E-08 4.78E-08 7.57E-08 0.00E+00
7.57E-08 0.00E+00 7.91E-05 0.00E+00 5.80E-07 7.91E-05
0404 0.00E+00 1.49E-06 0.00E+00 1.41E-06 2.55E-08 4.38E-08 6.93E-08 0.00E+00
6.93E-08 0.00E+00 7.35E-05 0.00E+00 5.31E-07 7.35E-05
0405 0.00E+00 1.21E-06 0.00E+00 1.14E-06 2.07E-08 3.55E-08 5.63E-08 0.00E+00
5.63E-08 0.00E+00 5.82E-05 0.00E+00 4.31E-07 5.82E-05
0406 0.00E+00 9.13E-07 0.00E+00 8.62E-07 1.56E-08 2.68E-08 4.25E-08 0.00E+00
4.25E-08 0.00E+00 4.51E-05 0.00E+00 3.26E-07 4.51E-05
0407 0.00E+00 8.10E-07 0.00E+00 7.65E-07 1.39E-08 2.38E-08 3.77E-08 0.00E+00
3.77E-08 0.00E+00 3.95E-05 0.00E+00 2.89E-07 3.95E-05
0408 0.00E+00 7.54E-07 0.00E+00 7.12E-07 1.29E-08 2.22E-08 3.51E-08 0.00E+00
3.51E-08 0.00E+00 3.61E-05 0.00E+00 2.69E-07 3.61E-05
0409 0.00E+00 7.04E-07 0.00E+00 6.64E-07 1.21E-08 2.07E-08 3.27E-08 0.00E+00
3.27E-08 0.00E+00 3.37E-05 0.00E+00 2.51E-07 3.37E-05
0410 0.00E+00 6.57E-07 0.00E+00 6.20E-07 1.13E-08 1.93E-08 3.06E-08 0.00E+00
3.06E-08 0.00E+00 3.22E-05 0.00E+00 2.34E-07 3.22E-05
0411 0.00E+00 5.86E-07 0.00E+00 5.53E-07 1.00E-08 1.72E-08 2.73E-08 0.00E+00
2.73E-08 0.00E+00 2.91E-05 0.00E+00 2.09E-07 2.91E-05
0412 0.00E+00 1.38E-06 0.00E+00 1.30E-06 2.37E-08 4.06E-08 6.43E-08 0.00E+00
6.43E-08 0.00E+00 7.07E-05 0.00E+00 4.93E-07 7.07E-05
0413 0.00E+00 1.29E-06 0.00E+00 1.22E-06 2.21E-08 3.80E-08 6.02E-08 0.00E+00
6.02E-08 0.00E+00 6.67E-05 0.00E+00 4.61E-07 6.67E-05
0414 0.00E+00 1.13E-06 0.00E+00 1.07E-06 1.94E-08 3.33E-08 5.27E-08 0.00E+00
5.27E-08 0.00E+00 5.81E-05 0.00E+00 4.04E-07 5.81E-05
0415 0.00E+00 9.44E-07 0.00E+00 8.91E-07 1.62E-08 2.77E-08 4.39E-08 0.00E+00
4.39E-08 0.00E+00 4.69E-05 0.00E+00 3.37E-07 4.69E-05
0416 0.00E+00 7.28E-07 0.00E+00 6.87E-07 1.25E-08 2.14E-08 3.39E-08 0.00E+00
3.39E-08 0.00E+00 3.72E-05 0.00E+00 2.60E-07 3.72E-05
0417 0.00E+00 6.57E-07 0.00E+00 6.20E-07 1.13E-08 1.93E-08 3.06E-08 0.00E+00

3.06E-08 0.00E+00 3.31E-05 0.00E+00 2.34E-07 3.31E-05
0418 0.00E+00 6.18E-07 0.00E+00 5.84E-07 1.06E-08 1.82E-08 2.88E-08 0.00E+00
2.88E-08 0.00E+00 3.06E-05 0.00E+00 2.21E-07 3.06E-05
0419 0.00E+00 5.80E-07 0.00E+00 5.48E-07 9.94E-09 1.71E-08 2.70E-08 0.00E+00
2.70E-08 0.00E+00 2.86E-05 0.00E+00 2.07E-07 2.86E-05
0420 0.00E+00 5.50E-07 0.00E+00 5.19E-07 9.42E-09 1.62E-08 2.56E-08 0.00E+00
2.56E-08 0.00E+00 2.75E-05 0.00E+00 1.96E-07 2.75E-05
0421 0.00E+00 5.10E-07 0.00E+00 4.82E-07 8.74E-09 1.50E-08 2.37E-08 0.00E+00
2.37E-08 0.00E+00 2.61E-05 0.00E+00 1.82E-07 2.61E-05
0422 0.00E+00 1.08E-06 0.00E+00 1.02E-06 1.85E-08 3.18E-08 5.04E-08 0.00E+00
5.04E-08 0.00E+00 5.77E-05 0.00E+00 3.86E-07 5.77E-05
0423 0.00E+00 1.06E-06 0.00E+00 9.97E-07 1.81E-08 3.11E-08 4.91E-08 0.00E+00
4.91E-08 0.00E+00 5.71E-05 0.00E+00 3.77E-07 5.71E-05
0424 0.00E+00 8.92E-07 0.00E+00 8.42E-07 1.53E-08 2.62E-08 4.15E-08 0.00E+00
4.15E-08 0.00E+00 4.73E-05 0.00E+00 3.18E-07 4.73E-05
0425 0.00E+00 7.57E-07 0.00E+00 7.15E-07 1.30E-08 2.23E-08 3.52E-08 0.00E+00
3.52E-08 0.00E+00 3.89E-05 0.00E+00 2.70E-07 3.89E-05
0426 0.00E+00 5.97E-07 0.00E+00 5.63E-07 1.02E-08 1.75E-08 2.78E-08 0.00E+00
2.78E-08 0.00E+00 3.14E-05 0.00E+00 2.13E-07 3.14E-05
0427 0.00E+00 5.46E-07 0.00E+00 5.15E-07 9.35E-09 1.60E-08 2.54E-08 0.00E+00
2.54E-08 0.00E+00 2.82E-05 0.00E+00 1.95E-07 2.82E-05
0428 0.00E+00 5.18E-07 0.00E+00 4.89E-07 8.88E-09 1.52E-08 2.41E-08 0.00E+00
2.41E-08 0.00E+00 2.64E-05 0.00E+00 1.85E-07 2.64E-05
0429 0.00E+00 4.89E-07 0.00E+00 4.61E-07 8.37E-09 1.44E-08 2.27E-08 0.00E+00
2.27E-08 0.00E+00 2.47E-05 0.00E+00 1.74E-07 2.47E-05
0430 0.00E+00 4.65E-07 0.00E+00 4.39E-07 7.97E-09 1.37E-08 2.16E-08 0.00E+00
2.16E-08 0.00E+00 2.37E-05 0.00E+00 1.66E-07 2.37E-05
0431 0.00E+00 4.43E-07 0.00E+00 4.18E-07 7.59E-09 1.30E-08 2.06E-08 0.00E+00
2.06E-08 0.00E+00 2.31E-05 0.00E+00 1.58E-07 2.31E-05
0432 0.00E+00 9.04E-07 0.00E+00 8.53E-07 1.55E-08 2.66E-08 4.20E-08 0.00E+00
4.20E-08 0.00E+00 5.01E-05 0.00E+00 3.22E-07 5.01E-05
0433 0.00E+00 8.59E-07 0.00E+00 8.10E-07 1.47E-08 2.52E-08 3.99E-08 0.00E+00
3.99E-08 0.00E+00 4.79E-05 0.00E+00 3.06E-07 4.79E-05
0434 0.00E+00 7.29E-07 0.00E+00 6.88E-07 1.25E-08 2.14E-08 3.39E-08 0.00E+00
3.39E-08 0.00E+00 3.96E-05 0.00E+00 2.60E-07 3.96E-05
0435 0.00E+00 6.21E-07 0.00E+00 5.86E-07 1.06E-08 1.82E-08 2.89E-08 0.00E+00
2.89E-08 0.00E+00 3.27E-05 0.00E+00 2.21E-07 3.27E-05
0436 0.00E+00 5.00E-07 0.00E+00 4.72E-07 8.56E-09 1.47E-08 2.33E-08 0.00E+00
2.33E-08 0.00E+00 2.70E-05 0.00E+00 1.78E-07 2.70E-05
0437 0.00E+00 4.62E-07 0.00E+00 4.36E-07 7.92E-09 1.36E-08 2.15E-08 0.00E+00
2.15E-08 0.00E+00 2.44E-05 0.00E+00 1.65E-07 2.44E-05
0438 0.00E+00 4.42E-07 0.00E+00 4.17E-07 7.57E-09 1.30E-08 2.06E-08 0.00E+00
2.06E-08 0.00E+00 2.31E-05 0.00E+00 1.58E-07 2.31E-05
0439 0.00E+00 4.19E-07 0.00E+00 3.96E-07 7.18E-09 1.23E-08 1.95E-08 0.00E+00
1.95E-08 0.00E+00 2.17E-05 0.00E+00 1.49E-07 2.17E-05
0440 0.00E+00 4.00E-07 0.00E+00 3.77E-07 6.85E-09 1.18E-08 1.86E-08 0.00E+00
1.86E-08 0.00E+00 2.07E-05 0.00E+00 1.43E-07 2.07E-05
0441 0.00E+00 3.84E-07 0.00E+00 3.62E-07 6.58E-09 1.13E-08 1.79E-08 0.00E+00
1.79E-08 0.00E+00 2.02E-05 0.00E+00 1.37E-07 2.02E-05
0442 0.00E+00 7.83E-07 0.00E+00 7.39E-07 1.34E-08 2.30E-08 3.64E-08 0.00E+00
3.64E-08 0.00E+00 4.50E-05 0.00E+00 2.79E-07 4.50E-05
0443 0.00E+00 6.98E-07 0.00E+00 6.59E-07 1.20E-08 2.05E-08 3.25E-08 0.00E+00
3.25E-08 0.00E+00 3.99E-05 0.00E+00 2.49E-07 3.99E-05
0444 0.00E+00 6.12E-07 0.00E+00 5.77E-07 1.05E-08 1.80E-08 2.85E-08 0.00E+00
2.85E-08 0.00E+00 3.39E-05 0.00E+00 2.18E-07 3.39E-05
0445 0.00E+00 5.18E-07 0.00E+00 4.89E-07 8.87E-09 1.52E-08 2.41E-08 0.00E+00
2.41E-08 0.00E+00 2.80E-05 0.00E+00 1.85E-07 2.80E-05
0446 0.00E+00 4.26E-07 0.00E+00 4.03E-07 7.30E-09 1.25E-08 1.98E-08 0.00E+00
1.98E-08 0.00E+00 2.35E-05 0.00E+00 1.52E-07 2.35E-05
0447 0.00E+00 3.98E-07 0.00E+00 3.75E-07 6.81E-09 1.17E-08 1.85E-08 0.00E+00
1.85E-08 0.00E+00 2.14E-05 0.00E+00 1.42E-07 2.14E-05
0448 0.00E+00 3.82E-07 0.00E+00 3.61E-07 6.55E-09 1.12E-08 1.78E-08 0.00E+00
1.78E-08 0.00E+00 2.04E-05 0.00E+00 1.36E-07 2.04E-05
0449 0.00E+00 3.65E-07 0.00E+00 3.44E-07 6.24E-09 1.07E-08 1.70E-08 0.00E+00
1.70E-08 0.00E+00 1.92E-05 0.00E+00 1.30E-07 1.92E-05
0450 0.00E+00 3.48E-07 0.00E+00 3.29E-07 5.97E-09 1.02E-08 1.62E-08 0.00E+00
1.62E-08 0.00E+00 1.84E-05 0.00E+00 1.24E-07 1.84E-05
0451 0.00E+00 3.35E-07 0.00E+00 3.17E-07 5.75E-09 9.86E-09 1.56E-08 0.00E+00
1.56E-08 0.00E+00 1.78E-05 0.00E+00 1.20E-07 1.78E-05

0452 0.00E+00 1.00E-05 0.00E+00 9.47E-06 1.72E-07 2.95E-07 4.67E-07 0.00E+00
4.67E-07 0.00E+00 2.38E-04 0.00E+00 3.58E-06 2.38E-04
0453 0.00E+00 1.09E-05 0.00E+00 1.03E-05 1.87E-07 3.20E-07 5.07E-07 0.00E+00
5.07E-07 0.00E+00 2.35E-04 0.00E+00 3.89E-06 2.35E-04
0454 0.00E+00 6.55E-06 0.00E+00 6.18E-06 1.12E-07 1.92E-07 3.05E-07 0.00E+00
3.05E-07 0.00E+00 1.58E-04 0.00E+00 2.34E-06 1.58E-04
0455 0.00E+00 7.51E-06 0.00E+00 7.09E-06 1.29E-07 2.21E-07 3.49E-07 0.00E+00
3.49E-07 0.00E+00 1.68E-04 0.00E+00 2.68E-06 1.68E-04
0456 0.00E+00 1.78E-06 0.00E+00 1.68E-06 3.05E-08 5.24E-08 8.29E-08 0.00E+00
8.29E-08 0.00E+00 1.07E-04 0.00E+00 6.36E-07 1.07E-04
0457 0.00E+00 5.54E-07 0.00E+00 5.23E-07 9.48E-09 1.63E-08 2.58E-08 0.00E+00
2.58E-08 0.00E+00 3.39E-05 0.00E+00 1.98E-07 3.39E-05
0458 0.00E+00 6.12E-07 0.00E+00 5.78E-07 1.05E-08 1.80E-08 2.85E-08 0.00E+00
2.85E-08 0.00E+00 3.62E-05 0.00E+00 2.18E-07 3.62E-05
0459 0.00E+00 5.81E-07 0.00E+00 5.49E-07 9.95E-09 1.71E-08 2.70E-08 0.00E+00
2.70E-08 0.00E+00 3.16E-05 0.00E+00 2.07E-07 3.16E-05
0460 0.00E+00 5.85E-07 0.00E+00 5.52E-07 1.00E-08 1.72E-08 2.72E-08 0.00E+00
2.72E-08 0.00E+00 3.09E-05 0.00E+00 2.09E-07 3.09E-05
0461 0.00E+00 6.42E-07 0.00E+00 6.06E-07 1.10E-08 1.89E-08 2.99E-08 0.00E+00
2.99E-08 0.00E+00 3.29E-05 0.00E+00 2.29E-07 3.29E-05
0462 0.00E+00 5.24E-07 0.00E+00 4.94E-07 8.97E-09 1.54E-08 2.44E-08 0.00E+00
2.44E-08 0.00E+00 3.04E-05 0.00E+00 1.87E-07 3.04E-05
0463 0.00E+00 2.29E-06 0.00E+00 2.16E-06 3.93E-08 6.74E-08 1.07E-07 0.00E+00
1.07E-07 0.00E+00 1.05E-04 0.00E+00 8.18E-07 1.05E-04
0464 0.00E+00 1.65E-06 0.00E+00 1.56E-06 2.83E-08 4.86E-08 7.69E-08 0.00E+00
7.69E-08 0.00E+00 6.97E-05 0.00E+00 5.89E-07 6.97E-05
0465 0.00E+00 1.26E-06 0.00E+00 1.19E-06 2.16E-08 3.70E-08 5.86E-08 0.00E+00
5.86E-08 0.00E+00 5.71E-05 0.00E+00 4.50E-07 5.71E-05
0466 0.00E+00 4.79E-06 0.00E+00 4.52E-06 8.20E-08 1.41E-07 2.23E-07 0.00E+00
2.23E-07 0.00E+00 2.61E-04 0.00E+00 1.71E-06 2.61E-04
0467 0.00E+00 3.19E-06 0.00E+00 3.01E-06 5.46E-08 9.37E-08 1.48E-07 0.00E+00
1.48E-07 0.00E+00 2.38E-04 0.00E+00 1.14E-06 2.38E-04
0468 0.00E+00 2.97E-06 0.00E+00 2.80E-06 5.09E-08 8.73E-08 1.38E-07 0.00E+00
1.38E-07 0.00E+00 1.67E-04 0.00E+00 1.06E-06 1.67E-04
0469 0.00E+00 2.07E-06 0.00E+00 1.95E-06 3.54E-08 6.07E-08 9.61E-08 0.00E+00
9.61E-08 0.00E+00 1.25E-04 0.00E+00 7.37E-07 1.25E-04
0470 0.00E+00 1.07E-06 0.00E+00 1.01E-06 1.84E-08 3.16E-08 5.00E-08 0.00E+00
5.00E-08 0.00E+00 5.66E-05 0.00E+00 3.83E-07 5.66E-05
0471 0.00E+00 5.60E-07 0.00E+00 5.29E-07 9.59E-09 1.65E-08 2.61E-08 0.00E+00
2.61E-08 0.00E+00 3.40E-05 0.00E+00 2.00E-07 3.40E-05
0472 0.00E+00 4.55E-07 0.00E+00 4.29E-07 7.79E-09 1.34E-08 2.12E-08 0.00E+00
2.12E-08 0.00E+00 2.30E-05 0.00E+00 1.62E-07 2.30E-05
0473 0.00E+00 8.99E-07 0.00E+00 8.49E-07 1.54E-08 2.64E-08 4.18E-08 0.00E+00
4.18E-08 0.00E+00 5.01E-05 0.00E+00 3.21E-07 5.01E-05
0474 0.00E+00 3.33E-06 0.00E+00 3.14E-06 5.70E-08 9.78E-08 1.55E-07 0.00E+00
1.55E-07 0.00E+00 1.98E-04 0.00E+00 1.19E-06 1.98E-04
0475 0.00E+00 4.31E-07 0.00E+00 4.07E-07 7.39E-09 1.27E-08 2.01E-08 0.00E+00
2.01E-08 0.00E+00 2.24E-05 0.00E+00 1.54E-07 2.24E-05
0476 0.00E+00 2.33E-07 0.00E+00 2.20E-07 4.00E-09 6.86E-09 1.09E-08 0.00E+00
1.09E-08 0.00E+00 1.27E-05 0.00E+00 8.32E-08 1.27E-05
0477 0.00E+00 2.04E-07 0.00E+00 1.92E-07 3.49E-09 5.98E-09 9.47E-09 0.00E+00
9.47E-09 0.00E+00 1.13E-05 0.00E+00 7.26E-08 1.13E-05
0478 0.00E+00 1.48E-07 0.00E+00 1.39E-07 2.53E-09 4.34E-09 6.88E-09 0.00E+00
6.88E-09 0.00E+00 8.91E-06 0.00E+00 5.27E-08 8.91E-06
0479 0.00E+00 1.74E-07 0.00E+00 1.64E-07 2.98E-09 5.11E-09 8.08E-09 0.00E+00
8.08E-09 0.00E+00 9.86E-06 0.00E+00 6.20E-08 9.86E-06
0480 0.00E+00 1.57E-07 0.00E+00 1.49E-07 2.70E-09 4.63E-09 7.32E-09 0.00E+00
7.32E-09 0.00E+00 8.96E-06 0.00E+00 5.62E-08 8.96E-06
0481 0.00E+00 2.15E-07 0.00E+00 2.03E-07 3.68E-09 6.32E-09 1.00E-08 0.00E+00
1.00E-08 0.00E+00 1.18E-05 0.00E+00 7.67E-08 1.18E-05
0482 0.00E+00 2.11E-07 0.00E+00 1.99E-07 3.61E-09 6.20E-09 9.81E-09 0.00E+00
9.81E-09 0.00E+00 1.17E-05 0.00E+00 7.52E-08 1.17E-05
0483 0.00E+00 2.04E-07 0.00E+00 1.92E-07 3.49E-09 5.98E-09 9.47E-09 0.00E+00
9.47E-09 0.00E+00 1.14E-05 0.00E+00 7.26E-08 1.14E-05
0484 0.00E+00 1.93E-07 0.00E+00 1.82E-07 3.31E-09 5.68E-09 8.99E-09 0.00E+00
8.99E-09 0.00E+00 1.08E-05 0.00E+00 6.89E-08 1.08E-05
0485 0.00E+00 3.02E-07 0.00E+00 2.85E-07 5.17E-09 8.88E-09 1.41E-08 0.00E+00
1.41E-08 0.00E+00 1.87E-05 0.00E+00 1.08E-07 1.87E-05
0486 0.00E+00 2.91E-07 0.00E+00 2.75E-07 4.98E-09 8.55E-09 1.35E-08 0.00E+00

1.35E-08 0.00E+00 1.64E-05 0.00E+00 1.04E-07 1.64E-05
0487 0.00E+00 2.58E-07 0.00E+00 2.43E-07 4.42E-09 7.58E-09 1.20E-08 0.00E+00
1.20E-08 0.00E+00 1.66E-05 0.00E+00 9.20E-08 1.66E-05
0488 0.00E+00 2.35E-07 0.00E+00 2.22E-07 4.03E-09 6.92E-09 1.09E-08 0.00E+00
1.09E-08 0.00E+00 1.59E-05 0.00E+00 8.39E-08 1.59E-05
0489 0.00E+00 2.48E-07 0.00E+00 2.35E-07 4.26E-09 7.30E-09 1.16E-08 0.00E+00
1.16E-08 0.00E+00 1.65E-05 0.00E+00 8.86E-08 1.65E-05
0490 0.00E+00 2.61E-07 0.00E+00 2.46E-07 4.46E-09 7.66E-09 1.21E-08 0.00E+00
1.21E-08 0.00E+00 1.70E-05 0.00E+00 9.29E-08 1.70E-05
0491 0.00E+00 2.75E-07 0.00E+00 2.59E-07 4.71E-09 8.08E-09 1.28E-08 0.00E+00
1.28E-08 0.00E+00 1.77E-05 0.00E+00 9.80E-08 1.77E-05
0492 0.00E+00 3.53E-07 0.00E+00 3.33E-07 6.04E-09 1.04E-08 1.64E-08 0.00E+00
1.64E-08 0.00E+00 2.13E-05 0.00E+00 1.26E-07 2.13E-05
0493 0.00E+00 3.89E-07 0.00E+00 3.67E-07 6.66E-09 1.14E-08 1.81E-08 0.00E+00
1.81E-08 0.00E+00 2.24E-05 0.00E+00 1.39E-07 2.24E-05
0494 0.00E+00 4.06E-07 0.00E+00 3.83E-07 6.95E-09 1.19E-08 1.89E-08 0.00E+00
1.89E-08 0.00E+00 2.29E-05 0.00E+00 1.45E-07 2.29E-05
0495 0.00E+00 4.46E-07 0.00E+00 4.21E-07 7.65E-09 1.31E-08 2.08E-08 0.00E+00
2.08E-08 0.00E+00 2.42E-05 0.00E+00 1.59E-07 2.42E-05
0496 0.00E+00 2.77E-07 0.00E+00 2.62E-07 4.75E-09 8.14E-09 1.29E-08 0.00E+00
1.29E-08 0.00E+00 1.87E-05 0.00E+00 9.88E-08 1.87E-05
0497 0.00E+00 2.81E-07 0.00E+00 2.65E-07 4.81E-09 8.25E-09 1.31E-08 0.00E+00
1.31E-08 0.00E+00 1.93E-05 0.00E+00 1.00E-07 1.93E-05
0498 0.00E+00 3.50E-07 0.00E+00 3.31E-07 6.00E-09 1.03E-08 1.63E-08 0.00E+00
1.63E-08 0.00E+00 2.29E-05 0.00E+00 1.25E-07 2.29E-05
0499 0.00E+00 3.53E-07 0.00E+00 3.33E-07 6.05E-09 1.04E-08 1.64E-08 0.00E+00
1.64E-08 0.00E+00 2.40E-05 0.00E+00 1.26E-07 2.40E-05
0500 0.00E+00 3.78E-07 0.00E+00 3.57E-07 6.48E-09 1.11E-08 1.76E-08 0.00E+00
1.76E-08 0.00E+00 2.64E-05 0.00E+00 1.35E-07 2.64E-05
0501 0.00E+00 6.55E-07 0.00E+00 6.18E-07 1.12E-08 1.92E-08 3.05E-08 0.00E+00
3.05E-08 0.00E+00 3.95E-05 0.00E+00 2.34E-07 3.95E-05
0502 0.00E+00 7.17E-07 0.00E+00 6.76E-07 1.23E-08 2.11E-08 3.33E-08 0.00E+00
3.33E-08 0.00E+00 4.38E-05 0.00E+00 2.56E-07 4.38E-05
0503 0.00E+00 5.57E-07 0.00E+00 5.25E-07 9.53E-09 1.64E-08 2.59E-08 0.00E+00
2.59E-08 0.00E+00 4.04E-05 0.00E+00 1.99E-07 4.04E-05
0504 0.00E+00 7.75E-07 0.00E+00 7.31E-07 1.33E-08 2.28E-08 3.61E-08 0.00E+00
3.61E-08 0.00E+00 5.96E-05 0.00E+00 2.76E-07 5.96E-05
0505 0.00E+00 9.19E-07 0.00E+00 8.67E-07 1.57E-08 2.70E-08 4.27E-08 0.00E+00
4.27E-08 0.00E+00 7.17E-05 0.00E+00 3.28E-07 7.17E-05
0506 0.00E+00 2.89E-06 0.00E+00 2.73E-06 4.95E-08 8.50E-08 1.35E-07 0.00E+00
1.35E-07 0.00E+00 1.90E-04 0.00E+00 1.03E-06 1.90E-04
0507 0.00E+00 5.78E-06 0.00E+00 5.45E-06 9.89E-08 1.70E-07 2.69E-07 0.00E+00
2.69E-07 0.00E+00 3.58E-04 0.00E+00 2.06E-06 3.58E-04
0508 0.00E+00 4.60E-06 0.00E+00 4.34E-06 7.88E-08 1.35E-07 2.14E-07 0.00E+00
2.14E-07 0.00E+00 2.93E-04 0.00E+00 1.64E-06 2.93E-04
0509 0.00E+00 9.09E-07 0.00E+00 8.58E-07 1.56E-08 2.67E-08 4.23E-08 0.00E+00
4.23E-08 0.00E+00 7.33E-05 0.00E+00 3.24E-07 7.33E-05
0510 0.00E+00 9.35E-07 0.00E+00 8.82E-07 1.60E-08 2.75E-08 4.35E-08 0.00E+00
4.35E-08 0.00E+00 7.61E-05 0.00E+00 3.33E-07 7.61E-05
0511 0.00E+00 9.99E-07 0.00E+00 9.43E-07 1.71E-08 2.94E-08 4.65E-08 0.00E+00
4.65E-08 0.00E+00 8.19E-05 0.00E+00 3.56E-07 8.19E-05
0512 0.00E+00 1.02E-06 0.00E+00 9.66E-07 1.75E-08 3.01E-08 4.76E-08 0.00E+00
4.76E-08 0.00E+00 8.39E-05 0.00E+00 3.65E-07 8.39E-05
0513 0.00E+00 1.02E-06 0.00E+00 9.59E-07 1.74E-08 2.99E-08 4.73E-08 0.00E+00
4.73E-08 0.00E+00 8.35E-05 0.00E+00 3.63E-07 8.35E-05
0514 0.00E+00 1.02E-06 0.00E+00 9.60E-07 1.74E-08 2.99E-08 4.73E-08 0.00E+00
4.73E-08 0.00E+00 8.42E-05 0.00E+00 3.63E-07 8.42E-05
0515 0.00E+00 1.13E-06 0.00E+00 1.07E-06 1.94E-08 3.33E-08 5.28E-08 0.00E+00
5.28E-08 0.00E+00 9.31E-05 0.00E+00 4.05E-07 9.31E-05
0516 0.00E+00 1.29E-06 0.00E+00 1.22E-06 2.21E-08 3.79E-08 6.00E-08 0.00E+00
6.00E-08 0.00E+00 1.06E-04 0.00E+00 4.60E-07 1.06E-04
0517 0.00E+00 1.49E-06 0.00E+00 1.41E-06 2.55E-08 4.38E-08 6.94E-08 0.00E+00
6.94E-08 0.00E+00 1.21E-04 0.00E+00 5.32E-07 1.21E-04
0518 0.00E+00 1.29E-06 0.00E+00 1.21E-06 2.20E-08 3.78E-08 5.99E-08 0.00E+00
5.99E-08 0.00E+00 1.03E-04 0.00E+00 4.59E-07 1.03E-04
0519 0.00E+00 1.31E-06 0.00E+00 1.23E-06 2.24E-08 3.84E-08 6.08E-08 0.00E+00
6.08E-08 0.00E+00 1.04E-04 0.00E+00 4.66E-07 1.04E-04
0520 0.00E+00 3.01E-06 0.00E+00 2.84E-06 5.16E-08 8.85E-08 1.40E-07 0.00E+00
1.40E-07 0.00E+00 2.26E-04 0.00E+00 1.07E-06 2.26E-04

0521 0.00E+00 2.42E-06 0.00E+00 2.29E-06 4.15E-08 7.13E-08 1.13E-07 0.00E+00
1.13E-07 0.00E+00 1.88E-04 0.00E+00 8.65E-07 1.88E-04
0522 0.00E+00 2.61E-06 0.00E+00 2.46E-06 4.47E-08 7.67E-08 1.21E-07 0.00E+00
1.21E-07 0.00E+00 1.99E-04 0.00E+00 9.30E-07 1.99E-04
0523 0.00E+00 1.05E-06 0.00E+00 9.91E-07 1.80E-08 3.09E-08 4.89E-08 0.00E+00
4.89E-08 0.00E+00 8.81E-05 0.00E+00 3.75E-07 8.81E-05
0524 0.00E+00 1.08E-06 0.00E+00 1.02E-06 1.86E-08 3.18E-08 5.04E-08 0.00E+00
5.04E-08 0.00E+00 9.17E-05 0.00E+00 3.86E-07 9.17E-05
0525 0.00E+00 2.23E-06 0.00E+00 2.11E-06 3.83E-08 6.57E-08 1.04E-07 0.00E+00
1.04E-07 0.00E+00 1.74E-04 0.00E+00 7.97E-07 1.74E-04
0526 0.00E+00 2.41E-06 0.00E+00 2.28E-06 4.13E-08 7.09E-08 1.12E-07 0.00E+00
1.12E-07 0.00E+00 1.86E-04 0.00E+00 8.60E-07 1.86E-04
0527 0.00E+00 2.84E-06 0.00E+00 2.69E-06 4.87E-08 8.36E-08 1.32E-07 0.00E+00
1.32E-07 0.00E+00 2.13E-04 0.00E+00 1.01E-06 2.13E-04
0528 0.00E+00 3.53E-06 0.00E+00 3.33E-06 6.05E-08 1.04E-07 1.64E-07 0.00E+00
1.64E-07 0.00E+00 2.45E-04 0.00E+00 1.26E-06 2.45E-04
0529 0.00E+00 1.95E-06 0.00E+00 1.84E-06 3.34E-08 5.74E-08 9.08E-08 0.00E+00
9.08E-08 0.00E+00 1.54E-04 0.00E+00 6.96E-07 1.54E-04
0530 0.00E+00 1.70E-06 0.00E+00 1.60E-06 2.91E-08 5.00E-08 7.91E-08 0.00E+00
7.91E-08 0.00E+00 1.37E-04 0.00E+00 6.06E-07 1.37E-04
0531 0.00E+00 1.46E-06 0.00E+00 1.38E-06 2.50E-08 4.30E-08 6.80E-08 0.00E+00
6.80E-08 0.00E+00 1.20E-04 0.00E+00 5.21E-07 1.20E-04
0532 0.00E+00 1.29E-06 0.00E+00 1.22E-06 2.22E-08 3.80E-08 6.02E-08 0.00E+00
6.02E-08 0.00E+00 1.06E-04 0.00E+00 4.62E-07 1.06E-04
0533 0.00E+00 2.08E-06 0.00E+00 1.96E-06 3.56E-08 6.12E-08 9.68E-08 0.00E+00
9.68E-08 0.00E+00 1.64E-04 0.00E+00 7.42E-07 1.64E-04
0534 0.00E+00 1.77E-06 0.00E+00 1.67E-06 3.04E-08 5.22E-08 8.25E-08 0.00E+00
8.25E-08 0.00E+00 1.43E-04 0.00E+00 6.33E-07 1.43E-04
0535 0.00E+00 1.54E-06 0.00E+00 1.46E-06 2.64E-08 4.53E-08 7.17E-08 0.00E+00
7.17E-08 0.00E+00 1.25E-04 0.00E+00 5.50E-07 1.25E-04
0536 0.00E+00 1.39E-06 0.00E+00 1.31E-06 2.38E-08 4.09E-08 6.47E-08 0.00E+00
6.47E-08 0.00E+00 1.14E-04 0.00E+00 4.96E-07 1.14E-04
0537 0.00E+00 2.20E-06 0.00E+00 2.08E-06 3.78E-08 6.48E-08 1.03E-07 0.00E+00
1.03E-07 0.00E+00 1.73E-04 0.00E+00 7.86E-07 1.73E-04
0538 0.00E+00 1.87E-06 0.00E+00 1.77E-06 3.21E-08 5.51E-08 8.72E-08 0.00E+00
8.72E-08 0.00E+00 1.49E-04 0.00E+00 6.69E-07 1.49E-04
0539 0.00E+00 1.66E-06 0.00E+00 1.56E-06 2.84E-08 4.87E-08 7.70E-08 0.00E+00
7.70E-08 0.00E+00 1.33E-04 0.00E+00 5.90E-07 1.33E-04
0540 0.00E+00 1.41E-06 0.00E+00 1.33E-06 2.41E-08 4.14E-08 6.55E-08 0.00E+00
6.55E-08 0.00E+00 1.15E-04 0.00E+00 5.02E-07 1.15E-04
0541 0.00E+00 1.61E-06 0.00E+00 1.52E-06 2.75E-08 4.73E-08 7.48E-08 0.00E+00
7.48E-08 0.00E+00 9.68E-05 0.00E+00 5.74E-07 9.68E-05
0542 0.00E+00 1.88E-06 0.00E+00 1.77E-06 3.22E-08 5.53E-08 8.75E-08 0.00E+00
8.75E-08 0.00E+00 1.15E-04 0.00E+00 6.71E-07 1.15E-04
0543 0.00E+00 1.56E-06 0.00E+00 1.47E-06 2.66E-08 4.57E-08 7.24E-08 0.00E+00
7.24E-08 0.00E+00 9.76E-05 0.00E+00 5.55E-07 9.76E-05
0544 0.00E+00 1.76E-06 0.00E+00 1.66E-06 3.01E-08 5.17E-08 8.18E-08 0.00E+00
8.18E-08 0.00E+00 1.15E-04 0.00E+00 6.27E-07 1.15E-04
0545 0.00E+00 1.90E-06 0.00E+00 1.80E-06 3.26E-08 5.59E-08 8.85E-08 0.00E+00
8.85E-08 0.00E+00 1.28E-04 0.00E+00 6.78E-07 1.28E-04
0546 0.00E+00 2.02E-06 0.00E+00 1.91E-06 3.47E-08 5.95E-08 9.41E-08 0.00E+00
9.41E-08 0.00E+00 1.37E-04 0.00E+00 7.22E-07 1.37E-04
0547 0.00E+00 2.23E-06 0.00E+00 2.10E-06 3.82E-08 6.55E-08 1.04E-07 0.00E+00
1.04E-07 0.00E+00 1.60E-04 0.00E+00 7.95E-07 1.60E-04
0548 0.00E+00 9.46E-07 0.00E+00 8.93E-07 1.62E-08 2.78E-08 4.40E-08 0.00E+00
4.40E-08 0.00E+00 6.47E-05 0.00E+00 3.38E-07 6.47E-05
0549 0.00E+00 1.07E-06 0.00E+00 1.01E-06 1.83E-08 3.13E-08 4.96E-08 0.00E+00
4.96E-08 0.00E+00 7.35E-05 0.00E+00 3.80E-07 7.35E-05
0550 0.00E+00 1.93E-06 0.00E+00 1.83E-06 3.31E-08 5.69E-08 9.00E-08 0.00E+00
9.00E-08 0.00E+00 1.41E-04 0.00E+00 6.90E-07 1.41E-04
0551 0.00E+00 2.08E-06 0.00E+00 1.96E-06 3.56E-08 6.11E-08 9.68E-08 0.00E+00
9.68E-08 0.00E+00 1.57E-04 0.00E+00 7.42E-07 1.57E-04
0552 0.00E+00 1.88E-06 0.00E+00 1.77E-06 3.22E-08 5.53E-08 8.75E-08 0.00E+00
8.75E-08 0.00E+00 1.44E-04 0.00E+00 6.71E-07 1.44E-04
0553 0.00E+00 1.67E-06 0.00E+00 1.58E-06 2.86E-08 4.91E-08 7.77E-08 0.00E+00
7.77E-08 0.00E+00 1.30E-04 0.00E+00 5.96E-07 1.30E-04
0554 0.00E+00 1.64E-06 0.00E+00 1.55E-06 2.81E-08 4.83E-08 7.64E-08 0.00E+00
7.64E-08 0.00E+00 1.30E-04 0.00E+00 5.86E-07 1.30E-04
0555 0.00E+00 1.49E-06 0.00E+00 1.41E-06 2.56E-08 4.39E-08 6.95E-08 0.00E+00

6.95E-08 0.00E+00 1.17E-04 0.00E+00 5.33E-07 1.17E-04
0556 0.00E+00 1.36E-06 0.00E+00 1.28E-06 2.33E-08 3.99E-08 6.32E-08 0.00E+00
6.32E-08 0.00E+00 1.11E-04 0.00E+00 4.84E-07 1.11E-04
0557 0.00E+00 1.15E-06 0.00E+00 1.08E-06 1.97E-08 3.38E-08 5.34E-08 0.00E+00
5.34E-08 0.00E+00 9.58E-05 0.00E+00 4.10E-07 9.58E-05
0558 0.00E+00 7.09E-07 0.00E+00 6.69E-07 1.21E-08 2.08E-08 3.30E-08 0.00E+00
3.30E-08 0.00E+00 3.60E-05 0.00E+00 2.53E-07 3.60E-05
0559 0.00E+00 6.39E-07 0.00E+00 6.03E-07 1.09E-08 1.88E-08 2.97E-08 0.00E+00
2.97E-08 0.00E+00 3.35E-05 0.00E+00 2.28E-07 3.35E-05
0560 0.00E+00 1.69E-06 0.00E+00 1.59E-06 2.89E-08 4.96E-08 7.85E-08 0.00E+00
7.85E-08 0.00E+00 8.56E-05 0.00E+00 6.02E-07 8.56E-05
0561 0.00E+00 2.08E-06 0.00E+00 1.96E-06 3.55E-08 6.10E-08 9.65E-08 0.00E+00
9.65E-08 0.00E+00 1.22E-04 0.00E+00 7.40E-07 1.22E-04

```
This file: c:\HARP\projects\demo\Rep_Acu_AllRec_AllSrc_AllCh_ByRec.txt

Created by HARP Version 1.4  Build 23.06.09
Uses ISC Version 99155
Uses BPIP (Dated: 04112)
Creation date: 10/16/2009 10:44:24 AM


EXCEPTION REPORT
   (there have been no changes or exceptions)

INPUT FILES:
   Source-Receptor file: C:\Lakes\Reedley\Reedley.src
   Averaging period adjustment factors file: not applicable
   Emission rates file: Reedley.ems
   Site parameters file: C:\HARP\PROJECTS\DEMO\project.sit


Screening mode is OFF

Analysis method:   Point Estimate
Health effect:     Acute HI Simple (Concurrent Max.)
Receptor(s):       All
Sources(s):        All
Chemicals(s):      All

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS
CHEM  CAS        ABBREVIATION    POLLUTANT NAME
                                    BACKGROUND (ug/m^3)
0001  9901       DieselExhPM     Diesel engine exhaust, particulate matter
(Diesel PM)                            0.000E+00
0002  71432      Benzene         Benzene
                                    0.000E+00
0003  100414     Ethyl Benzene   Ethyl benzene
                                    0.000E+00
0004  108383     m-Xylene        m-Xylene
                                    0.000E+00
0005  108883     Toluene         Toluene
                                    0.000E+00
0006  1634044    Me t-ButylEther Methyl tert-butyl ether
                                    0.000E+00

CHEMICAL HEALTH VALUES
CHEM  CAS        ABBREVIATION    CancerPF(Inh)      CancerPF(Oral)
ChronicREL(Inh)     ChronicREL(Oral)    AcuteREL
                                 (mg/kg-d)^-1       (mg/kg-d)^-1        ug/m^3
             mg/kg-d             ug/m^3

0001  9901       DieselExhPM     1.10E+00           *
5.00E+00            *                  *
0002  71432      Benzene         1.00E-01           *
6.00E+01            *                  1.30E+03
0003  100414     Ethyl Benzene   8.70E-03           *
2.00E+03            *                  *
0004  108383     m-Xylene        *                  *
7.00E+02            *                  2.20E+04
0005  108883     Toluene         *                  *
3.00E+02            *                  3.70E+04
0006  1634044    Me t-ButylEther 1.80E-03           *
8.00E+03            *                  *

EMISSIONS DATA SOURCE: Emission rates loaded from file:
C:\Lakes\Reedley\Reedley.ems
CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA1   NAME=Reedley AREA1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
```

```
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA10   NAME=Reedley
AREA10  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS              ABBREV                 MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA11   NAME=Reedley
AREA11  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS              ABBREV                 MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA12   NAME=Reedley
AREA12  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS              ABBREV                 MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA13   NAME=Reedley
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AREA13  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)     MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA14   NAME=Reedley
AREA14  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)     MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA15   NAME=Reedley
AREA15  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)     MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA16   NAME=Reedley
AREA16  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER      BG (ug/m^3)    AVRG
(lbs/yr)     MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
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```
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA17   NAME=Reedley
AREA17  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA18   NAME=Reedley
AREA18  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA19   NAME=Reedley
AREA19  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
108883          Toluene                       1
0.00E+00        0.00E+00
1634044         Me t-ButylEther               1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA2   NAME=Reedley AREA2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                   1
6.87E-02        5.50E-03
71432           Benzene                       1
0.00E+00        0.00E+00
100414          Ethyl Benzene                 1
0.00E+00        0.00E+00
108383          m-Xylene                      1
0.00E+00        0.00E+00
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```
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA20   NAME=Reedley
AREA20  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA21   NAME=Reedley
AREA21  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA22   NAME=Reedley
AREA22  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA23   NAME=Reedley
AREA23  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
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```
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA24   NAME=Reedley
AREA24  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA25   NAME=Reedley
AREA25  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA26   NAME=Reedley
AREA26  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA27   NAME=Reedley
AREA27  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
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71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA28   NAME=Reedley
AREA28  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA29   NAME=Reedley
AREA29  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA3   NAME=Reedley AREA3
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                      1
6.87E-02        5.50E-03
71432           Benzene                          1
0.00E+00        0.00E+00
100414          Ethyl Benzene                    1
0.00E+00        0.00E+00
108383          m-Xylene                         1
0.00E+00        0.00E+00
108883          Toluene                          1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                  1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA30   NAME=Reedley
AREA30  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
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(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA31   NAME=Reedley
AREA31  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS              ABBREV                 MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA32   NAME=Reedley
AREA32  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS              ABBREV                 MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA33   NAME=Reedley
AREA33  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS              ABBREV                 MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)     MAX (lbs/hr)
9901             DieselExhPM                    1
6.87E-02         5.50E-03
71432            Benzene                        1
0.00E+00         0.00E+00
100414           Ethyl Benzene                  1
0.00E+00         0.00E+00
108383           m-Xylene                       1
0.00E+00         0.00E+00
108883           Toluene                        1
0.00E+00         0.00E+00
1634044          Me t-ButylEther                1
0.00E+00         0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA34   NAME=Reedley
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AREA34  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA35   NAME=Reedley
AREA35  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA36   NAME=Reedley
AREA36  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA37   NAME=Reedley
AREA37  EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
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0.00E+00 0.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA38 NAME=Reedley AREA38 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA4 NAME=Reedley AREA4 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA5 NAME=Reedley AREA5 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				
108883	Toluene	1			
0.00E+00	0.00E+00				
1634044	Me t-ButylEther	1			
0.00E+00	0.00E+00				

EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=AREA6 NAME=Reedley AREA6 EMS (lbs/yr)
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1			
6.87E-02	5.50E-03				
71432	Benzene	1			
0.00E+00	0.00E+00				
100414	Ethyl Benzene	1			
0.00E+00	0.00E+00				
108383	m-Xylene	1			
0.00E+00	0.00E+00				

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108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA7   NAME=Reedley AREA7
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA8   NAME=Reedley AREA8
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=AREA9   NAME=Reedley AREA9
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
6.87E-02        5.50E-03
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK1   NAME=Reedley STCK1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
3.26E+01        9.20E-02
71432           Benzene                         1
0.00E+00        0.00E+00
100414          Ethyl Benzene                   1
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0.00E+00        0.00E+00
108383          m-Xylene                        1
0.00E+00        0.00E+00
108883          Toluene                         1
0.00E+00        0.00E+00
1634044         Me t-ButylEther                 1
0.00E+00        0.00E+00

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK2   NAME=Reedley STCK2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
1.13E-01        4.33E-05
100414          Ethyl Benzene                   1
1.80E-01        6.93E-05
108383          m-Xylene                        1
2.70E-01        1.04E-04
108883          Toluene                         1
9.00E-01        3.46E-04
1634044         Me t-ButylEther                 1
1.24E+00        4.76E-04

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=STCK3   NAME=Reedley STCK3
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
3.40E-02        1.29E-05
100414          Ethyl Benzene                   1
5.40E-02        2.06E-05
108383          m-Xylene                        1
8.00E-02        3.09E-05
108883          Toluene                         1
2.68E-01        1.03E-04
1634044         Me t-ButylEther                 1
3.69E-01        1.42E-04

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=VOL1   NAME=Reedley VOL1
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
71432           Benzene                         1
9.92E-01        3.81E-04
100414          Ethyl Benzene                   1
1.59E+00        6.10E-04
108383          m-Xylene                        1
2.38E+00        9.15E-04
108883          Toluene                         1
7.93E+00        3.05E-03
1634044         Me t-ButylEther                 1
1.09E+01        4.20E-03

EMISSIONS FOR FACILITY FAC=1   DEV=*   PRO=*   STK=VOL2   NAME=Reedley VOL2
EMS (lbs/yr)
SOURCE MULTIPLIER=1
CAS             ABBREV                  MULTIPLIER     BG (ug/m^3)   AVRG
(lbs/yr)    MAX (lbs/hr)
9901            DieselExhPM                     1
0.00E+00        0.00E+00
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71432            Benzene                        1
5.63E-01         2.16E-04
100414           Ethyl Benzene                  1
9.00E-01         3.46E-04
108383           m-Xylene                       1
1.35E+00         5.20E-04
108883           Toluene                        1
4.50E+00         1.73E-03
1634044          Me t-ButylEther                1
6.19E+00         2.38E-03

ACUTE HI REPORT
REC          CV       CNS      BONE     DEVEL      ENDO       EYE      GILV     IMMUN
   KIDN     REPRO      RESP      SKIN     BLOOD       MAX
0001  0.00E+00 1.64E-06 0.00E+00 3.96E-06 0.00E+00 2.47E-06 0.00E+00 2.33E-06
0.00E+00 3.96E-06 2.47E-06 0.00E+00 2.33E-06 3.96E-06
0002  0.00E+00 2.34E-06 0.00E+00 5.66E-06 0.00E+00 3.52E-06 0.00E+00 3.32E-06
0.00E+00 5.66E-06 3.52E-06 0.00E+00 3.32E-06 5.66E-06
0003  0.00E+00 3.00E-06 0.00E+00 7.27E-06 0.00E+00 4.52E-06 0.00E+00 4.26E-06
0.00E+00 7.27E-06 4.52E-06 0.00E+00 4.26E-06 7.27E-06
0004  0.00E+00 3.39E-06 0.00E+00 8.20E-06 0.00E+00 5.10E-06 0.00E+00 4.81E-06
0.00E+00 8.20E-06 5.10E-06 0.00E+00 4.81E-06 8.20E-06
0005  0.00E+00 3.28E-06 0.00E+00 7.93E-06 0.00E+00 4.93E-06 0.00E+00 4.65E-06
0.00E+00 7.93E-06 4.93E-06 0.00E+00 4.65E-06 7.93E-06
0006  0.00E+00 2.63E-06 0.00E+00 6.60E-06 0.00E+00 3.96E-06 0.00E+00 3.97E-06
0.00E+00 6.60E-06 3.96E-06 0.00E+00 3.97E-06 6.60E-06
0007  0.00E+00 2.01E-06 0.00E+00 5.68E-06 0.00E+00 3.03E-06 0.00E+00 3.67E-06
0.00E+00 5.68E-06 3.03E-06 0.00E+00 3.67E-06 5.68E-06
0008  0.00E+00 3.52E-06 0.00E+00 8.71E-06 0.00E+00 5.30E-06 0.00E+00 5.19E-06
0.00E+00 8.71E-06 5.30E-06 0.00E+00 5.19E-06 8.71E-06
0009  0.00E+00 4.64E-06 0.00E+00 1.13E-05 0.00E+00 6.99E-06 0.00E+00 6.70E-06
0.00E+00 1.13E-05 6.99E-06 0.00E+00 6.70E-06 1.13E-05
0010  0.00E+00 4.32E-06 0.00E+00 1.05E-05 0.00E+00 6.50E-06 0.00E+00 6.19E-06
0.00E+00 1.05E-05 6.50E-06 0.00E+00 6.19E-06 1.05E-05
0011  0.00E+00 2.90E-06 0.00E+00 7.04E-06 0.00E+00 4.36E-06 0.00E+00 4.14E-06
0.00E+00 7.04E-06 4.36E-06 0.00E+00 4.14E-06 7.04E-06
0012  0.00E+00 5.41E-06 0.00E+00 1.31E-05 0.00E+00 8.14E-06 0.00E+00 7.71E-06
0.00E+00 1.31E-05 8.14E-06 0.00E+00 7.71E-06 1.31E-05
0013  0.00E+00 5.89E-06 0.00E+00 1.43E-05 0.00E+00 8.86E-06 0.00E+00 8.40E-06
0.00E+00 1.43E-05 8.86E-06 0.00E+00 8.40E-06 1.43E-05
0014  0.00E+00 3.94E-06 0.00E+00 8.82E-06 0.00E+00 5.94E-06 0.00E+00 4.88E-06
0.00E+00 8.82E-06 5.94E-06 0.00E+00 4.88E-06 8.82E-06
0015  0.00E+00 7.12E-06 0.00E+00 1.50E-05 0.00E+00 1.07E-05 0.00E+00 7.87E-06
0.00E+00 1.50E-05 1.07E-05 0.00E+00 7.87E-06 1.50E-05
0016  0.00E+00 2.56E-06 0.00E+00 6.19E-06 0.00E+00 3.85E-06 0.00E+00 3.63E-06
0.00E+00 6.19E-06 3.85E-06 0.00E+00 3.63E-06 6.19E-06
0017  0.00E+00 2.92E-06 0.00E+00 7.07E-06 0.00E+00 4.40E-06 0.00E+00 4.15E-06
0.00E+00 7.07E-06 4.40E-06 0.00E+00 4.15E-06 7.07E-06
0018  0.00E+00 2.93E-06 0.00E+00 7.09E-06 0.00E+00 4.41E-06 0.00E+00 4.16E-06
0.00E+00 7.09E-06 4.41E-06 0.00E+00 4.16E-06 7.09E-06
0019  0.00E+00 2.52E-06 0.00E+00 6.11E-06 0.00E+00 3.79E-06 0.00E+00 3.60E-06
0.00E+00 6.11E-06 3.79E-06 0.00E+00 3.60E-06 6.11E-06
0020  0.00E+00 1.85E-06 0.00E+00 4.97E-06 0.00E+00 2.78E-06 0.00E+00 3.12E-06
0.00E+00 4.97E-06 2.78E-06 0.00E+00 3.12E-06 4.97E-06
0021  0.00E+00 2.22E-06 0.00E+00 5.58E-06 0.00E+00 3.34E-06 0.00E+00 3.36E-06
0.00E+00 5.58E-06 3.34E-06 0.00E+00 3.36E-06 5.58E-06
0022  0.00E+00 3.45E-06 0.00E+00 8.49E-06 0.00E+00 5.20E-06 0.00E+00 5.04E-06
0.00E+00 8.49E-06 5.20E-06 0.00E+00 5.04E-06 8.49E-06
0023  0.00E+00 4.13E-06 0.00E+00 1.01E-05 0.00E+00 6.21E-06 0.00E+00 5.93E-06
0.00E+00 1.01E-05 6.21E-06 0.00E+00 5.93E-06 1.01E-05
0024  0.00E+00 3.59E-06 0.00E+00 8.72E-06 0.00E+00 5.40E-06 0.00E+00 5.13E-06
0.00E+00 8.72E-06 5.40E-06 0.00E+00 5.13E-06 8.72E-06
0025  0.00E+00 2.37E-06 0.00E+00 5.75E-06 0.00E+00 3.56E-06 0.00E+00 3.38E-06
0.00E+00 5.75E-06 3.56E-06 0.00E+00 3.38E-06 5.75E-06
0026  0.00E+00 4.57E-06 0.00E+00 1.11E-05 0.00E+00 6.88E-06 0.00E+00 6.52E-06
0.00E+00 1.11E-05 6.88E-06 0.00E+00 6.52E-06 1.11E-05
0027  0.00E+00 5.32E-06 0.00E+00 1.29E-05 0.00E+00 8.01E-06 0.00E+00 7.59E-06
0.00E+00 1.29E-05 8.01E-06 0.00E+00 7.59E-06 1.29E-05
0028  0.00E+00 3.59E-06 0.00E+00 8.58E-06 0.00E+00 5.40E-06 0.00E+00 4.99E-06
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0.00E+00 8.58E-06 5.40E-06 0.00E+00 4.99E-06 8.58E-06
0029 0.00E+00 5.60E-06 0.00E+00 1.18E-05 0.00E+00 8.42E-06 0.00E+00 6.16E-06
0.00E+00 1.18E-05 8.42E-06 0.00E+00 6.16E-06 1.18E-05
0030 0.00E+00 5.69E-06 0.00E+00 1.20E-05 0.00E+00 8.57E-06 0.00E+00 6.34E-06
0.00E+00 1.20E-05 8.57E-06 0.00E+00 6.34E-06 1.20E-05
0031 0.00E+00 2.62E-06 0.00E+00 6.33E-06 0.00E+00 3.94E-06 0.00E+00 3.71E-06
0.00E+00 6.33E-06 3.94E-06 0.00E+00 3.71E-06 6.33E-06
0032 0.00E+00 2.37E-06 0.00E+00 5.73E-06 0.00E+00 3.56E-06 0.00E+00 3.36E-06
0.00E+00 5.73E-06 3.56E-06 0.00E+00 3.36E-06 5.73E-06
0033 0.00E+00 1.85E-06 0.00E+00 4.65E-06 0.00E+00 2.78E-06 0.00E+00 2.81E-06
0.00E+00 4.65E-06 2.78E-06 0.00E+00 2.81E-06 4.65E-06
0034 0.00E+00 1.39E-06 0.00E+00 3.95E-06 0.00E+00 2.09E-06 0.00E+00 2.56E-06
0.00E+00 3.95E-06 2.09E-06 0.00E+00 2.56E-06 3.95E-06
0035 0.00E+00 2.34E-06 0.00E+00 5.82E-06 0.00E+00 3.53E-06 0.00E+00 3.48E-06
0.00E+00 5.82E-06 3.53E-06 0.00E+00 3.48E-06 5.82E-06
0036 0.00E+00 3.30E-06 0.00E+00 8.09E-06 0.00E+00 4.97E-06 0.00E+00 4.78E-06
0.00E+00 8.09E-06 4.97E-06 0.00E+00 4.78E-06 8.09E-06
0037 0.00E+00 3.64E-06 0.00E+00 8.87E-06 0.00E+00 5.48E-06 0.00E+00 5.23E-06
0.00E+00 8.87E-06 5.48E-06 0.00E+00 5.23E-06 8.87E-06
0038 0.00E+00 3.01E-06 0.00E+00 7.30E-06 0.00E+00 4.52E-06 0.00E+00 4.30E-06
0.00E+00 7.30E-06 4.52E-06 0.00E+00 4.30E-06 7.30E-06
0039 0.00E+00 2.04E-06 0.00E+00 4.96E-06 0.00E+00 3.08E-06 0.00E+00 2.91E-06
0.00E+00 4.96E-06 3.08E-06 0.00E+00 2.91E-06 4.96E-06
0040 0.00E+00 3.91E-06 0.00E+00 9.49E-06 0.00E+00 5.89E-06 0.00E+00 5.58E-06
0.00E+00 9.49E-06 5.89E-06 0.00E+00 5.58E-06 9.49E-06
0041 0.00E+00 4.78E-06 0.00E+00 1.16E-05 0.00E+00 7.20E-06 0.00E+00 6.82E-06
0.00E+00 1.16E-05 7.20E-06 0.00E+00 6.82E-06 1.16E-05
0042 0.00E+00 3.53E-06 0.00E+00 8.47E-06 0.00E+00 5.31E-06 0.00E+00 4.94E-06
0.00E+00 8.47E-06 5.31E-06 0.00E+00 4.94E-06 8.47E-06
0043 0.00E+00 4.06E-06 0.00E+00 8.49E-06 0.00E+00 6.10E-06 0.00E+00 4.44E-06
0.00E+00 8.49E-06 6.10E-06 0.00E+00 4.44E-06 8.49E-06
0044 0.00E+00 5.59E-06 0.00E+00 1.17E-05 0.00E+00 8.41E-06 0.00E+00 6.16E-06
0.00E+00 1.17E-05 8.41E-06 0.00E+00 6.16E-06 1.17E-05
0045 0.00E+00 3.77E-06 0.00E+00 7.81E-06 0.00E+00 5.67E-06 0.00E+00 4.04E-06
0.00E+00 7.81E-06 5.67E-06 0.00E+00 4.04E-06 7.81E-06
0046 0.00E+00 1.82E-06 0.00E+00 4.43E-06 0.00E+00 2.74E-06 0.00E+00 2.60E-06
0.00E+00 4.43E-06 2.74E-06 0.00E+00 2.60E-06 4.43E-06
0047 0.00E+00 1.35E-06 0.00E+00 3.60E-06 0.00E+00 2.02E-06 0.00E+00 2.25E-06
0.00E+00 3.60E-06 2.02E-06 0.00E+00 2.25E-06 3.60E-06
0048 0.00E+00 1.52E-06 0.00E+00 3.83E-06 0.00E+00 2.29E-06 0.00E+00 2.31E-06
0.00E+00 3.83E-06 2.29E-06 0.00E+00 2.31E-06 3.83E-06
0049 0.00E+00 2.39E-06 0.00E+00 5.90E-06 0.00E+00 3.60E-06 0.00E+00 3.51E-06
0.00E+00 5.90E-06 3.60E-06 0.00E+00 3.51E-06 5.90E-06
0050 0.00E+00 3.10E-06 0.00E+00 7.58E-06 0.00E+00 4.67E-06 0.00E+00 4.48E-06
0.00E+00 7.58E-06 4.67E-06 0.00E+00 4.48E-06 7.58E-06
0051 0.00E+00 3.21E-06 0.00E+00 7.80E-06 0.00E+00 4.83E-06 0.00E+00 4.59E-06
0.00E+00 7.80E-06 4.83E-06 0.00E+00 4.59E-06 7.80E-06
0052 0.00E+00 2.54E-06 0.00E+00 6.16E-06 0.00E+00 3.82E-06 0.00E+00 3.62E-06
0.00E+00 6.16E-06 3.82E-06 0.00E+00 3.62E-06 6.16E-06
0053 0.00E+00 1.80E-06 0.00E+00 4.36E-06 0.00E+00 2.71E-06 0.00E+00 2.56E-06
0.00E+00 4.36E-06 2.71E-06 0.00E+00 2.56E-06 4.36E-06
0054 0.00E+00 3.38E-06 0.00E+00 8.20E-06 0.00E+00 5.09E-06 0.00E+00 4.82E-06
0.00E+00 8.20E-06 5.09E-06 0.00E+00 4.82E-06 8.20E-06
0055 0.00E+00 4.29E-06 0.00E+00 1.04E-05 0.00E+00 6.45E-06 0.00E+00 6.11E-06
0.00E+00 1.04E-05 6.45E-06 0.00E+00 6.11E-06 1.04E-05
0056 0.00E+00 3.42E-06 0.00E+00 8.30E-06 0.00E+00 5.15E-06 0.00E+00 4.88E-06
0.00E+00 8.30E-06 5.15E-06 0.00E+00 4.88E-06 8.30E-06
0057 0.00E+00 2.80E-06 0.00E+00 5.87E-06 0.00E+00 4.22E-06 0.00E+00 3.07E-06
0.00E+00 5.87E-06 4.22E-06 0.00E+00 3.07E-06 5.87E-06
0058 0.00E+00 4.83E-06 0.00E+00 1.01E-05 0.00E+00 7.27E-06 0.00E+00 5.32E-06
0.00E+00 1.01E-05 7.27E-06 0.00E+00 5.32E-06 1.01E-05
0059 0.00E+00 4.28E-06 0.00E+00 9.01E-06 0.00E+00 6.43E-06 0.00E+00 4.73E-06
0.00E+00 9.01E-06 6.43E-06 0.00E+00 4.73E-06 9.01E-06
0060 0.00E+00 3.45E-06 0.00E+00 7.08E-06 0.00E+00 5.20E-06 0.00E+00 3.63E-06
0.00E+00 7.08E-06 5.20E-06 0.00E+00 3.63E-06 7.08E-06
0061 0.00E+00 1.05E-06 0.00E+00 2.92E-06 0.00E+00 1.58E-06 0.00E+00 1.88E-06
0.00E+00 2.92E-06 1.58E-06 0.00E+00 1.88E-06 2.92E-06
0062 0.00E+00 1.64E-06 0.00E+00 4.08E-06 0.00E+00 2.47E-06 0.00E+00 2.44E-06
0.00E+00 4.08E-06 2.47E-06 0.00E+00 2.44E-06 4.08E-06

0063 0.00E+00 2.38E-06 0.00E+00 5.85E-06 0.00E+00 3.59E-06 0.00E+00 3.46E-06
0.00E+00 5.85E-06 3.59E-06 0.00E+00 3.46E-06 5.85E-06
0064 0.00E+00 2.88E-06 0.00E+00 7.03E-06 0.00E+00 4.34E-06 0.00E+00 4.14E-06
0.00E+00 7.03E-06 4.34E-06 0.00E+00 4.14E-06 7.03E-06
0065 0.00E+00 2.82E-06 0.00E+00 6.86E-06 0.00E+00 4.25E-06 0.00E+00 4.03E-06
0.00E+00 6.86E-06 4.25E-06 0.00E+00 4.03E-06 6.86E-06
0066 0.00E+00 2.16E-06 0.00E+00 5.24E-06 0.00E+00 3.25E-06 0.00E+00 3.08E-06
0.00E+00 5.24E-06 3.25E-06 0.00E+00 3.08E-06 5.24E-06
0067 0.00E+00 1.60E-06 0.00E+00 3.87E-06 0.00E+00 2.41E-06 0.00E+00 2.27E-06
0.00E+00 3.87E-06 2.41E-06 0.00E+00 2.27E-06 3.87E-06
0068 0.00E+00 2.95E-06 0.00E+00 7.15E-06 0.00E+00 4.44E-06 0.00E+00 4.21E-06
0.00E+00 7.15E-06 4.44E-06 0.00E+00 4.21E-06 7.15E-06
0069 0.00E+00 3.85E-06 0.00E+00 9.33E-06 0.00E+00 5.79E-06 0.00E+00 5.48E-06
0.00E+00 9.33E-06 5.79E-06 0.00E+00 5.48E-06 9.33E-06
0070 0.00E+00 3.33E-06 0.00E+00 8.09E-06 0.00E+00 5.02E-06 0.00E+00 4.75E-06
0.00E+00 8.09E-06 5.02E-06 0.00E+00 4.75E-06 8.09E-06
0071 0.00E+00 2.01E-06 0.00E+00 4.79E-06 0.00E+00 3.03E-06 0.00E+00 2.78E-06
0.00E+00 4.79E-06 3.03E-06 0.00E+00 2.78E-06 4.79E-06
0072 0.00E+00 3.84E-06 0.00E+00 8.06E-06 0.00E+00 5.78E-06 0.00E+00 4.21E-06
0.00E+00 8.06E-06 5.78E-06 0.00E+00 4.21E-06 8.06E-06
0073 0.00E+00 4.43E-06 0.00E+00 9.31E-06 0.00E+00 6.67E-06 0.00E+00 4.87E-06
0.00E+00 9.31E-06 6.67E-06 0.00E+00 4.87E-06 9.31E-06
0074 0.00E+00 2.86E-06 0.00E+00 5.91E-06 0.00E+00 4.30E-06 0.00E+00 3.05E-06
0.00E+00 5.91E-06 4.30E-06 0.00E+00 3.05E-06 5.91E-06
0075 0.00E+00 4.17E-06 0.00E+00 7.66E-06 0.00E+00 6.28E-06 0.00E+00 3.49E-06
0.00E+00 7.66E-06 6.28E-06 0.00E+00 3.49E-06 7.66E-06
0076 0.00E+00 1.72E-06 0.00E+00 4.24E-06 0.00E+00 2.58E-06 0.00E+00 2.52E-06
0.00E+00 4.24E-06 2.58E-06 0.00E+00 2.52E-06 4.24E-06
0077 0.00E+00 2.33E-06 0.00E+00 5.69E-06 0.00E+00 3.50E-06 0.00E+00 3.36E-06
0.00E+00 5.69E-06 3.50E-06 0.00E+00 3.36E-06 5.69E-06
0078 0.00E+00 2.66E-06 0.00E+00 6.46E-06 0.00E+00 4.00E-06 0.00E+00 3.81E-06
0.00E+00 6.46E-06 4.00E-06 0.00E+00 3.81E-06 6.46E-06
0079 0.00E+00 2.48E-06 0.00E+00 6.03E-06 0.00E+00 3.74E-06 0.00E+00 3.55E-06
0.00E+00 6.03E-06 3.74E-06 0.00E+00 3.55E-06 6.03E-06
0080 0.00E+00 1.85E-06 0.00E+00 4.49E-06 0.00E+00 2.79E-06 0.00E+00 2.64E-06
0.00E+00 4.49E-06 2.79E-06 0.00E+00 2.64E-06 4.49E-06
0081 0.00E+00 1.44E-06 0.00E+00 3.46E-06 0.00E+00 2.16E-06 0.00E+00 2.02E-06
0.00E+00 3.46E-06 2.16E-06 0.00E+00 2.02E-06 3.46E-06
0082 0.00E+00 2.59E-06 0.00E+00 6.29E-06 0.00E+00 3.90E-06 0.00E+00 3.70E-06
0.00E+00 6.29E-06 3.90E-06 0.00E+00 3.70E-06 6.29E-06
0083 0.00E+00 3.46E-06 0.00E+00 8.38E-06 0.00E+00 5.20E-06 0.00E+00 4.93E-06
0.00E+00 8.38E-06 5.20E-06 0.00E+00 4.93E-06 8.38E-06
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0.00E+00 7.76E-06 4.82E-06 0.00E+00 4.56E-06 7.76E-06
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0.00E+00 4.93E-06 3.10E-06 0.00E+00 2.87E-06 4.93E-06
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0.00E+00 6.05E-06 4.36E-06 0.00E+00 3.16E-06 6.05E-06
0087 0.00E+00 4.10E-06 0.00E+00 8.61E-06 0.00E+00 6.17E-06 0.00E+00 4.51E-06
0.00E+00 8.61E-06 6.17E-06 0.00E+00 4.51E-06 8.61E-06
0088 0.00E+00 3.32E-06 0.00E+00 6.97E-06 0.00E+00 4.99E-06 0.00E+00 3.65E-06
0.00E+00 6.97E-06 4.99E-06 0.00E+00 3.65E-06 6.97E-06
0089 0.00E+00 2.53E-06 0.00E+00 5.29E-06 0.00E+00 3.81E-06 0.00E+00 2.75E-06
0.00E+00 5.29E-06 3.81E-06 0.00E+00 2.75E-06 5.29E-06
0090 0.00E+00 4.37E-06 0.00E+00 7.85E-06 0.00E+00 6.58E-06 0.00E+00 3.48E-06
0.00E+00 7.85E-06 6.58E-06 0.00E+00 3.48E-06 7.85E-06
0091 0.00E+00 2.24E-06 0.00E+00 5.47E-06 0.00E+00 3.37E-06 0.00E+00 3.23E-06
0.00E+00 5.47E-06 3.37E-06 0.00E+00 3.23E-06 5.47E-06
0092 0.00E+00 2.43E-06 0.00E+00 5.91E-06 0.00E+00 3.66E-06 0.00E+00 3.48E-06
0.00E+00 5.91E-06 3.66E-06 0.00E+00 3.48E-06 5.91E-06
0093 0.00E+00 2.19E-06 0.00E+00 5.31E-06 0.00E+00 3.29E-06 0.00E+00 3.12E-06
0.00E+00 5.31E-06 3.29E-06 0.00E+00 3.12E-06 5.31E-06
0094 0.00E+00 1.60E-06 0.00E+00 3.87E-06 0.00E+00 2.41E-06 0.00E+00 2.27E-06
0.00E+00 3.87E-06 2.41E-06 0.00E+00 2.27E-06 3.87E-06
0095 0.00E+00 1.30E-06 0.00E+00 3.11E-06 0.00E+00 1.95E-06 0.00E+00 1.81E-06
0.00E+00 3.11E-06 1.95E-06 0.00E+00 1.81E-06 3.11E-06
0096 0.00E+00 2.29E-06 0.00E+00 5.57E-06 0.00E+00 3.45E-06 0.00E+00 3.27E-06
0.00E+00 5.57E-06 3.45E-06 0.00E+00 3.27E-06 5.57E-06
0097 0.00E+00 3.11E-06 0.00E+00 7.55E-06 0.00E+00 4.68E-06 0.00E+00 4.43E-06

0.00E+00 7.55E-06 4.68E-06 0.00E+00 4.43E-06 7.55E-06
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0.00E+00 7.38E-06 4.58E-06 0.00E+00 4.34E-06 7.38E-06
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0.00E+00 5.03E-06 3.13E-06 0.00E+00 2.95E-06 5.03E-06
0100 0.00E+00 2.11E-06 0.00E+00 4.39E-06 0.00E+00 3.17E-06 0.00E+00 2.28E-06
0.00E+00 4.39E-06 3.17E-06 0.00E+00 2.28E-06 4.39E-06
0101 0.00E+00 3.50E-06 0.00E+00 7.34E-06 0.00E+00 5.26E-06 0.00E+00 3.84E-06
0.00E+00 7.34E-06 5.26E-06 0.00E+00 3.84E-06 7.34E-06
0102 0.00E+00 3.57E-06 0.00E+00 7.48E-06 0.00E+00 5.37E-06 0.00E+00 3.92E-06
0.00E+00 7.48E-06 5.37E-06 0.00E+00 3.92E-06 7.48E-06
0103 0.00E+00 2.24E-06 0.00E+00 4.63E-06 0.00E+00 3.37E-06 0.00E+00 2.40E-06
0.00E+00 4.63E-06 3.37E-06 0.00E+00 2.40E-06 4.63E-06
0104 0.00E+00 3.16E-06 0.00E+00 5.86E-06 0.00E+00 4.76E-06 0.00E+00 2.70E-06
0.00E+00 5.86E-06 4.76E-06 0.00E+00 2.70E-06 5.86E-06
0105 0.00E+00 4.10E-06 0.00E+00 7.32E-06 0.00E+00 6.17E-06 0.00E+00 3.22E-06
0.00E+00 7.32E-06 6.17E-06 0.00E+00 3.22E-06 7.32E-06
0106 0.00E+00 2.22E-06 0.00E+00 5.39E-06 0.00E+00 3.34E-06 0.00E+00 3.17E-06
0.00E+00 5.39E-06 3.34E-06 0.00E+00 3.17E-06 5.39E-06
0107 0.00E+00 1.93E-06 0.00E+00 4.69E-06 0.00E+00 2.91E-06 0.00E+00 2.75E-06
0.00E+00 4.69E-06 2.91E-06 0.00E+00 2.75E-06 4.69E-06
0108 0.00E+00 1.39E-06 0.00E+00 3.36E-06 0.00E+00 2.09E-06 0.00E+00 1.97E-06
0.00E+00 3.36E-06 2.09E-06 0.00E+00 1.97E-06 3.36E-06
0109 0.00E+00 1.17E-06 0.00E+00 2.81E-06 0.00E+00 1.77E-06 0.00E+00 1.64E-06
0.00E+00 2.81E-06 1.77E-06 0.00E+00 1.64E-06 2.81E-06
0110 0.00E+00 2.04E-06 0.00E+00 4.96E-06 0.00E+00 3.07E-06 0.00E+00 2.91E-06
0.00E+00 4.96E-06 3.07E-06 0.00E+00 2.91E-06 4.96E-06
0111 0.00E+00 2.81E-06 0.00E+00 6.81E-06 0.00E+00 4.22E-06 0.00E+00 4.00E-06
0.00E+00 6.81E-06 4.22E-06 0.00E+00 4.00E-06 6.81E-06
0112 0.00E+00 2.87E-06 0.00E+00 6.96E-06 0.00E+00 4.32E-06 0.00E+00 4.09E-06
0.00E+00 6.96E-06 4.32E-06 0.00E+00 4.09E-06 6.96E-06
0113 0.00E+00 2.11E-06 0.00E+00 5.11E-06 0.00E+00 3.17E-06 0.00E+00 3.00E-06
0.00E+00 5.11E-06 3.17E-06 0.00E+00 3.00E-06 5.11E-06
0114 0.00E+00 1.50E-06 0.00E+00 3.32E-06 0.00E+00 2.25E-06 0.00E+00 1.82E-06
0.00E+00 3.32E-06 2.25E-06 0.00E+00 1.82E-06 3.32E-06
0115 0.00E+00 2.82E-06 0.00E+00 5.91E-06 0.00E+00 4.25E-06 0.00E+00 3.08E-06
0.00E+00 5.91E-06 4.25E-06 0.00E+00 3.08E-06 5.91E-06
0116 0.00E+00 3.46E-06 0.00E+00 7.27E-06 0.00E+00 5.21E-06 0.00E+00 3.81E-06
0.00E+00 7.27E-06 5.21E-06 0.00E+00 3.81E-06 7.27E-06
0117 0.00E+00 2.64E-06 0.00E+00 5.53E-06 0.00E+00 3.97E-06 0.00E+00 2.90E-06
0.00E+00 5.53E-06 3.97E-06 0.00E+00 2.90E-06 5.53E-06
0118 0.00E+00 1.91E-06 0.00E+00 4.06E-06 0.00E+00 2.88E-06 0.00E+00 2.15E-06
0.00E+00 4.06E-06 2.88E-06 0.00E+00 2.15E-06 4.06E-06
0119 0.00E+00 3.48E-06 0.00E+00 6.29E-06 0.00E+00 5.24E-06 0.00E+00 2.80E-06
0.00E+00 6.29E-06 5.24E-06 0.00E+00 2.80E-06 6.29E-06
0120 0.00E+00 3.53E-06 0.00E+00 6.33E-06 0.00E+00 5.31E-06 0.00E+00 2.80E-06
0.00E+00 6.33E-06 5.31E-06 0.00E+00 2.80E-06 6.33E-06
0121 0.00E+00 1.71E-06 0.00E+00 4.14E-06 0.00E+00 2.57E-06 0.00E+00 2.44E-06
0.00E+00 4.14E-06 2.57E-06 0.00E+00 2.44E-06 4.14E-06
0122 0.00E+00 1.21E-06 0.00E+00 2.93E-06 0.00E+00 1.83E-06 0.00E+00 1.71E-06
0.00E+00 2.93E-06 1.83E-06 0.00E+00 1.71E-06 2.93E-06
0123 0.00E+00 1.07E-06 0.00E+00 2.55E-06 0.00E+00 1.61E-06 0.00E+00 1.48E-06
0.00E+00 2.55E-06 1.61E-06 0.00E+00 1.48E-06 2.55E-06
0124 0.00E+00 1.83E-06 0.00E+00 4.44E-06 0.00E+00 2.75E-06 0.00E+00 2.61E-06
0.00E+00 4.44E-06 2.75E-06 0.00E+00 2.61E-06 4.44E-06
0125 0.00E+00 2.54E-06 0.00E+00 6.16E-06 0.00E+00 3.82E-06 0.00E+00 3.62E-06
0.00E+00 6.16E-06 3.82E-06 0.00E+00 3.62E-06 6.16E-06
0126 0.00E+00 2.69E-06 0.00E+00 6.53E-06 0.00E+00 4.05E-06 0.00E+00 3.84E-06
0.00E+00 6.53E-06 4.05E-06 0.00E+00 3.84E-06 6.53E-06
0127 0.00E+00 2.11E-06 0.00E+00 5.13E-06 0.00E+00 3.18E-06 0.00E+00 3.01E-06
0.00E+00 5.13E-06 3.18E-06 0.00E+00 3.01E-06 5.13E-06
0128 0.00E+00 1.31E-06 0.00E+00 3.09E-06 0.00E+00 1.97E-06 0.00E+00 1.78E-06
0.00E+00 3.09E-06 1.97E-06 0.00E+00 1.78E-06 3.09E-06
0129 0.00E+00 2.19E-06 0.00E+00 4.57E-06 0.00E+00 3.29E-06 0.00E+00 2.38E-06
0.00E+00 4.57E-06 3.29E-06 0.00E+00 2.38E-06 4.57E-06
0130 0.00E+00 3.12E-06 0.00E+00 6.55E-06 0.00E+00 4.70E-06 0.00E+00 3.43E-06
0.00E+00 6.55E-06 4.70E-06 0.00E+00 3.43E-06 6.55E-06
0131 0.00E+00 2.92E-06 0.00E+00 6.11E-06 0.00E+00 4.39E-06 0.00E+00 3.19E-06
0.00E+00 6.11E-06 4.39E-06 0.00E+00 3.19E-06 6.11E-06

0132 0.00E+00 1.80E-06 0.00E+00 3.73E-06 0.00E+00 2.71E-06 0.00E+00 1.93E-06
0.00E+00 3.73E-06 2.71E-06 0.00E+00 1.93E-06 3.73E-06
0133 0.00E+00 2.44E-06 0.00E+00 4.57E-06 0.00E+00 3.67E-06 0.00E+00 2.13E-06
0.00E+00 4.57E-06 3.67E-06 0.00E+00 2.13E-06 4.57E-06
0134 0.00E+00 3.48E-06 0.00E+00 6.20E-06 0.00E+00 5.23E-06 0.00E+00 2.73E-06
0.00E+00 6.20E-06 5.23E-06 0.00E+00 2.73E-06 6.20E-06
0135 0.00E+00 2.84E-06 0.00E+00 5.16E-06 0.00E+00 4.27E-06 0.00E+00 2.32E-06
0.00E+00 5.16E-06 4.27E-06 0.00E+00 2.32E-06 5.16E-06
0136 0.00E+00 1.06E-06 0.00E+00 2.57E-06 0.00E+00 1.60E-06 0.00E+00 1.50E-06
0.00E+00 2.57E-06 1.60E-06 0.00E+00 1.50E-06 2.57E-06
0137 0.00E+00 9.80E-07 0.00E+00 2.33E-06 0.00E+00 1.47E-06 0.00E+00 1.35E-06
0.00E+00 2.33E-06 1.47E-06 0.00E+00 1.35E-06 2.33E-06
0138 0.00E+00 1.65E-06 0.00E+00 4.00E-06 0.00E+00 2.48E-06 0.00E+00 2.35E-06
0.00E+00 4.00E-06 2.48E-06 0.00E+00 2.35E-06 4.00E-06
0139 0.00E+00 2.30E-06 0.00E+00 5.59E-06 0.00E+00 3.47E-06 0.00E+00 3.28E-06
0.00E+00 5.59E-06 3.47E-06 0.00E+00 3.28E-06 5.59E-06
0140 0.00E+00 2.52E-06 0.00E+00 6.11E-06 0.00E+00 3.79E-06 0.00E+00 3.59E-06
0.00E+00 6.11E-06 3.79E-06 0.00E+00 3.59E-06 6.11E-06
0141 0.00E+00 2.09E-06 0.00E+00 5.08E-06 0.00E+00 3.15E-06 0.00E+00 2.99E-06
0.00E+00 5.08E-06 3.15E-06 0.00E+00 2.99E-06 5.08E-06
0142 0.00E+00 1.33E-06 0.00E+00 3.20E-06 0.00E+00 2.00E-06 0.00E+00 1.86E-06
0.00E+00 3.20E-06 2.00E-06 0.00E+00 1.86E-06 3.20E-06
0143 0.00E+00 1.65E-06 0.00E+00 3.43E-06 0.00E+00 2.48E-06 0.00E+00 1.78E-06
0.00E+00 3.43E-06 2.48E-06 0.00E+00 1.78E-06 3.43E-06
0144 0.00E+00 2.66E-06 0.00E+00 5.57E-06 0.00E+00 4.00E-06 0.00E+00 2.91E-06
0.00E+00 5.57E-06 4.00E-06 0.00E+00 2.91E-06 5.57E-06
0145 0.00E+00 2.94E-06 0.00E+00 6.16E-06 0.00E+00 4.42E-06 0.00E+00 3.22E-06
0.00E+00 6.16E-06 4.42E-06 0.00E+00 3.22E-06 6.16E-06
0146 0.00E+00 2.15E-06 0.00E+00 4.49E-06 0.00E+00 3.23E-06 0.00E+00 2.34E-06
0.00E+00 4.49E-06 3.23E-06 0.00E+00 2.34E-06 4.49E-06
0147 0.00E+00 1.48E-06 0.00E+00 3.20E-06 0.00E+00 2.23E-06 0.00E+00 1.72E-06
0.00E+00 3.20E-06 2.23E-06 0.00E+00 1.72E-06 3.20E-06
0148 0.00E+00 2.79E-06 0.00E+00 5.06E-06 0.00E+00 4.20E-06 0.00E+00 2.28E-06
0.00E+00 5.06E-06 4.20E-06 0.00E+00 2.28E-06 5.06E-06
0149 0.00E+00 3.20E-06 0.00E+00 5.71E-06 0.00E+00 4.82E-06 0.00E+00 2.50E-06
0.00E+00 5.71E-06 4.82E-06 0.00E+00 2.50E-06 5.71E-06
0150 0.00E+00 2.19E-06 0.00E+00 4.04E-06 0.00E+00 3.29E-06 0.00E+00 1.85E-06
0.00E+00 4.04E-06 3.29E-06 0.00E+00 1.85E-06 4.04E-06
0151 0.00E+00 9.01E-07 0.00E+00 2.13E-06 0.00E+00 1.36E-06 0.00E+00 1.23E-06
0.00E+00 2.13E-06 1.36E-06 0.00E+00 1.23E-06 2.13E-06
0152 0.00E+00 1.49E-06 0.00E+00 3.61E-06 0.00E+00 2.24E-06 0.00E+00 2.12E-06
0.00E+00 3.61E-06 2.24E-06 0.00E+00 2.12E-06 3.61E-06
0153 0.00E+00 2.10E-06 0.00E+00 5.08E-06 0.00E+00 3.15E-06 0.00E+00 2.99E-06
0.00E+00 5.08E-06 3.15E-06 0.00E+00 2.99E-06 5.08E-06
0154 0.00E+00 2.35E-06 0.00E+00 5.70E-06 0.00E+00 3.54E-06 0.00E+00 3.35E-06
0.00E+00 5.70E-06 3.54E-06 0.00E+00 3.35E-06 5.70E-06
0155 0.00E+00 2.05E-06 0.00E+00 4.98E-06 0.00E+00 3.09E-06 0.00E+00 2.93E-06
0.00E+00 4.98E-06 3.09E-06 0.00E+00 2.93E-06 4.98E-06
0156 0.00E+00 1.37E-06 0.00E+00 3.32E-06 0.00E+00 2.06E-06 0.00E+00 1.95E-06
0.00E+00 3.32E-06 2.06E-06 0.00E+00 1.95E-06 3.32E-06
0157 0.00E+00 1.22E-06 0.00E+00 2.55E-06 0.00E+00 1.83E-06 0.00E+00 1.33E-06
0.00E+00 2.55E-06 1.83E-06 0.00E+00 1.33E-06 2.55E-06
0158 0.00E+00 2.17E-06 0.00E+00 4.54E-06 0.00E+00 3.27E-06 0.00E+00 2.37E-06
0.00E+00 4.54E-06 3.27E-06 0.00E+00 2.37E-06 4.54E-06
0159 0.00E+00 2.75E-06 0.00E+00 5.78E-06 0.00E+00 4.15E-06 0.00E+00 3.02E-06
0.00E+00 5.78E-06 4.15E-06 0.00E+00 3.02E-06 5.78E-06
0160 0.00E+00 2.41E-06 0.00E+00 5.05E-06 0.00E+00 3.63E-06 0.00E+00 2.64E-06
0.00E+00 5.05E-06 3.63E-06 0.00E+00 2.64E-06 5.05E-06
0161 0.00E+00 1.47E-06 0.00E+00 3.05E-06 0.00E+00 2.22E-06 0.00E+00 1.58E-06
0.00E+00 3.05E-06 2.22E-06 0.00E+00 1.58E-06 3.05E-06
0162 0.00E+00 1.91E-06 0.00E+00 3.63E-06 0.00E+00 2.88E-06 0.00E+00 1.71E-06
0.00E+00 3.63E-06 2.88E-06 0.00E+00 1.71E-06 3.63E-06
0163 0.00E+00 2.91E-06 0.00E+00 5.21E-06 0.00E+00 4.39E-06 0.00E+00 2.30E-06
0.00E+00 5.21E-06 4.39E-06 0.00E+00 2.30E-06 5.21E-06
0164 0.00E+00 2.76E-06 0.00E+00 4.96E-06 0.00E+00 4.16E-06 0.00E+00 2.19E-06
0.00E+00 4.96E-06 4.16E-06 0.00E+00 2.19E-06 4.96E-06
0165 0.00E+00 1.67E-06 0.00E+00 3.13E-06 0.00E+00 2.51E-06 0.00E+00 1.47E-06
0.00E+00 3.13E-06 2.51E-06 0.00E+00 1.47E-06 3.13E-06
0166 0.00E+00 1.35E-06 0.00E+00 3.28E-06 0.00E+00 2.03E-06 0.00E+00 1.93E-06

0.00E+00 3.28E-06 2.03E-06 0.00E+00 1.93E-06 3.28E-06
0167 0.00E+00 1.91E-06 0.00E+00 4.64E-06 0.00E+00 2.88E-06 0.00E+00 2.73E-06
0.00E+00 4.64E-06 2.88E-06 0.00E+00 2.73E-06 4.64E-06
0168 0.00E+00 2.19E-06 0.00E+00 5.32E-06 0.00E+00 3.30E-06 0.00E+00 3.13E-06
0.00E+00 5.32E-06 3.30E-06 0.00E+00 3.13E-06 5.32E-06
0169 0.00E+00 2.00E-06 0.00E+00 4.84E-06 0.00E+00 3.00E-06 0.00E+00 2.85E-06
0.00E+00 4.84E-06 3.00E-06 0.00E+00 2.85E-06 4.84E-06
0170 0.00E+00 1.42E-06 0.00E+00 3.43E-06 0.00E+00 2.13E-06 0.00E+00 2.01E-06
0.00E+00 3.43E-06 2.13E-06 0.00E+00 2.01E-06 3.43E-06
0171 0.00E+00 9.36E-07 0.00E+00 2.18E-06 0.00E+00 1.41E-06 0.00E+00 1.25E-06
0.00E+00 2.18E-06 1.41E-06 0.00E+00 1.25E-06 2.18E-06
0172 0.00E+00 1.72E-06 0.00E+00 3.58E-06 0.00E+00 2.59E-06 0.00E+00 1.86E-06
0.00E+00 3.58E-06 2.59E-06 0.00E+00 1.86E-06 3.58E-06
0173 0.00E+00 2.45E-06 0.00E+00 5.13E-06 0.00E+00 3.69E-06 0.00E+00 2.68E-06
0.00E+00 5.13E-06 3.69E-06 0.00E+00 2.68E-06 5.13E-06
0174 0.00E+00 2.50E-06 0.00E+00 5.24E-06 0.00E+00 3.76E-06 0.00E+00 2.74E-06
0.00E+00 5.24E-06 3.76E-06 0.00E+00 2.74E-06 5.24E-06
0175 0.00E+00 1.77E-06 0.00E+00 3.70E-06 0.00E+00 2.67E-06 0.00E+00 1.93E-06
0.00E+00 3.70E-06 2.67E-06 0.00E+00 1.93E-06 3.70E-06
0176 0.00E+00 1.20E-06 0.00E+00 2.60E-06 0.00E+00 1.81E-06 0.00E+00 1.40E-06
0.00E+00 2.60E-06 1.81E-06 0.00E+00 1.40E-06 2.60E-06
0177 0.00E+00 2.25E-06 0.00E+00 4.11E-06 0.00E+00 3.38E-06 0.00E+00 1.87E-06
0.00E+00 4.11E-06 3.38E-06 0.00E+00 1.87E-06 4.11E-06
0178 0.00E+00 2.83E-06 0.00E+00 5.03E-06 0.00E+00 4.26E-06 0.00E+00 2.20E-06
0.00E+00 5.03E-06 4.26E-06 0.00E+00 2.20E-06 5.03E-06
0179 0.00E+00 2.26E-06 0.00E+00 4.11E-06 0.00E+00 3.41E-06 0.00E+00 1.85E-06
0.00E+00 4.11E-06 3.41E-06 0.00E+00 1.85E-06 4.11E-06
0180 0.00E+00 1.29E-06 0.00E+00 2.44E-06 0.00E+00 1.94E-06 0.00E+00 1.15E-06
0.00E+00 2.44E-06 1.94E-06 0.00E+00 1.15E-06 2.44E-06
0181 0.00E+00 1.75E-06 0.00E+00 4.24E-06 0.00E+00 2.63E-06 0.00E+00 2.49E-06
0.00E+00 4.24E-06 2.63E-06 0.00E+00 2.49E-06 4.24E-06
0182 0.00E+00 2.04E-06 0.00E+00 4.96E-06 0.00E+00 3.07E-06 0.00E+00 2.91E-06
0.00E+00 4.96E-06 3.07E-06 0.00E+00 2.91E-06 4.96E-06
0183 0.00E+00 1.93E-06 0.00E+00 4.68E-06 0.00E+00 2.90E-06 0.00E+00 2.75E-06
0.00E+00 4.68E-06 2.90E-06 0.00E+00 2.75E-06 4.68E-06
0184 0.00E+00 1.44E-06 0.00E+00 3.50E-06 0.00E+00 2.17E-06 0.00E+00 2.06E-06
0.00E+00 3.50E-06 2.17E-06 0.00E+00 2.06E-06 3.50E-06
0185 0.00E+00 9.24E-07 0.00E+00 2.16E-06 0.00E+00 1.39E-06 0.00E+00 1.23E-06
0.00E+00 2.16E-06 1.39E-06 0.00E+00 1.23E-06 2.16E-06
0186 0.00E+00 1.33E-06 0.00E+00 2.76E-06 0.00E+00 2.00E-06 0.00E+00 1.43E-06
0.00E+00 2.76E-06 2.00E-06 0.00E+00 1.43E-06 2.76E-06
0187 0.00E+00 2.09E-06 0.00E+00 4.37E-06 0.00E+00 3.14E-06 0.00E+00 2.28E-06
0.00E+00 4.37E-06 3.14E-06 0.00E+00 2.28E-06 4.37E-06
0188 0.00E+00 2.42E-06 0.00E+00 5.08E-06 0.00E+00 3.65E-06 0.00E+00 2.66E-06
0.00E+00 5.08E-06 3.65E-06 0.00E+00 2.66E-06 5.08E-06
0189 0.00E+00 2.02E-06 0.00E+00 4.23E-06 0.00E+00 3.04E-06 0.00E+00 2.20E-06
0.00E+00 4.23E-06 3.04E-06 0.00E+00 2.20E-06 4.23E-06
0190 0.00E+00 1.23E-06 0.00E+00 2.55E-06 0.00E+00 1.85E-06 0.00E+00 1.32E-06
0.00E+00 2.55E-06 1.85E-06 0.00E+00 1.32E-06 2.55E-06
0191 0.00E+00 1.53E-06 0.00E+00 2.92E-06 0.00E+00 2.30E-06 0.00E+00 1.40E-06
0.00E+00 2.92E-06 2.30E-06 0.00E+00 1.40E-06 2.92E-06
0192 0.00E+00 2.43E-06 0.00E+00 4.37E-06 0.00E+00 3.66E-06 0.00E+00 1.94E-06
0.00E+00 4.37E-06 3.66E-06 0.00E+00 1.94E-06 4.37E-06
0193 0.00E+00 2.58E-06 0.00E+00 4.59E-06 0.00E+00 3.88E-06 0.00E+00 2.01E-06
0.00E+00 4.59E-06 3.88E-06 0.00E+00 2.01E-06 4.59E-06
0194 0.00E+00 1.78E-06 0.00E+00 3.29E-06 0.00E+00 2.68E-06 0.00E+00 1.51E-06
0.00E+00 3.29E-06 2.68E-06 0.00E+00 1.51E-06 3.29E-06
0195 0.00E+00 1.34E-06 0.00E+00 2.29E-06 0.00E+00 2.01E-06 0.00E+00 9.53E-07
0.00E+00 2.29E-06 2.01E-06 0.00E+00 9.53E-07 2.29E-06
0196 0.00E+00 1.90E-06 0.00E+00 4.62E-06 0.00E+00 2.87E-06 0.00E+00 2.71E-06
0.00E+00 4.62E-06 2.87E-06 0.00E+00 2.71E-06 4.62E-06
0197 0.00E+00 1.85E-06 0.00E+00 4.50E-06 0.00E+00 2.79E-06 0.00E+00 2.64E-06
0.00E+00 4.50E-06 2.79E-06 0.00E+00 2.64E-06 4.50E-06
0198 0.00E+00 1.46E-06 0.00E+00 3.53E-06 0.00E+00 2.19E-06 0.00E+00 2.08E-06
0.00E+00 3.53E-06 2.19E-06 0.00E+00 2.08E-06 3.53E-06
0199 0.00E+00 9.28E-07 0.00E+00 2.24E-06 0.00E+00 1.40E-06 0.00E+00 1.31E-06
0.00E+00 2.24E-06 1.40E-06 0.00E+00 1.31E-06 2.24E-06
0200 0.00E+00 1.01E-06 0.00E+00 2.10E-06 0.00E+00 1.52E-06 0.00E+00 1.08E-06
0.00E+00 2.10E-06 1.52E-06 0.00E+00 1.08E-06 2.10E-06

0201 0.00E+00 1.73E-06 0.00E+00 3.60E-06 0.00E+00 2.60E-06 0.00E+00 1.88E-06
0.00E+00 3.60E-06 2.60E-06 0.00E+00 1.88E-06 3.60E-06
0202 0.00E+00 2.23E-06 0.00E+00 4.68E-06 0.00E+00 3.36E-06 0.00E+00 2.45E-06
0.00E+00 4.68E-06 3.36E-06 0.00E+00 2.45E-06 4.68E-06
0203 0.00E+00 2.14E-06 0.00E+00 4.48E-06 0.00E+00 3.22E-06 0.00E+00 2.34E-06
0.00E+00 4.48E-06 3.22E-06 0.00E+00 2.34E-06 4.48E-06
0204 0.00E+00 1.49E-06 0.00E+00 3.10E-06 0.00E+00 2.24E-06 0.00E+00 1.61E-06
0.00E+00 3.10E-06 2.24E-06 0.00E+00 1.61E-06 3.10E-06
0205 0.00E+00 9.94E-07 0.00E+00 2.15E-06 0.00E+00 1.50E-06 0.00E+00 1.15E-06
0.00E+00 2.15E-06 1.50E-06 0.00E+00 1.15E-06 2.15E-06
0206 0.00E+00 1.83E-06 0.00E+00 3.37E-06 0.00E+00 2.75E-06 0.00E+00 1.55E-06
0.00E+00 3.37E-06 2.75E-06 0.00E+00 1.55E-06 3.37E-06
0207 0.00E+00 2.46E-06 0.00E+00 4.37E-06 0.00E+00 3.70E-06 0.00E+00 1.91E-06
0.00E+00 4.37E-06 3.70E-06 0.00E+00 1.91E-06 4.37E-06
0208 0.00E+00 2.23E-06 0.00E+00 4.01E-06 0.00E+00 3.36E-06 0.00E+00 1.77E-06
0.00E+00 4.01E-06 3.36E-06 0.00E+00 1.77E-06 4.01E-06
0209 0.00E+00 1.38E-06 0.00E+00 2.58E-06 0.00E+00 2.07E-06 0.00E+00 1.20E-06
0.00E+00 2.58E-06 2.07E-06 0.00E+00 1.20E-06 2.58E-06
0210 0.00E+00 1.51E-06 0.00E+00 2.59E-06 0.00E+00 2.27E-06 0.00E+00 1.08E-06
0.00E+00 2.59E-06 2.27E-06 0.00E+00 1.08E-06 2.59E-06
0211 0.00E+00 1.78E-06 0.00E+00 4.31E-06 0.00E+00 2.67E-06 0.00E+00 2.53E-06
0.00E+00 4.31E-06 2.67E-06 0.00E+00 2.53E-06 4.31E-06
0212 0.00E+00 1.46E-06 0.00E+00 3.53E-06 0.00E+00 2.19E-06 0.00E+00 2.08E-06
0.00E+00 3.53E-06 2.19E-06 0.00E+00 2.08E-06 3.53E-06
0213 0.00E+00 9.71E-07 0.00E+00 2.35E-06 0.00E+00 1.46E-06 0.00E+00 1.38E-06
0.00E+00 2.35E-06 1.46E-06 0.00E+00 1.38E-06 2.35E-06
0214 0.00E+00 7.60E-07 0.00E+00 1.72E-06 0.00E+00 1.14E-06 0.00E+00 9.56E-07
0.00E+00 1.72E-06 1.14E-06 0.00E+00 9.56E-07 1.72E-06
0215 0.00E+00 1.39E-06 0.00E+00 2.89E-06 0.00E+00 2.09E-06 0.00E+00 1.50E-06
0.00E+00 2.89E-06 2.09E-06 0.00E+00 1.50E-06 2.89E-06
0216 0.00E+00 1.97E-06 0.00E+00 4.13E-06 0.00E+00 2.97E-06 0.00E+00 2.16E-06
0.00E+00 4.13E-06 2.97E-06 0.00E+00 2.16E-06 4.13E-06
0217 0.00E+00 2.13E-06 0.00E+00 4.46E-06 0.00E+00 3.20E-06 0.00E+00 2.33E-06
0.00E+00 4.46E-06 3.20E-06 0.00E+00 2.33E-06 4.46E-06
0218 0.00E+00 1.71E-06 0.00E+00 3.58E-06 0.00E+00 2.58E-06 0.00E+00 1.86E-06
0.00E+00 3.58E-06 2.58E-06 0.00E+00 1.86E-06 3.58E-06
0219 0.00E+00 1.04E-06 0.00E+00 2.15E-06 0.00E+00 1.57E-06 0.00E+00 1.11E-06
0.00E+00 2.15E-06 1.57E-06 0.00E+00 1.11E-06 2.15E-06
0220 0.00E+00 1.23E-06 0.00E+00 2.39E-06 0.00E+00 1.85E-06 0.00E+00 1.16E-06
0.00E+00 2.39E-06 1.85E-06 0.00E+00 1.16E-06 2.39E-06
0221 0.00E+00 2.03E-06 0.00E+00 3.67E-06 0.00E+00 3.06E-06 0.00E+00 1.64E-06
0.00E+00 3.67E-06 3.06E-06 0.00E+00 1.64E-06 3.67E-06
0222 0.00E+00 2.34E-06 0.00E+00 4.16E-06 0.00E+00 3.53E-06 0.00E+00 1.81E-06
0.00E+00 4.16E-06 3.53E-06 0.00E+00 1.81E-06 4.16E-06
0223 0.00E+00 1.86E-06 0.00E+00 3.37E-06 0.00E+00 2.79E-06 0.00E+00 1.51E-06
0.00E+00 3.37E-06 2.79E-06 0.00E+00 1.51E-06 3.37E-06
0224 0.00E+00 1.07E-06 0.00E+00 2.04E-06 0.00E+00 1.61E-06 0.00E+00 9.69E-07
0.00E+00 2.04E-06 1.61E-06 0.00E+00 9.69E-07 2.04E-06
0225 0.00E+00 1.65E-06 0.00E+00 2.83E-06 0.00E+00 2.49E-06 0.00E+00 1.18E-06
0.00E+00 2.83E-06 2.49E-06 0.00E+00 1.18E-06 2.83E-06
0226 0.00E+00 2.41E-05 0.00E+00 6.24E-05 0.00E+00 3.62E-05 0.00E+00 3.83E-05
0.00E+00 6.24E-05 3.62E-05 0.00E+00 3.83E-05 6.24E-05
0227 0.00E+00 2.98E-05 0.00E+00 7.60E-05 0.00E+00 4.49E-05 0.00E+00 4.62E-05
0.00E+00 7.60E-05 4.49E-05 0.00E+00 4.62E-05 7.60E-05
0228 0.00E+00 3.18E-05 0.00E+00 9.52E-05 0.00E+00 4.79E-05 0.00E+00 6.34E-05
0.00E+00 9.52E-05 4.79E-05 0.00E+00 6.34E-05 9.52E-05
0229 0.00E+00 2.81E-05 0.00E+00 6.74E-05 0.00E+00 4.22E-05 0.00E+00 3.93E-05
0.00E+00 6.74E-05 4.22E-05 0.00E+00 3.93E-05 6.74E-05
0230 0.00E+00 2.89E-05 0.00E+00 6.96E-05 0.00E+00 4.34E-05 0.00E+00 4.07E-05
0.00E+00 6.96E-05 4.34E-05 0.00E+00 4.07E-05 6.96E-05
0231 0.00E+00 2.33E-05 0.00E+00 7.36E-05 0.00E+00 3.51E-05 0.00E+00 5.03E-05
0.00E+00 7.36E-05 3.51E-05 0.00E+00 5.03E-05 7.36E-05
0232 0.00E+00 2.15E-05 0.00E+00 6.35E-05 0.00E+00 3.23E-05 0.00E+00 4.20E-05
0.00E+00 6.35E-05 3.23E-05 0.00E+00 4.20E-05 6.35E-05
0233 0.00E+00 1.59E-05 0.00E+00 5.61E-05 0.00E+00 2.39E-05 0.00E+00 4.03E-05
0.00E+00 5.61E-05 2.39E-05 0.00E+00 4.03E-05 5.61E-05
0234 0.00E+00 1.22E-05 0.00E+00 3.02E-05 0.00E+00 1.84E-05 0.00E+00 1.79E-05
0.00E+00 3.02E-05 1.84E-05 0.00E+00 1.79E-05 3.02E-05
0235 0.00E+00 1.16E-05 0.00E+00 2.82E-05 0.00E+00 1.74E-05 0.00E+00 1.67E-05

0.00E+00 2.82E-05 1.74E-05 0.00E+00 1.67E-05 2.82E-05
0236 0.00E+00 1.46E-05 0.00E+00 3.55E-05 0.00E+00 2.20E-05 0.00E+00 2.09E-05
0.00E+00 3.55E-05 2.20E-05 0.00E+00 2.09E-05 3.55E-05
0237 0.00E+00 1.43E-05 0.00E+00 3.42E-05 0.00E+00 2.15E-05 0.00E+00 1.99E-05
0.00E+00 3.42E-05 2.15E-05 0.00E+00 1.99E-05 3.42E-05
0238 0.00E+00 8.76E-06 0.00E+00 2.13E-05 0.00E+00 1.32E-05 0.00E+00 1.26E-05
0.00E+00 2.13E-05 1.32E-05 0.00E+00 1.26E-05 2.13E-05
0239 0.00E+00 1.19E-05 0.00E+00 2.89E-05 0.00E+00 1.80E-05 0.00E+00 1.70E-05
0.00E+00 2.89E-05 1.80E-05 0.00E+00 1.70E-05 2.89E-05
0240 0.00E+00 1.25E-05 0.00E+00 2.99E-05 0.00E+00 1.88E-05 0.00E+00 1.74E-05
0.00E+00 2.99E-05 1.88E-05 0.00E+00 1.74E-05 2.99E-05
0241 0.00E+00 1.38E-05 0.00E+00 2.94E-05 0.00E+00 2.08E-05 0.00E+00 1.56E-05
0.00E+00 2.94E-05 2.08E-05 0.00E+00 1.56E-05 2.94E-05
0242 0.00E+00 9.94E-06 0.00E+00 2.41E-05 0.00E+00 1.50E-05 0.00E+00 1.42E-05
0.00E+00 2.41E-05 1.50E-05 0.00E+00 1.42E-05 2.41E-05
0243 0.00E+00 1.07E-05 0.00E+00 2.58E-05 0.00E+00 1.62E-05 0.00E+00 1.51E-05
0.00E+00 2.58E-05 1.62E-05 0.00E+00 1.51E-05 2.58E-05
0244 0.00E+00 9.89E-06 0.00E+00 2.09E-05 0.00E+00 1.49E-05 0.00E+00 1.11E-05
0.00E+00 2.09E-05 1.49E-05 0.00E+00 1.11E-05 2.09E-05
0245 0.00E+00 1.28E-05 0.00E+00 2.69E-05 0.00E+00 1.92E-05 0.00E+00 1.42E-05
0.00E+00 2.69E-05 1.92E-05 0.00E+00 1.42E-05 2.69E-05
0246 0.00E+00 9.26E-06 0.00E+00 2.25E-05 0.00E+00 1.39E-05 0.00E+00 1.32E-05
0.00E+00 2.25E-05 1.39E-05 0.00E+00 1.32E-05 2.25E-05
0247 0.00E+00 6.81E-06 0.00E+00 1.56E-05 0.00E+00 1.02E-05 0.00E+00 8.75E-06
0.00E+00 1.56E-05 1.02E-05 0.00E+00 8.75E-06 1.56E-05
0248 0.00E+00 1.09E-05 0.00E+00 2.32E-05 0.00E+00 1.65E-05 0.00E+00 1.22E-05
0.00E+00 2.32E-05 1.65E-05 0.00E+00 1.22E-05 2.32E-05
0249 0.00E+00 8.59E-06 0.00E+00 1.84E-05 0.00E+00 1.29E-05 0.00E+00 9.80E-06
0.00E+00 1.84E-05 1.29E-05 0.00E+00 9.80E-06 1.84E-05
0250 0.00E+00 3.92E-06 0.00E+00 1.09E-05 0.00E+00 5.89E-06 0.00E+00 7.00E-06
0.00E+00 1.09E-05 5.89E-06 0.00E+00 7.00E-06 1.09E-05
0251 0.00E+00 4.78E-06 0.00E+00 1.22E-05 0.00E+00 7.19E-06 0.00E+00 7.40E-06
0.00E+00 1.22E-05 7.19E-06 0.00E+00 7.40E-06 1.22E-05
0252 0.00E+00 6.58E-06 0.00E+00 1.61E-05 0.00E+00 9.91E-06 0.00E+00 9.54E-06
0.00E+00 1.61E-05 9.91E-06 0.00E+00 9.54E-06 1.61E-05
0253 0.00E+00 8.48E-06 0.00E+00 2.07E-05 0.00E+00 1.28E-05 0.00E+00 1.22E-05
0.00E+00 2.07E-05 1.28E-05 0.00E+00 1.22E-05 2.07E-05
0254 0.00E+00 9.93E-06 0.00E+00 2.44E-05 0.00E+00 1.49E-05 0.00E+00 1.45E-05
0.00E+00 2.44E-05 1.49E-05 0.00E+00 1.45E-05 2.44E-05
0255 0.00E+00 1.01E-05 0.00E+00 2.52E-05 0.00E+00 1.52E-05 0.00E+00 1.51E-05
0.00E+00 2.52E-05 1.52E-05 0.00E+00 1.51E-05 2.52E-05
0256 0.00E+00 9.00E-06 0.00E+00 2.28E-05 0.00E+00 1.35E-05 0.00E+00 1.38E-05
0.00E+00 2.28E-05 1.35E-05 0.00E+00 1.38E-05 2.28E-05
0257 0.00E+00 1.27E-05 0.00E+00 3.09E-05 0.00E+00 1.92E-05 0.00E+00 1.81E-05
0.00E+00 3.09E-05 1.92E-05 0.00E+00 1.81E-05 3.09E-05
0258 0.00E+00 6.39E-06 0.00E+00 1.56E-05 0.00E+00 9.62E-06 0.00E+00 9.20E-06
0.00E+00 1.56E-05 9.62E-06 0.00E+00 9.20E-06 1.56E-05
0259 0.00E+00 7.10E-06 0.00E+00 1.74E-05 0.00E+00 1.07E-05 0.00E+00 1.03E-05
0.00E+00 1.74E-05 1.07E-05 0.00E+00 1.03E-05 1.74E-05
0260 0.00E+00 7.16E-06 0.00E+00 1.77E-05 0.00E+00 1.08E-05 0.00E+00 1.05E-05
0.00E+00 1.77E-05 1.08E-05 0.00E+00 1.05E-05 1.77E-05
0261 0.00E+00 6.38E-06 0.00E+00 1.60E-05 0.00E+00 9.60E-06 0.00E+00 9.65E-06
0.00E+00 1.60E-05 9.60E-06 0.00E+00 9.65E-06 1.60E-05
0262 0.00E+00 6.28E-06 0.00E+00 1.57E-05 0.00E+00 9.46E-06 0.00E+00 9.37E-06
0.00E+00 1.57E-05 9.46E-06 0.00E+00 9.37E-06 1.57E-05
0263 0.00E+00 9.66E-06 0.00E+00 2.34E-05 0.00E+00 1.45E-05 0.00E+00 1.37E-05
0.00E+00 2.34E-05 1.45E-05 0.00E+00 1.37E-05 2.34E-05
0264 0.00E+00 1.14E-05 0.00E+00 2.80E-05 0.00E+00 1.71E-05 0.00E+00 1.66E-05
0.00E+00 2.80E-05 1.71E-05 0.00E+00 1.66E-05 2.80E-05
0265 0.00E+00 9.95E-06 0.00E+00 2.73E-05 0.00E+00 1.50E-05 0.00E+00 1.74E-05
0.00E+00 2.73E-05 1.50E-05 0.00E+00 1.74E-05 2.73E-05
0266 0.00E+00 4.92E-06 0.00E+00 1.23E-05 0.00E+00 7.40E-06 0.00E+00 7.34E-06
0.00E+00 1.23E-05 7.40E-06 0.00E+00 7.34E-06 1.23E-05
0267 0.00E+00 4.15E-06 0.00E+00 1.05E-05 0.00E+00 6.24E-06 0.00E+00 6.38E-06
0.00E+00 1.05E-05 6.24E-06 0.00E+00 6.38E-06 1.05E-05
0268 0.00E+00 5.43E-06 0.00E+00 1.31E-05 0.00E+00 8.17E-06 0.00E+00 7.71E-06
0.00E+00 1.31E-05 8.17E-06 0.00E+00 7.71E-06 1.31E-05
0269 0.00E+00 7.63E-06 0.00E+00 1.85E-05 0.00E+00 1.15E-05 0.00E+00 1.08E-05
0.00E+00 1.85E-05 1.15E-05 0.00E+00 1.08E-05 1.85E-05

0270 0.00E+00 8.73E-06 0.00E+00 2.12E-05 0.00E+00 1.31E-05 0.00E+00 1.25E-05
0.00E+00 2.12E-05 1.31E-05 0.00E+00 1.25E-05 2.12E-05
0271 0.00E+00 7.79E-06 0.00E+00 2.02E-05 0.00E+00 1.17E-05 0.00E+00 1.24E-05
0.00E+00 2.02E-05 1.17E-05 0.00E+00 1.24E-05 2.02E-05
0272 0.00E+00 8.38E-06 0.00E+00 2.11E-05 0.00E+00 1.26E-05 0.00E+00 1.27E-05
0.00E+00 2.11E-05 1.26E-05 0.00E+00 1.27E-05 2.11E-05
0273 0.00E+00 1.17E-05 0.00E+00 2.87E-05 0.00E+00 1.76E-05 0.00E+00 1.70E-05
0.00E+00 2.87E-05 1.76E-05 0.00E+00 1.70E-05 2.87E-05
0274 0.00E+00 4.71E-06 0.00E+00 1.14E-05 0.00E+00 7.09E-06 0.00E+00 6.69E-06
0.00E+00 1.14E-05 7.09E-06 0.00E+00 6.69E-06 1.14E-05
0275 0.00E+00 6.23E-06 0.00E+00 1.51E-05 0.00E+00 9.37E-06 0.00E+00 8.84E-06
0.00E+00 1.51E-05 9.37E-06 0.00E+00 8.84E-06 1.51E-05
0276 0.00E+00 6.97E-06 0.00E+00 1.69E-05 0.00E+00 1.05E-05 0.00E+00 9.92E-06
0.00E+00 1.69E-05 1.05E-05 0.00E+00 9.92E-06 1.69E-05
0277 0.00E+00 6.30E-06 0.00E+00 1.60E-05 0.00E+00 9.48E-06 0.00E+00 9.67E-06
0.00E+00 1.60E-05 9.48E-06 0.00E+00 9.67E-06 1.60E-05
0278 0.00E+00 5.02E-06 0.00E+00 1.44E-05 0.00E+00 7.56E-06 0.00E+00 9.37E-06
0.00E+00 1.44E-05 7.56E-06 0.00E+00 9.37E-06 1.44E-05
0279 0.00E+00 8.33E-06 0.00E+00 2.06E-05 0.00E+00 1.25E-05 0.00E+00 1.23E-05
0.00E+00 2.06E-05 1.25E-05 0.00E+00 1.23E-05 2.06E-05
0280 0.00E+00 9.32E-06 0.00E+00 2.28E-05 0.00E+00 1.40E-05 0.00E+00 1.35E-05
0.00E+00 2.28E-05 1.40E-05 0.00E+00 1.35E-05 2.28E-05
0281 0.00E+00 7.06E-06 0.00E+00 1.72E-05 0.00E+00 1.06E-05 0.00E+00 1.01E-05
0.00E+00 1.72E-05 1.06E-05 0.00E+00 1.01E-05 1.72E-05
0282 0.00E+00 5.74E-06 0.00E+00 1.39E-05 0.00E+00 8.64E-06 0.00E+00 8.15E-06
0.00E+00 1.39E-05 8.64E-06 0.00E+00 8.15E-06 1.39E-05
0283 0.00E+00 5.32E-06 0.00E+00 1.31E-05 0.00E+00 8.01E-06 0.00E+00 7.82E-06
0.00E+00 1.31E-05 8.01E-06 0.00E+00 7.82E-06 1.31E-05
0284 0.00E+00 4.22E-06 0.00E+00 1.16E-05 0.00E+00 6.35E-06 0.00E+00 7.34E-06
0.00E+00 1.16E-05 6.35E-06 0.00E+00 7.34E-06 1.16E-05
0285 0.00E+00 5.58E-06 0.00E+00 1.40E-05 0.00E+00 8.40E-06 0.00E+00 8.37E-06
0.00E+00 1.40E-05 8.40E-06 0.00E+00 8.37E-06 1.40E-05
0286 0.00E+00 7.62E-06 0.00E+00 1.87E-05 0.00E+00 1.15E-05 0.00E+00 1.11E-05
0.00E+00 1.87E-05 1.15E-05 0.00E+00 1.11E-05 1.87E-05
0287 0.00E+00 7.29E-06 0.00E+00 1.78E-05 0.00E+00 1.10E-05 0.00E+00 1.05E-05
0.00E+00 1.78E-05 1.10E-05 0.00E+00 1.05E-05 1.78E-05
0288 0.00E+00 6.12E-06 0.00E+00 1.49E-05 0.00E+00 9.21E-06 0.00E+00 8.74E-06
0.00E+00 1.49E-05 9.21E-06 0.00E+00 8.74E-06 1.49E-05
0289 0.00E+00 9.88E-06 0.00E+00 2.40E-05 0.00E+00 1.49E-05 0.00E+00 1.41E-05
0.00E+00 2.40E-05 1.49E-05 0.00E+00 1.41E-05 2.40E-05
0290 0.00E+00 3.69E-06 0.00E+00 9.67E-06 0.00E+00 5.56E-06 0.00E+00 5.98E-06
0.00E+00 9.67E-06 5.56E-06 0.00E+00 5.98E-06 9.67E-06
0291 0.00E+00 3.69E-06 0.00E+00 9.52E-06 0.00E+00 5.56E-06 0.00E+00 5.82E-06
0.00E+00 9.52E-06 5.56E-06 0.00E+00 5.82E-06 9.52E-06
0292 0.00E+00 5.66E-06 0.00E+00 1.40E-05 0.00E+00 8.51E-06 0.00E+00 8.32E-06
0.00E+00 1.40E-05 8.51E-06 0.00E+00 8.32E-06 1.40E-05
0293 0.00E+00 6.65E-06 0.00E+00 1.62E-05 0.00E+00 1.00E-05 0.00E+00 9.60E-06
0.00E+00 1.62E-05 1.00E-05 0.00E+00 9.60E-06 1.62E-05
0294 0.00E+00 5.74E-06 0.00E+00 1.40E-05 0.00E+00 8.63E-06 0.00E+00 8.23E-06
0.00E+00 1.40E-05 8.63E-06 0.00E+00 8.23E-06 1.40E-05
0295 0.00E+00 5.49E-06 0.00E+00 1.33E-05 0.00E+00 8.26E-06 0.00E+00 7.83E-06
0.00E+00 1.33E-05 8.26E-06 0.00E+00 7.83E-06 1.33E-05
0296 0.00E+00 8.40E-06 0.00E+00 2.04E-05 0.00E+00 1.26E-05 0.00E+00 1.20E-05
0.00E+00 2.04E-05 1.26E-05 0.00E+00 1.20E-05 2.04E-05
0297 0.00E+00 7.61E-06 0.00E+00 1.82E-05 0.00E+00 1.14E-05 0.00E+00 1.06E-05
0.00E+00 1.82E-05 1.14E-05 0.00E+00 1.06E-05 1.82E-05
0298 0.00E+00 4.04E-06 0.00E+00 1.01E-05 0.00E+00 6.08E-06 0.00E+00 6.01E-06
0.00E+00 1.01E-05 6.08E-06 0.00E+00 6.01E-06 1.01E-05
0299 0.00E+00 5.40E-06 0.00E+00 1.33E-05 0.00E+00 8.13E-06 0.00E+00 7.85E-06
0.00E+00 1.33E-05 8.13E-06 0.00E+00 7.85E-06 1.33E-05
0300 0.00E+00 5.64E-06 0.00E+00 1.37E-05 0.00E+00 8.48E-06 0.00E+00 8.11E-06
0.00E+00 1.37E-05 8.48E-06 0.00E+00 8.11E-06 1.37E-05
0301 0.00E+00 4.52E-06 0.00E+00 1.10E-05 0.00E+00 6.81E-06 0.00E+00 6.47E-06
0.00E+00 1.10E-05 6.81E-06 0.00E+00 6.47E-06 1.10E-05
0302 0.00E+00 4.94E-06 0.00E+00 1.20E-05 0.00E+00 7.44E-06 0.00E+00 7.05E-06
0.00E+00 1.20E-05 7.44E-06 0.00E+00 7.05E-06 1.20E-05
0303 0.00E+00 7.26E-06 0.00E+00 1.76E-05 0.00E+00 1.09E-05 0.00E+00 1.03E-05
0.00E+00 1.76E-05 1.09E-05 0.00E+00 1.03E-05 1.76E-05
0304 0.00E+00 6.67E-06 0.00E+00 1.61E-05 0.00E+00 1.00E-05 0.00E+00 9.40E-06

0.00E+00 1.61E-05 1.00E-05 0.00E+00 9.40E-06 1.61E-05
0305 0.00E+00 5.78E-06 0.00E+00 1.21E-05 0.00E+00 8.70E-06 0.00E+00 6.37E-06
0.00E+00 1.21E-05 8.70E-06 0.00E+00 6.37E-06 1.21E-05
0306 0.00E+00 4.95E-06 0.00E+00 1.21E-05 0.00E+00 7.46E-06 0.00E+00 7.15E-06
0.00E+00 1.21E-05 7.46E-06 0.00E+00 7.15E-06 1.21E-05
0307 0.00E+00 4.71E-06 0.00E+00 1.15E-05 0.00E+00 7.08E-06 0.00E+00 6.75E-06
0.00E+00 1.15E-05 7.08E-06 0.00E+00 6.75E-06 1.15E-05
0308 0.00E+00 3.59E-06 0.00E+00 8.71E-06 0.00E+00 5.40E-06 0.00E+00 5.13E-06
0.00E+00 8.71E-06 5.40E-06 0.00E+00 5.13E-06 8.71E-06
0309 0.00E+00 4.47E-06 0.00E+00 1.09E-05 0.00E+00 6.73E-06 0.00E+00 6.38E-06
0.00E+00 1.09E-05 6.73E-06 0.00E+00 6.38E-06 1.09E-05
0310 0.00E+00 6.35E-06 0.00E+00 1.54E-05 0.00E+00 9.56E-06 0.00E+00 9.06E-06
0.00E+00 1.54E-05 9.56E-06 0.00E+00 9.06E-06 1.54E-05
0311 0.00E+00 5.92E-06 0.00E+00 1.44E-05 0.00E+00 8.91E-06 0.00E+00 8.45E-06
0.00E+00 1.44E-05 8.91E-06 0.00E+00 8.45E-06 1.44E-05
0312 0.00E+00 4.17E-06 0.00E+00 9.50E-06 0.00E+00 6.27E-06 0.00E+00 5.33E-06
0.00E+00 9.50E-06 6.27E-06 0.00E+00 5.33E-06 9.50E-06
0313 0.00E+00 7.21E-06 0.00E+00 1.52E-05 0.00E+00 1.09E-05 0.00E+00 7.97E-06
0.00E+00 1.52E-05 1.09E-05 0.00E+00 7.97E-06 1.52E-05
0314 0.00E+00 9.79E-06 0.00E+00 2.50E-05 0.00E+00 1.47E-05 0.00E+00 1.52E-05
0.00E+00 2.50E-05 1.47E-05 0.00E+00 1.52E-05 2.50E-05
0315 0.00E+00 1.26E-05 0.00E+00 3.10E-05 0.00E+00 1.90E-05 0.00E+00 1.84E-05
0.00E+00 3.10E-05 1.90E-05 0.00E+00 1.84E-05 3.10E-05
0316 0.00E+00 1.60E-05 0.00E+00 3.87E-05 0.00E+00 2.40E-05 0.00E+00 2.28E-05
0.00E+00 3.87E-05 2.40E-05 0.00E+00 2.28E-05 3.87E-05
0317 0.00E+00 9.12E-06 0.00E+00 2.35E-05 0.00E+00 1.37E-05 0.00E+00 1.44E-05
0.00E+00 2.35E-05 1.37E-05 0.00E+00 1.44E-05 2.35E-05
0318 0.00E+00 8.68E-06 0.00E+00 2.45E-05 0.00E+00 1.31E-05 0.00E+00 1.59E-05
0.00E+00 2.45E-05 1.31E-05 0.00E+00 1.59E-05 2.45E-05
0319 0.00E+00 1.35E-05 0.00E+00 3.32E-05 0.00E+00 2.03E-05 0.00E+00 1.97E-05
0.00E+00 3.32E-05 2.03E-05 0.00E+00 1.97E-05 3.32E-05
0320 0.00E+00 1.06E-05 0.00E+00 2.60E-05 0.00E+00 1.60E-05 0.00E+00 1.54E-05
0.00E+00 2.60E-05 1.60E-05 0.00E+00 1.54E-05 2.60E-05
0321 0.00E+00 1.19E-05 0.00E+00 2.96E-05 0.00E+00 1.80E-05 0.00E+00 1.77E-05
0.00E+00 2.96E-05 1.80E-05 0.00E+00 1.77E-05 2.96E-05
0322 0.00E+00 1.09E-05 0.00E+00 2.75E-05 0.00E+00 1.63E-05 0.00E+00 1.67E-05
0.00E+00 2.75E-05 1.63E-05 0.00E+00 1.67E-05 2.75E-05
0323 0.00E+00 1.41E-05 0.00E+00 5.86E-05 0.00E+00 2.12E-05 0.00E+00 4.45E-05
0.00E+00 5.86E-05 2.12E-05 0.00E+00 4.45E-05 5.86E-05
0324 0.00E+00 1.67E-05 0.00E+00 7.12E-05 0.00E+00 2.52E-05 0.00E+00 5.44E-05
0.00E+00 7.12E-05 2.52E-05 0.00E+00 5.44E-05 7.12E-05
0325 0.00E+00 2.44E-05 0.00E+00 9.16E-05 0.00E+00 3.67E-05 0.00E+00 6.72E-05
0.00E+00 9.16E-05 3.67E-05 0.00E+00 6.72E-05 9.16E-05
0326 0.00E+00 4.07E-05 0.00E+00 1.24E-04 0.00E+00 6.12E-05 0.00E+00 8.33E-05
0.00E+00 1.24E-04 6.12E-05 0.00E+00 8.33E-05 1.24E-04
0327 0.00E+00 5.46E-05 0.00E+00 1.99E-04 0.00E+00 8.22E-05 0.00E+00 1.44E-04
0.00E+00 1.99E-04 8.22E-05 0.00E+00 1.44E-04 1.99E-04
0328 0.00E+00 1.73E-05 0.00E+00 4.26E-05 0.00E+00 2.60E-05 0.00E+00 2.53E-05
0.00E+00 4.26E-05 2.60E-05 0.00E+00 2.53E-05 4.26E-05
0329 0.00E+00 2.17E-05 0.00E+00 5.41E-05 0.00E+00 3.27E-05 0.00E+00 3.24E-05
0.00E+00 5.41E-05 3.27E-05 0.00E+00 3.24E-05 5.41E-05
0330 0.00E+00 2.42E-05 0.00E+00 6.75E-05 0.00E+00 3.64E-05 0.00E+00 4.33E-05
0.00E+00 6.75E-05 3.64E-05 0.00E+00 4.33E-05 6.75E-05
0331 0.00E+00 4.02E-05 0.00E+00 1.01E-04 0.00E+00 6.05E-05 0.00E+00 6.12E-05
0.00E+00 1.01E-04 6.05E-05 0.00E+00 6.12E-05 1.01E-04
0332 0.00E+00 5.49E-05 0.00E+00 1.61E-04 0.00E+00 8.27E-05 0.00E+00 1.06E-04
0.00E+00 1.61E-04 8.27E-05 0.00E+00 1.06E-04 1.61E-04
0333 0.00E+00 1.60E-05 0.00E+00 3.96E-05 0.00E+00 2.40E-05 0.00E+00 2.37E-05
0.00E+00 3.96E-05 2.40E-05 0.00E+00 2.37E-05 3.96E-05
0334 0.00E+00 1.46E-05 0.00E+00 3.75E-05 0.00E+00 2.20E-05 0.00E+00 2.29E-05
0.00E+00 3.75E-05 2.20E-05 0.00E+00 2.29E-05 3.75E-05
0335 0.00E+00 2.48E-05 0.00E+00 6.41E-05 0.00E+00 3.73E-05 0.00E+00 3.93E-05
0.00E+00 6.41E-05 3.73E-05 0.00E+00 3.93E-05 6.41E-05
0336 0.00E+00 3.22E-05 0.00E+00 7.97E-05 0.00E+00 4.84E-05 0.00E+00 4.75E-05
0.00E+00 7.97E-05 4.84E-05 0.00E+00 4.75E-05 7.97E-05
0337 0.00E+00 3.74E-05 0.00E+00 8.23E-05 0.00E+00 5.64E-05 0.00E+00 4.49E-05
0.00E+00 8.23E-05 5.64E-05 0.00E+00 4.49E-05 8.23E-05
0338 0.00E+00 1.40E-05 0.00E+00 3.53E-05 0.00E+00 2.11E-05 0.00E+00 2.13E-05
0.00E+00 3.53E-05 2.11E-05 0.00E+00 2.13E-05 3.53E-05

0339 0.00E+00 1.47E-05 0.00E+00 3.70E-05 0.00E+00 2.21E-05 0.00E+00 2.23E-05
0.00E+00 3.70E-05 2.21E-05 0.00E+00 2.23E-05 3.70E-05
0340 0.00E+00 1.71E-05 0.00E+00 4.19E-05 0.00E+00 2.58E-05 0.00E+00 2.48E-05
0.00E+00 4.19E-05 2.58E-05 0.00E+00 2.48E-05 4.19E-05
0341 0.00E+00 2.04E-05 0.00E+00 4.90E-05 0.00E+00 3.08E-05 0.00E+00 2.85E-05
0.00E+00 4.90E-05 3.08E-05 0.00E+00 2.85E-05 4.90E-05
0342 0.00E+00 2.72E-05 0.00E+00 5.51E-05 0.00E+00 4.09E-05 0.00E+00 2.79E-05
0.00E+00 5.51E-05 4.09E-05 0.00E+00 2.79E-05 5.51E-05
0343 0.00E+00 1.26E-05 0.00E+00 3.12E-05 0.00E+00 1.90E-05 0.00E+00 1.85E-05
0.00E+00 3.12E-05 1.90E-05 0.00E+00 1.85E-05 3.12E-05
0344 0.00E+00 1.10E-05 0.00E+00 2.67E-05 0.00E+00 1.66E-05 0.00E+00 1.57E-05
0.00E+00 2.67E-05 1.66E-05 0.00E+00 1.57E-05 2.67E-05
0345 0.00E+00 1.56E-05 0.00E+00 3.73E-05 0.00E+00 2.34E-05 0.00E+00 2.17E-05
0.00E+00 3.73E-05 2.34E-05 0.00E+00 2.17E-05 3.73E-05
0346 0.00E+00 1.86E-05 0.00E+00 3.90E-05 0.00E+00 2.80E-05 0.00E+00 2.04E-05
0.00E+00 3.90E-05 2.80E-05 0.00E+00 2.04E-05 3.90E-05
0347 0.00E+00 1.83E-05 0.00E+00 3.43E-05 0.00E+00 2.76E-05 0.00E+00 1.60E-05
0.00E+00 3.43E-05 2.76E-05 0.00E+00 1.60E-05 3.43E-05
0348 0.00E+00 2.15E-06 0.00E+00 5.26E-06 0.00E+00 3.24E-06 0.00E+00 3.11E-06
0.00E+00 5.26E-06 3.24E-06 0.00E+00 3.11E-06 5.26E-06
0349 0.00E+00 1.95E-06 0.00E+00 5.06E-06 0.00E+00 2.94E-06 0.00E+00 3.11E-06
0.00E+00 5.06E-06 2.94E-06 0.00E+00 3.11E-06 5.06E-06
0350 0.00E+00 1.76E-06 0.00E+00 4.88E-06 0.00E+00 2.65E-06 0.00E+00 3.12E-06
0.00E+00 4.88E-06 2.65E-06 0.00E+00 3.12E-06 4.88E-06
0351 0.00E+00 2.09E-06 0.00E+00 5.32E-06 0.00E+00 3.15E-06 0.00E+00 3.23E-06
0.00E+00 5.32E-06 3.15E-06 0.00E+00 3.23E-06 5.32E-06
0352 0.00E+00 2.92E-06 0.00E+00 7.16E-06 0.00E+00 4.40E-06 0.00E+00 4.24E-06
0.00E+00 7.16E-06 4.40E-06 0.00E+00 4.24E-06 7.16E-06
0353 0.00E+00 3.89E-06 0.00E+00 9.48E-06 0.00E+00 5.85E-06 0.00E+00 5.59E-06
0.00E+00 9.48E-06 5.85E-06 0.00E+00 5.59E-06 9.48E-06
0354 0.00E+00 4.83E-06 0.00E+00 1.18E-05 0.00E+00 7.26E-06 0.00E+00 6.93E-06
0.00E+00 1.18E-05 7.26E-06 0.00E+00 6.93E-06 1.18E-05
0355 0.00E+00 5.47E-06 0.00E+00 1.34E-05 0.00E+00 8.23E-06 0.00E+00 7.91E-06
0.00E+00 1.34E-05 8.23E-06 0.00E+00 7.91E-06 1.34E-05
0356 0.00E+00 5.48E-06 0.00E+00 1.35E-05 0.00E+00 8.25E-06 0.00E+00 8.04E-06
0.00E+00 1.35E-05 8.25E-06 0.00E+00 8.04E-06 1.35E-05
0357 0.00E+00 1.67E-06 0.00E+00 4.12E-06 0.00E+00 2.52E-06 0.00E+00 2.44E-06
0.00E+00 4.12E-06 2.52E-06 0.00E+00 2.44E-06 4.12E-06
0358 0.00E+00 2.26E-06 0.00E+00 5.52E-06 0.00E+00 3.40E-06 0.00E+00 3.26E-06
0.00E+00 5.52E-06 3.40E-06 0.00E+00 3.26E-06 5.52E-06
0359 0.00E+00 2.92E-06 0.00E+00 7.11E-06 0.00E+00 4.39E-06 0.00E+00 4.19E-06
0.00E+00 7.11E-06 4.39E-06 0.00E+00 4.19E-06 7.11E-06
0360 0.00E+00 3.59E-06 0.00E+00 8.72E-06 0.00E+00 5.40E-06 0.00E+00 5.14E-06
0.00E+00 8.72E-06 5.40E-06 0.00E+00 5.14E-06 8.72E-06
0361 0.00E+00 4.13E-06 0.00E+00 1.01E-05 0.00E+00 6.21E-06 0.00E+00 5.93E-06
0.00E+00 1.01E-05 6.21E-06 0.00E+00 5.93E-06 1.01E-05
0362 0.00E+00 4.37E-06 0.00E+00 1.07E-05 0.00E+00 6.57E-06 0.00E+00 6.32E-06
0.00E+00 1.07E-05 6.57E-06 0.00E+00 6.32E-06 1.07E-05
0363 0.00E+00 4.15E-06 0.00E+00 1.02E-05 0.00E+00 6.24E-06 0.00E+00 6.10E-06
0.00E+00 1.02E-05 6.24E-06 0.00E+00 6.10E-06 1.02E-05
0364 0.00E+00 3.44E-06 0.00E+00 8.65E-06 0.00E+00 5.18E-06 0.00E+00 5.21E-06
0.00E+00 8.65E-06 5.18E-06 0.00E+00 5.21E-06 8.65E-06
0365 0.00E+00 3.51E-06 0.00E+00 8.67E-06 0.00E+00 5.29E-06 0.00E+00 5.16E-06
0.00E+00 8.67E-06 5.29E-06 0.00E+00 5.16E-06 8.67E-06
0366 0.00E+00 2.78E-06 0.00E+00 6.75E-06 0.00E+00 4.18E-06 0.00E+00 3.97E-06
0.00E+00 6.75E-06 4.18E-06 0.00E+00 3.97E-06 6.75E-06
0367 0.00E+00 3.22E-06 0.00E+00 7.82E-06 0.00E+00 4.84E-06 0.00E+00 4.61E-06
0.00E+00 7.82E-06 4.84E-06 0.00E+00 4.61E-06 7.82E-06
0368 0.00E+00 3.50E-06 0.00E+00 8.53E-06 0.00E+00 5.26E-06 0.00E+00 5.03E-06
0.00E+00 8.53E-06 5.26E-06 0.00E+00 5.03E-06 8.53E-06
0369 0.00E+00 3.52E-06 0.00E+00 8.63E-06 0.00E+00 5.30E-06 0.00E+00 5.11E-06
0.00E+00 8.63E-06 5.30E-06 0.00E+00 5.11E-06 8.63E-06
0370 0.00E+00 3.22E-06 0.00E+00 7.97E-06 0.00E+00 4.85E-06 0.00E+00 4.75E-06
0.00E+00 7.97E-06 4.85E-06 0.00E+00 4.75E-06 7.97E-06
0371 0.00E+00 2.63E-06 0.00E+00 6.62E-06 0.00E+00 3.96E-06 0.00E+00 3.99E-06
0.00E+00 6.62E-06 3.96E-06 0.00E+00 3.99E-06 6.62E-06
0372 0.00E+00 2.61E-06 0.00E+00 6.47E-06 0.00E+00 3.93E-06 0.00E+00 3.86E-06
0.00E+00 6.47E 06 3.93E-06 0.00E+00 3.86E-06 6.47E-06
0373 0.00E+00 4.15E-06 0.00E+00 1.00E-05 0.00E+00 6.25E-06 0.00E+00 5.89E-06

0.00E+00 1.00E-05 6.25E-06 0.00E+00 5.89E-06 1.00E-05
0374 0.00E+00 5.47E-06 0.00E+00 1.32E-05 0.00E+00 8.24E-06 0.00E+00 7.77E-06
0.00E+00 1.32E-05 8.24E-06 0.00E+00 7.77E-06 1.32E-05
0375 0.00E+00 2.96E-06 0.00E+00 7.22E-06 0.00E+00 4.45E-06 0.00E+00 4.26E-06
0.00E+00 7.22E-06 4.45E-06 0.00E+00 4.26E-06 7.22E-06
0376 0.00E+00 2.87E-06 0.00E+00 7.04E-06 0.00E+00 4.32E-06 0.00E+00 4.17E-06
0.00E+00 7.04E-06 4.32E-06 0.00E+00 4.17E-06 7.04E-06
0377 0.00E+00 2.56E-06 0.00E+00 6.34E-06 0.00E+00 3.86E-06 0.00E+00 3.78E-06
0.00E+00 6.34E-06 3.86E-06 0.00E+00 3.78E-06 6.34E-06
0378 0.00E+00 2.07E-06 0.00E+00 5.22E-06 0.00E+00 3.12E-06 0.00E+00 3.15E-06
0.00E+00 5.22E-06 3.12E-06 0.00E+00 3.15E-06 5.22E-06
0379 0.00E+00 2.03E-06 0.00E+00 5.01E-06 0.00E+00 3.05E-06 0.00E+00 2.99E-06
0.00E+00 5.01E-06 3.05E-06 0.00E+00 2.99E-06 5.01E-06
0380 0.00E+00 3.16E-06 0.00E+00 7.64E-06 0.00E+00 4.75E-06 0.00E+00 4.48E-06
0.00E+00 7.64E-06 4.75E-06 0.00E+00 4.48E-06 7.64E-06
0381 0.00E+00 4.29E-06 0.00E+00 1.04E-05 0.00E+00 6.46E-06 0.00E+00 6.09E-06
0.00E+00 1.04E-05 6.46E-06 0.00E+00 6.09E-06 1.04E-05
0382 0.00E+00 4.83E-06 0.00E+00 1.17E-05 0.00E+00 7.27E-06 0.00E+00 6.86E-06
0.00E+00 1.17E-05 7.27E-06 0.00E+00 6.86E-06 1.17E-05
0383 0.00E+00 4.28E-06 0.00E+00 1.06E-05 0.00E+00 6.43E-06 0.00E+00 6.32E-06
0.00E+00 1.06E-05 6.43E-06 0.00E+00 6.32E-06 1.06E-05
0384 0.00E+00 2.08E-06 0.00E+00 5.14E-06 0.00E+00 3.12E-06 0.00E+00 3.07E-06
0.00E+00 5.14E-06 3.12E-06 0.00E+00 3.07E-06 5.14E-06
0385 0.00E+00 1.67E-06 0.00E+00 4.21E-06 0.00E+00 2.51E-06 0.00E+00 2.54E-06
0.00E+00 4.21E-06 2.51E-06 0.00E+00 2.54E-06 4.21E-06
0386 0.00E+00 1.61E-06 0.00E+00 3.99E-06 0.00E+00 2.43E-06 0.00E+00 2.37E-06
0.00E+00 3.99E-06 2.43E-06 0.00E+00 2.37E-06 3.99E-06
0387 0.00E+00 2.46E-06 0.00E+00 5.95E-06 0.00E+00 3.70E-06 0.00E+00 3.49E-06
0.00E+00 5.95E-06 3.70E-06 0.00E+00 3.49E-06 5.95E-06
0388 0.00E+00 3.40E-06 0.00E+00 8.23E-06 0.00E+00 5.12E-06 0.00E+00 4.83E-06
0.00E+00 8.23E-06 5.12E-06 0.00E+00 4.83E-06 8.23E-06
0389 0.00E+00 4.05E-06 0.00E+00 9.79E-06 0.00E+00 6.09E-06 0.00E+00 5.74E-06
0.00E+00 9.79E-06 6.09E-06 0.00E+00 5.74E-06 9.79E-06
0390 0.00E+00 4.00E-06 0.00E+00 9.69E-06 0.00E+00 6.02E-06 0.00E+00 5.69E-06
0.00E+00 9.69E-06 6.02E-06 0.00E+00 5.69E-06 9.69E-06
0391 0.00E+00 3.15E-06 0.00E+00 8.11E-06 0.00E+00 4.74E-06 0.00E+00 4.96E-06
0.00E+00 8.11E-06 4.74E-06 0.00E+00 4.96E-06 8.11E-06
0392 0.00E+00 3.06E-06 0.00E+00 7.79E-06 0.00E+00 4.61E-06 0.00E+00 4.72E-06
0.00E+00 7.79E-06 4.61E-06 0.00E+00 4.72E-06 7.79E-06
0393 0.00E+00 1.32E-06 0.00E+00 3.24E-06 0.00E+00 1.98E-06 0.00E+00 1.93E-06
0.00E+00 3.24E-06 1.98E-06 0.00E+00 1.93E-06 3.24E-06
0394 0.00E+00 1.96E-06 0.00E+00 4.74E-06 0.00E+00 2.95E-06 0.00E+00 2.78E-06
0.00E+00 4.74E-06 2.95E-06 0.00E+00 2.78E-06 4.74E-06
0395 0.00E+00 2.73E-06 0.00E+00 6.60E-06 0.00E+00 4.11E-06 0.00E+00 3.87E-06
0.00E+00 6.60E-06 4.11E-06 0.00E+00 3.87E-06 6.60E-06
0396 0.00E+00 3.37E-06 0.00E+00 8.15E-06 0.00E+00 5.07E-06 0.00E+00 4.78E-06
0.00E+00 8.15E-06 5.07E-06 0.00E+00 4.78E-06 8.15E-06
0397 0.00E+00 3.58E-06 0.00E+00 8.67E-06 0.00E+00 5.39E-06 0.00E+00 5.08E-06
0.00E+00 8.67E-06 5.39E-06 0.00E+00 5.08E-06 8.67E-06
0398 0.00E+00 3.18E-06 0.00E+00 7.73E-06 0.00E+00 4.79E-06 0.00E+00 4.54E-06
0.00E+00 7.73E-06 4.79E-06 0.00E+00 4.54E-06 7.73E-06
0399 0.00E+00 2.34E-06 0.00E+00 6.33E-06 0.00E+00 3.53E-06 0.00E+00 3.98E-06
0.00E+00 6.33E-06 3.53E-06 0.00E+00 3.98E-06 6.33E-06
0400 0.00E+00 3.04E-06 0.00E+00 7.61E-06 0.00E+00 4.57E-06 0.00E+00 4.57E-06
0.00E+00 7.61E-06 4.57E-06 0.00E+00 4.57E-06 7.61E-06
0401 0.00E+00 4.56E-06 0.00E+00 1.12E-05 0.00E+00 6.87E-06 0.00E+00 6.63E-06
0.00E+00 1.12E-05 6.87E-06 0.00E+00 6.63E-06 1.12E-05
0402 0.00E+00 7.52E-06 0.00E+00 1.58E-05 0.00E+00 1.13E-05 0.00E+00 8.32E-06
0.00E+00 1.58E-05 1.13E-05 0.00E+00 8.32E-06 1.58E-05
0403 0.00E+00 5.54E-06 0.00E+00 1.17E-05 0.00E+00 8.34E-06 0.00E+00 6.18E-06
0.00E+00 1.17E-05 8.34E-06 0.00E+00 6.18E-06 1.17E-05
0404 0.00E+00 7.14E-06 0.00E+00 1.30E-05 0.00E+00 1.07E-05 0.00E+00 5.88E-06
0.00E+00 1.30E-05 1.07E-05 0.00E+00 5.88E-06 1.30E-05
0405 0.00E+00 8.64E-06 0.00E+00 1.48E-05 0.00E+00 1.30E-05 0.00E+00 6.16E-06
0.00E+00 1.48E-05 1.30E-05 0.00E+00 6.16E-06 1.48E-05
0406 0.00E+00 3.86E-06 0.00E+00 6.65E-06 0.00E+00 5.81E-06 0.00E+00 2.79E-06
0.00E+00 6.65E-06 5.81E-06 0.00E+00 2.79E-06 6.65E-06
0407 0.00E+00 3.36E-06 0.00E+00 7.11E-06 0.00E+00 5.06E-06 0.00E+00 3.74E-06
0.00E+00 7.11E-06 5.06E-06 0.00E+00 3.74E-06 7.11E-06

0408 0.00E+00 3.21E-06 0.00E+00 6.64E-06 0.00E+00 4.82E-06 0.00E+00 3.44E-06
0.00E+00 6.64E-06 4.82E-06 0.00E+00 3.44E-06 6.64E-06
0409 0.00E+00 3.51E-06 0.00E+00 6.05E-06 0.00E+00 5.29E-06 0.00E+00 2.53E-06
0.00E+00 6.05E-06 5.29E-06 0.00E+00 2.53E-06 6.05E-06
0410 0.00E+00 3.20E-06 0.00E+00 5.55E-06 0.00E+00 4.82E-06 0.00E+00 2.34E-06
0.00E+00 5.55E-06 4.82E-06 0.00E+00 2.34E-06 5.55E-06
0411 0.00E+00 2.59E-06 0.00E+00 4.70E-06 0.00E+00 3.89E-06 0.00E+00 2.12E-06
0.00E+00 4.70E-06 3.89E-06 0.00E+00 2.12E-06 4.70E-06
0412 0.00E+00 5.47E-06 0.00E+00 1.15E-05 0.00E+00 8.23E-06 0.00E+00 6.03E-06
0.00E+00 1.15E-05 8.23E-06 0.00E+00 6.03E-06 1.15E-05
0413 0.00E+00 6.61E-06 0.00E+00 1.20E-05 0.00E+00 9.95E-06 0.00E+00 5.43E-06
0.00E+00 1.20E-05 9.95E-06 0.00E+00 5.43E-06 1.20E-05
0414 0.00E+00 4.42E-06 0.00E+00 8.29E-06 0.00E+00 6.65E-06 0.00E+00 3.87E-06
0.00E+00 8.29E-06 6.65E-06 0.00E+00 3.87E-06 8.29E-06
0415 0.00E+00 6.94E-06 0.00E+00 1.19E-05 0.00E+00 1.04E-05 0.00E+00 4.97E-06
0.00E+00 1.19E-05 1.04E-05 0.00E+00 4.97E-06 1.19E-05
0416 0.00E+00 3.26E-06 0.00E+00 5.62E-06 0.00E+00 4.91E-06 0.00E+00 2.36E-06
0.00E+00 5.62E-06 4.91E-06 0.00E+00 2.36E-06 5.62E-06
0417 0.00E+00 2.58E-06 0.00E+00 5.43E-06 0.00E+00 3.88E-06 0.00E+00 2.86E-06
0.00E+00 5.43E-06 3.88E-06 0.00E+00 2.86E-06 5.43E-06
0418 0.00E+00 3.01E-06 0.00E+00 6.30E-06 0.00E+00 4.52E-06 0.00E+00 3.29E-06
0.00E+00 6.30E-06 4.52E-06 0.00E+00 3.29E-06 6.30E-06
0419 0.00E+00 3.06E-06 0.00E+00 5.25E-06 0.00E+00 4.61E-06 0.00E+00 2.18E-06
0.00E+00 5.25E-06 4.61E-06 0.00E+00 2.18E-06 5.25E-06
0420 0.00E+00 2.14E-06 0.00E+00 3.79E-06 0.00E+00 3.21E-06 0.00E+00 1.66E-06
0.00E+00 3.79E-06 3.21E-06 0.00E+00 1.66E-06 3.79E-06
0421 0.00E+00 2.74E-06 0.00E+00 4.75E-06 0.00E+00 4.12E-06 0.00E+00 2.01E-06
0.00E+00 4.75E-06 4.12E-06 0.00E+00 2.01E-06 4.75E-06
0422 0.00E+00 3.26E-06 0.00E+00 7.32E-06 0.00E+00 4.91E-06 0.00E+00 4.05E-06
0.00E+00 7.32E-06 4.91E-06 0.00E+00 4.05E-06 7.32E-06
0423 0.00E+00 5.97E-06 0.00E+00 1.08E-05 0.00E+00 8.99E-06 0.00E+00 4.78E-06
0.00E+00 1.08E-05 8.99E-06 0.00E+00 4.78E-06 1.08E-05
0424 0.00E+00 4.65E-06 0.00E+00 7.97E-06 0.00E+00 7.00E-06 0.00E+00 3.31E-06
0.00E+00 7.97E-06 7.00E-06 0.00E+00 3.31E-06 7.97E-06
0425 0.00E+00 5.43E-06 0.00E+00 9.33E-06 0.00E+00 8.17E-06 0.00E+00 3.90E-06
0.00E+00 9.33E-06 8.17E-06 0.00E+00 3.90E-06 9.33E-06
0426 0.00E+00 2.81E-06 0.00E+00 4.84E-06 0.00E+00 4.23E-06 0.00E+00 2.03E-06
0.00E+00 4.84E-06 4.23E-06 0.00E+00 2.03E-06 4.84E-06
0427 0.00E+00 2.08E-06 0.00E+00 4.28E-06 0.00E+00 3.12E-06 0.00E+00 2.21E-06
0.00E+00 4.28E-06 3.12E-06 0.00E+00 2.21E-06 4.28E-06
0428 0.00E+00 2.73E-06 0.00E+00 5.78E-06 0.00E+00 4.11E-06 0.00E+00 3.05E-06
0.00E+00 5.78E-06 4.11E-06 0.00E+00 3.05E-06 5.78E-06
0429 0.00E+00 2.38E-06 0.00E+00 4.07E-06 0.00E+00 3.58E-06 0.00E+00 1.69E-06
0.00E+00 4.07E-06 3.58E-06 0.00E+00 1.69E-06 4.07E-06
0430 0.00E+00 2.31E-06 0.00E+00 4.00E-06 0.00E+00 3.48E-06 0.00E+00 1.69E-06
0.00E+00 4.00E-06 3.48E-06 0.00E+00 1.69E-06 4.00E-06
0431 0.00E+00 2.26E-06 0.00E+00 3.91E-06 0.00E+00 3.40E-06 0.00E+00 1.65E-06
0.00E+00 3.91E-06 3.40E-06 0.00E+00 1.65E-06 3.91E-06
0432 0.00E+00 4.37E-06 0.00E+00 8.12E-06 0.00E+00 6.57E-06 0.00E+00 3.76E-06
0.00E+00 8.12E-06 6.57E-06 0.00E+00 3.76E-06 8.12E-06
0433 0.00E+00 4.51E-06 0.00E+00 8.20E-06 0.00E+00 6.79E-06 0.00E+00 3.69E-06
0.00E+00 8.20E-06 6.79E-06 0.00E+00 3.69E-06 8.20E-06
0434 0.00E+00 4.91E-06 0.00E+00 8.40E-06 0.00E+00 7.38E-06 0.00E+00 3.49E-06
0.00E+00 8.40E-06 7.38E-06 0.00E+00 3.49E-06 8.40E-06
0435 0.00E+00 4.22E-06 0.00E+00 7.25E-06 0.00E+00 6.35E-06 0.00E+00 3.03E-06
0.00E+00 7.25E-06 6.35E-06 0.00E+00 3.03E-06 7.25E-06
0436 0.00E+00 2.45E-06 0.00E+00 4.23E-06 0.00E+00 3.69E-06 0.00E+00 1.77E-06
0.00E+00 4.23E-06 3.69E-06 0.00E+00 1.77E-06 4.23E-06
0437 0.00E+00 1.87E-06 0.00E+00 3.61E-06 0.00E+00 2.82E-06 0.00E+00 1.74E-06
0.00E+00 3.61E-06 2.82E-06 0.00E+00 1.74E-06 3.61E-06
0438 0.00E+00 2.45E-06 0.00E+00 5.18E-06 0.00E+00 3.68E-06 0.00E+00 2.73E-06
0.00E+00 5.18E-06 3.68E-06 0.00E+00 2.73E-06 5.18E-06
0439 0.00E+00 1.72E-06 0.00E+00 3.36E-06 0.00E+00 2.59E-06 0.00E+00 1.64E-06
0.00E+00 3.36E-06 2.59E-06 0.00E+00 1.64E-06 3.36E-06
0440 0.00E+00 2.27E-06 0.00E+00 3.88E-06 0.00E+00 3.41E-06 0.00E+00 1.62E-06
0.00E+00 3.88E-06 3.41E-06 0.00E+00 1.62E-06 3.88E-06
0441 0.00E+00 1.54E-06 0.00E+00 2.70E-06 0.00E+00 2.31E-06 0.00E+00 1.17E-06
0.00E+00 2.70E-06 2.31E-06 0.00E+00 1.17E-06 2.70E-06
0442 0.00E+00 4.62E-06 0.00E+00 8.30E-06 0.00E+00 6.95E-06 0.00E+00 3.68E-06

0.00E+00 8.30E-06 6.95E-06 0.00E+00 3.68E-06 8.30E-06
0443 0.00E+00 3.16E-06 0.00E+00 5.85E-06 0.00E+00 4.76E-06 0.00E+00 2.69E-06
0.00E+00 5.85E-06 4.76E-06 0.00E+00 2.69E-06 5.85E-06
0444 0.00E+00 4.81E-06 0.00E+00 8.23E-06 0.00E+00 7.23E-06 0.00E+00 3.42E-06
0.00E+00 8.23E-06 7.23E-06 0.00E+00 3.42E-06 8.23E-06
0445 0.00E+00 3.27E-06 0.00E+00 5.61E-06 0.00E+00 4.92E-06 0.00E+00 2.34E-06
0.00E+00 5.61E-06 4.92E-06 0.00E+00 2.34E-06 5.61E-06
0446 0.00E+00 2.17E-06 0.00E+00 3.73E-06 0.00E+00 3.26E-06 0.00E+00 1.56E-06
0.00E+00 3.73E-06 3.26E-06 0.00E+00 1.56E-06 3.73E-06
0447 0.00E+00 1.69E-06 0.00E+00 3.16E-06 0.00E+00 2.55E-06 0.00E+00 1.47E-06
0.00E+00 3.16E-06 2.55E-06 0.00E+00 1.47E-06 3.16E-06
0448 0.00E+00 2.15E-06 0.00E+00 4.55E-06 0.00E+00 3.24E-06 0.00E+00 2.40E-06
0.00E+00 4.55E-06 3.24E-06 0.00E+00 2.40E-06 4.55E-06
0449 0.00E+00 1.61E-06 0.00E+00 3.34E-06 0.00E+00 2.43E-06 0.00E+00 1.73E-06
0.00E+00 3.34E-06 2.43E-06 0.00E+00 1.73E-06 3.34E-06
0450 0.00E+00 2.01E-06 0.00E+00 3.43E-06 0.00E+00 3.02E-06 0.00E+00 1.43E-06
0.00E+00 3.43E-06 3.02E-06 0.00E+00 1.43E-06 3.43E-06
0451 0.00E+00 1.60E-06 0.00E+00 2.79E-06 0.00E+00 2.41E-06 0.00E+00 1.19E-06
0.00E+00 2.79E-06 2.41E-06 0.00E+00 1.19E-06 2.79E-06
0452 0.00E+00 1.73E-05 0.00E+00 4.57E-05 0.00E+00 2.60E-05 0.00E+00 2.85E-05
0.00E+00 4.57E-05 2.60E-05 0.00E+00 2.85E-05 4.57E-05
0453 0.00E+00 1.99E-05 0.00E+00 5.27E-05 0.00E+00 3.00E-05 0.00E+00 3.28E-05
0.00E+00 5.27E-05 3.00E-05 0.00E+00 3.28E-05 5.27E-05
0454 0.00E+00 1.60E-05 0.00E+00 3.95E-05 0.00E+00 2.41E-05 0.00E+00 2.35E-05
0.00E+00 3.95E-05 2.41E-05 0.00E+00 2.35E-05 3.95E-05
0455 0.00E+00 1.70E-05 0.00E+00 5.16E-05 0.00E+00 2.55E-05 0.00E+00 3.46E-05
0.00E+00 5.16E-05 2.55E-05 0.00E+00 3.46E-05 5.16E-05
0456 0.00E+00 3.14E-06 0.00E+00 7.78E-06 0.00E+00 4.73E-06 0.00E+00 4.64E-06
0.00E+00 7.78E-06 4.73E-06 0.00E+00 4.64E-06 7.78E-06
0457 0.00E+00 2.39E-06 0.00E+00 7.16E-06 0.00E+00 3.60E-06 0.00E+00 4.77E-06
0.00E+00 7.16E-06 3.60E-06 0.00E+00 4.77E-06 7.16E-06
0458 0.00E+00 1.77E-06 0.00E+00 4.27E-06 0.00E+00 2.66E-06 0.00E+00 2.51E-06
0.00E+00 4.27E-06 2.66E-06 0.00E+00 2.51E-06 4.27E-06
0459 0.00E+00 2.92E-06 0.00E+00 7.06E-06 0.00E+00 4.40E-06 0.00E+00 4.14E-06
0.00E+00 7.06E-06 4.40E-06 0.00E+00 4.14E-06 7.06E-06
0460 0.00E+00 3.02E-06 0.00E+00 7.06E-06 0.00E+00 4.55E-06 0.00E+00 4.04E-06
0.00E+00 7.06E-06 4.55E-06 0.00E+00 4.04E-06 7.06E-06
0461 0.00E+00 8.44E-06 0.00E+00 1.44E-05 0.00E+00 1.27E-05 0.00E+00 6.00E-06
0.00E+00 1.44E-05 1.27E-05 0.00E+00 6.00E-06 1.44E-05
0462 0.00E+00 9.53E-06 0.00E+00 1.63E-05 0.00E+00 1.43E-05 0.00E+00 6.79E-06
0.00E+00 1.63E-05 1.43E-05 0.00E+00 6.79E-06 1.63E-05
0463 0.00E+00 5.76E-06 0.00E+00 1.35E-05 0.00E+00 8.66E-06 0.00E+00 7.75E-06
0.00E+00 1.35E-05 8.66E-06 0.00E+00 7.75E-06 1.35E-05
0464 0.00E+00 2.00E-05 0.00E+00 3.43E-05 0.00E+00 3.01E-05 0.00E+00 1.43E-05
0.00E+00 3.43E-05 3.01E-05 0.00E+00 1.43E-05 3.43E-05
0465 0.00E+00 1.45E-05 0.00E+00 2.49E-05 0.00E+00 2.19E-05 0.00E+00 1.04E-05
0.00E+00 2.49E-05 2.19E-05 0.00E+00 1.04E-05 2.49E-05
0466 0.00E+00 4.61E-06 0.00E+00 1.20E-05 0.00E+00 6.94E-06 0.00E+00 7.39E-06
0.00E+00 1.20E-05 6.94E-06 0.00E+00 7.39E-06 1.20E-05
0467 0.00E+00 2.48E-06 0.00E+00 6.68E-06 0.00E+00 3.74E-06 0.00E+00 4.20E-06
0.00E+00 6.68E-06 3.74E-06 0.00E+00 4.20E-06 6.68E-06
0468 0.00E+00 7.19E-06 0.00E+00 1.44E-05 0.00E+00 1.08E-05 0.00E+00 7.20E-06
0.00E+00 1.44E-05 1.08E-05 0.00E+00 7.20E-06 1.44E-05
0469 0.00E+00 5.45E-06 0.00E+00 1.06E-05 0.00E+00 8.20E-06 0.00E+00 5.14E-06
0.00E+00 1.06E-05 8.20E-06 0.00E+00 5.14E-06 1.06E-05
0470 0.00E+00 3.99E-06 0.00E+00 9.08E-06 0.00E+00 6.01E-06 0.00E+00 5.09E-06
0.00E+00 9.08E-06 6.01E-06 0.00E+00 5.09E-06 9.08E-06
0471 0.00E+00 2.57E-06 0.00E+00 5.81E-06 0.00E+00 3.87E-06 0.00E+00 3.24E-06
0.00E+00 5.81E-06 3.87E-06 0.00E+00 3.24E-06 5.81E-06
0472 0.00E+00 2.38E-06 0.00E+00 4.38E-06 0.00E+00 3.59E-06 0.00E+00 1.99E-06
0.00E+00 4.38E-06 3.59E-06 0.00E+00 1.99E-06 4.38E-06
0473 0.00E+00 3.79E-06 0.00E+00 8.57E-06 0.00E+00 5.70E-06 0.00E+00 4.78E-06
0.00E+00 8.57E-06 5.70E-06 0.00E+00 4.78E-06 8.57E-06
0474 0.00E+00 3.68E-06 0.00E+00 9.24E-06 0.00E+00 5.54E-06 0.00E+00 5.56E-06
0.00E+00 9.24E-06 5.54E-06 0.00E+00 5.56E-06 9.24E-06
0475 0.00E+00 2.07E-06 0.00E+00 4.00E-06 0.00E+00 3.11E-06 0.00E+00 1.93E-06
0.00E+00 4.00E-06 3.11E-06 0.00E+00 1.93E-06 4.00E-06
0476 0.00E+00 1.41E-06 0.00E+00 2.49E-06 0.00E+00 2.13E-06 0.00E+00 1.08E-06
0.00E+00 2.49E-06 2.13E-06 0.00E+00 1.08E-06 2.49E-06

0477 0.00E+00 1.06E-06 0.00E+00 1.83E-06 0.00E+00 1.59E-06 0.00E+00 7.73E-07
0.00E+00 1.83E-06 1.59E-06 0.00E+00 7.73E-07 1.83E-06
0478 0.00E+00 9.36E-07 0.00E+00 1.62E-06 0.00E+00 1.41E-06 0.00E+00 6.81E-07
0.00E+00 1.62E-06 1.41E-06 0.00E+00 6.81E-07 1.62E-06
0479 0.00E+00 7.60E-07 0.00E+00 1.32E-06 0.00E+00 1.14E-06 0.00E+00 5.59E-07
0.00E+00 1.32E-06 1.14E-06 0.00E+00 5.59E-07 1.32E-06
0480 0.00E+00 9.21E-07 0.00E+00 1.59E-06 0.00E+00 1.39E-06 0.00E+00 6.71E-07
0.00E+00 1.59E-06 1.39E-06 0.00E+00 6.71E-07 1.59E-06
0481 0.00E+00 1.28E-06 0.00E+00 2.28E-06 0.00E+00 1.93E-06 0.00E+00 9.97E-07
0.00E+00 2.28E-06 1.93E-06 0.00E+00 9.97E-07 2.28E-06
0482 0.00E+00 1.01E-06 0.00E+00 1.93E-06 0.00E+00 1.51E-06 0.00E+00 9.28E-07
0.00E+00 1.93E-06 1.51E-06 0.00E+00 9.28E-07 1.93E-06
0483 0.00E+00 8.26E-07 0.00E+00 1.68E-06 0.00E+00 1.24E-06 0.00E+00 8.59E-07
0.00E+00 1.68E-06 1.24E-06 0.00E+00 8.59E-07 1.68E-06
0484 0.00E+00 1.24E-06 0.00E+00 2.14E-06 0.00E+00 1.87E-06 0.00E+00 9.03E-07
0.00E+00 2.14E-06 1.87E-06 0.00E+00 9.03E-07 2.14E-06
0485 0.00E+00 1.70E-06 0.00E+00 3.55E-06 0.00E+00 2.56E-06 0.00E+00 1.85E-06
0.00E+00 3.55E-06 2.56E-06 0.00E+00 1.85E-06 3.55E-06
0486 0.00E+00 1.79E-06 0.00E+00 3.16E-06 0.00E+00 2.70E-06 0.00E+00 1.37E-06
0.00E+00 3.16E-06 2.70E-06 0.00E+00 1.37E-06 3.16E-06
0487 0.00E+00 1.03E-06 0.00E+00 2.25E-06 0.00E+00 1.54E-06 0.00E+00 1.22E-06
0.00E+00 2.25E-06 1.54E-06 0.00E+00 1.22E-06 2.25E-06
0488 0.00E+00 1.18E-06 0.00E+00 2.67E-06 0.00E+00 1.77E-06 0.00E+00 1.49E-06
0.00E+00 2.67E-06 1.77E-06 0.00E+00 1.49E-06 2.67E-06
0489 0.00E+00 1.12E-06 0.00E+00 2.54E-06 0.00E+00 1.68E-06 0.00E+00 1.42E-06
0.00E+00 2.54E-06 1.68E-06 0.00E+00 1.42E-06 2.54E-06
0490 0.00E+00 9.63E-07 0.00E+00 2.21E-06 0.00E+00 1.45E-06 0.00E+00 1.25E-06
0.00E+00 2.21E-06 1.45E-06 0.00E+00 1.25E-06 2.21E-06
0491 0.00E+00 8.60E-07 0.00E+00 1.99E-06 0.00E+00 1.29E-06 0.00E+00 1.13E-06
0.00E+00 1.99E-06 1.29E-06 0.00E+00 1.13E-06 1.99E-06
0492 0.00E+00 1.94E-06 0.00E+00 4.05E-06 0.00E+00 2.92E-06 0.00E+00 2.11E-06
0.00E+00 4.05E-06 2.92E-06 0.00E+00 2.11E-06 4.05E-06
0493 0.00E+00 1.70E-06 0.00E+00 3.70E-06 0.00E+00 2.56E-06 0.00E+00 2.00E-06
0.00E+00 3.70E-06 2.56E-06 0.00E+00 2.00E-06 3.70E-06
0494 0.00E+00 1.49E-06 0.00E+00 3.24E-06 0.00E+00 2.24E-06 0.00E+00 1.75E-06
0.00E+00 3.24E-06 2.24E-06 0.00E+00 1.75E-06 3.24E-06
0495 0.00E+00 2.58E-06 0.00E+00 4.44E-06 0.00E+00 3.88E-06 0.00E+00 1.87E-06
0.00E+00 4.44E-06 3.88E-06 0.00E+00 1.87E-06 4.44E-06
0496 0.00E+00 1.21E-06 0.00E+00 2.75E-06 0.00E+00 1.83E-06 0.00E+00 1.54E-06
0.00E+00 2.75E-06 1.83E-06 0.00E+00 1.54E-06 2.75E-06
0497 0.00E+00 9.10E-07 0.00E+00 1.84E-06 0.00E+00 1.37E-06 0.00E+00 9.34E-07
0.00E+00 1.84E-06 1.37E-06 0.00E+00 9.34E-07 1.84E-06
0498 0.00E+00 1.73E-06 0.00E+00 3.90E-06 0.00E+00 2.60E-06 0.00E+00 2.17E-06
0.00E+00 3.90E-06 2.60E-06 0.00E+00 2.17E-06 3.90E-06
0499 0.00E+00 1.30E-06 0.00E+00 2.46E-06 0.00E+00 1.96E-06 0.00E+00 1.16E-06
0.00E+00 2.46E-06 1.96E-06 0.00E+00 1.16E-06 2.46E-06
0500 0.00E+00 1.62E-06 0.00E+00 2.78E-06 0.00E+00 2.44E-06 0.00E+00 1.16E-06
0.00E+00 2.78E-06 2.44E-06 0.00E+00 1.16E-06 2.78E-06
0501 0.00E+00 2.57E-06 0.00E+00 5.83E-06 0.00E+00 3.87E-06 0.00E+00 3.26E-06
0.00E+00 5.83E-06 3.87E-06 0.00E+00 3.26E-06 5.83E-06
0502 0.00E+00 2.14E-06 0.00E+00 4.51E-06 0.00E+00 3.22E-06 0.00E+00 2.37E-06
0.00E+00 4.51E-06 3.22E-06 0.00E+00 2.37E-06 4.51E-06
0503 0.00E+00 1.91E-06 0.00E+00 3.46E-06 0.00E+00 2.88E-06 0.00E+00 1.55E-06
0.00E+00 3.46E-06 2.88E-06 0.00E+00 1.55E-06 3.46E-06
0504 0.00E+00 1.25E-06 0.00E+00 3.50E-06 0.00E+00 1.88E-06 0.00E+00 2.25E-06
0.00E+00 3.50E-06 1.88E-06 0.00E+00 2.25E-06 3.50E-06
0505 0.00E+00 1.91E-06 0.00E+00 4.71E-06 0.00E+00 2.88E-06 0.00E+00 2.80E-06
0.00E+00 4.71E-06 2.88E-06 0.00E+00 2.80E-06 4.71E-06
0506 0.00E+00 4.79E-06 0.00E+00 1.20E-05 0.00E+00 7.21E-06 0.00E+00 7.18E-06
0.00E+00 1.20E-05 7.21E-06 0.00E+00 7.18E-06 1.20E-05
0507 0.00E+00 6.18E-06 0.00E+00 1.44E-05 0.00E+00 9.30E-06 0.00E+00 8.18E-06
0.00E+00 1.44E-05 9.30E-06 0.00E+00 8.18E-06 1.44E-05
0508 0.00E+00 4.34E-06 0.00E+00 1.11E-05 0.00E+00 6.52E-06 0.00E+00 6.74E-06
0.00E+00 1.11E-05 6.52E-06 0.00E+00 6.74E-06 1.11E-05
0509 0.00E+00 1.07E-06 0.00E+00 2.37E-06 0.00E+00 1.61E-06 0.00E+00 1.30E-06
0.00E+00 2.37E-06 1.61E-06 0.00E+00 1.30E-06 2.37E-06
0510 0.00E+00 1.22E-06 0.00E+00 2.85E-06 0.00E+00 1.83E-06 0.00E+00 1.63E-06
0.00E+00 2.85E-06 1.83E-06 0.00E+00 1.63E-06 2.85E-06
0511 0.00E+00 1.68E-06 0.00E+00 3.86E-06 0.00E+00 2.53E-06 0.00E+00 2.18E-06

0.00E+00 3.86E-06 2.53E-06 0.00E+00 2.18E-06 3.86E-06
0512 0.00E+00 1.63E-06 0.00E+00 3.73E-06 0.00E+00 2.45E-06 0.00E+00 2.10E-06
0.00E+00 3.73E-06 2.45E-06 0.00E+00 2.10E-06 3.73E-06
0513 0.00E+00 1.28E-06 0.00E+00 2.97E-06 0.00E+00 1.92E-06 0.00E+00 1.69E-06
0.00E+00 2.97E-06 1.92E-06 0.00E+00 1.69E-06 2.97E-06
0514 0.00E+00 1.00E-06 0.00E+00 2.35E-06 0.00E+00 1.51E-06 0.00E+00 1.35E-06
0.00E+00 2.35E-06 1.51E-06 0.00E+00 1.35E-06 2.35E-06
0515 0.00E+00 1.09E-06 0.00E+00 2.57E-06 0.00E+00 1.64E-06 0.00E+00 1.48E-06
0.00E+00 2.57E-06 1.64E-06 0.00E+00 1.48E-06 2.57E-06
0516 0.00E+00 1.24E-06 0.00E+00 3.00E-06 0.00E+00 1.87E-06 0.00E+00 1.76E-06
0.00E+00 3.00E-06 1.87E-06 0.00E+00 1.76E-06 3.00E-06
0517 0.00E+00 1.67E-06 0.00E+00 4.05E-06 0.00E+00 2.52E-06 0.00E+00 2.37E-06
0.00E+00 4.05E-06 2.52E-06 0.00E+00 2.37E-06 4.05E-06
0518 0.00E+00 1.88E-06 0.00E+00 4.34E-06 0.00E+00 2.84E-06 0.00E+00 2.45E-06
0.00E+00 4.34E-06 2.84E-06 0.00E+00 2.45E-06 4.34E-06
0519 0.00E+00 2.12E-06 0.00E+00 4.85E-06 0.00E+00 3.19E-06 0.00E+00 2.73E-06
0.00E+00 4.85E-06 3.19E-06 0.00E+00 2.73E-06 4.85E-06
0520 0.00E+00 3.38E-06 0.00E+00 8.54E-06 0.00E+00 5.08E-06 0.00E+00 5.16E-06
0.00E+00 8.54E-06 5.08E-06 0.00E+00 5.16E-06 8.54E-06
0521 0.00E+00 1.85E-06 0.00E+00 5.02E-06 0.00E+00 2.78E-06 0.00E+00 3.17E-06
0.00E+00 5.02E-06 2.78E-06 0.00E+00 3.17E-06 5.02E-06
0522 0.00E+00 2.82E-06 0.00E+00 6.81E-06 0.00E+00 4.24E-06 0.00E+00 4.00E-06
0.00E+00 6.81E-06 4.24E-06 0.00E+00 4.00E-06 6.81E-06
0523 0.00E+00 9.16E-07 0.00E+00 2.21E-06 0.00E+00 1.38E-06 0.00E+00 1.29E-06
0.00E+00 2.21E-06 1.38E-06 0.00E+00 1.29E-06 2.21E-06
0524 0.00E+00 1.30E-06 0.00E+00 3.32E-06 0.00E+00 1.96E-06 0.00E+00 2.02E-06
0.00E+00 3.32E-06 1.96E-06 0.00E+00 2.02E-06 3.32E-06
0525 0.00E+00 2.50E-06 0.00E+00 6.29E-06 0.00E+00 3.76E-06 0.00E+00 3.80E-06
0.00E+00 6.29E-06 3.76E-06 0.00E+00 3.80E-06 6.29E-06
0526 0.00E+00 2.79E-06 0.00E+00 7.05E-06 0.00E+00 4.21E-06 0.00E+00 4.25E-06
0.00E+00 7.05E-06 4.21E-06 0.00E+00 4.25E-06 7.05E-06
0527 0.00E+00 1.89E-06 0.00E+00 5.74E-06 0.00E+00 2.84E-06 0.00E+00 3.85E-06
0.00E+00 5.74E-06 2.84E-06 0.00E+00 3.85E-06 5.74E-06
0528 0.00E+00 3.30E-06 0.00E+00 8.11E-06 0.00E+00 4.97E-06 0.00E+00 4.81E-06
0.00E+00 8.11E-06 4.97E-06 0.00E+00 4.81E-06 8.11E-06
0529 0.00E+00 1.62E-06 0.00E+00 4.10E-06 0.00E+00 2.44E-06 0.00E+00 2.48E-06
0.00E+00 4.10E-06 2.44E-06 0.00E+00 2.48E-06 4.10E-06
0530 0.00E+00 2.16E-06 0.00E+00 5.46E-06 0.00E+00 3.26E-06 0.00E+00 3.29E-06
0.00E+00 5.46E-06 3.26E-06 0.00E+00 3.29E-06 5.46E-06
0531 0.00E+00 1.43E-06 0.00E+00 3.68E-06 0.00E+00 2.15E-06 0.00E+00 2.25E-06
0.00E+00 3.68E-06 2.15E-06 0.00E+00 2.25E-06 3.68E-06
0532 0.00E+00 1.13E-06 0.00E+00 2.74E-06 0.00E+00 1.70E-06 0.00E+00 1.61E-06
0.00E+00 2.74E-06 1.70E-06 0.00E+00 1.61E-06 2.74E-06
0533 0.00E+00 2.48E-06 0.00E+00 6.24E-06 0.00E+00 3.73E-06 0.00E+00 3.77E-06
0.00E+00 6.24E-06 3.73E-06 0.00E+00 3.77E-06 6.24E-06
0534 0.00E+00 1.85E-06 0.00E+00 4.74E-06 0.00E+00 2.78E-06 0.00E+00 2.90E-06
0.00E+00 4.74E-06 2.78E-06 0.00E+00 2.90E-06 4.74E-06
0535 0.00E+00 1.28E-06 0.00E+00 3.11E-06 0.00E+00 1.93E-06 0.00E+00 1.83E-06
0.00E+00 3.11E-06 1.93E-06 0.00E+00 1.83E-06 3.11E-06
0536 0.00E+00 1.76E-06 0.00E+00 4.27E-06 0.00E+00 2.65E-06 0.00E+00 2.50E-06
0.00E+00 4.27E-06 2.65E-06 0.00E+00 2.50E-06 4.27E-06
0537 0.00E+00 2.42E-06 0.00E+00 6.18E-06 0.00E+00 3.64E-06 0.00E+00 3.76E-06
0.00E+00 6.18E-06 3.64E-06 0.00E+00 3.76E-06 6.18E-06
0538 0.00E+00 1.48E-06 0.00E+00 3.75E-06 0.00E+00 2.22E-06 0.00E+00 2.28E-06
0.00E+00 3.75E-06 2.22E-06 0.00E+00 2.28E-06 3.75E-06
0539 0.00E+00 2.06E-06 0.00E+00 4.98E-06 0.00E+00 3.10E-06 0.00E+00 2.92E-06
0.00E+00 4.98E-06 3.10E-06 0.00E+00 2.92E-06 4.98E-06
0540 0.00E+00 1.81E-06 0.00E+00 4.39E-06 0.00E+00 2.73E-06 0.00E+00 2.57E-06
0.00E+00 4.39E-06 2.73E-06 0.00E+00 2.57E-06 4.39E-06
0541 0.00E+00 3.26E-06 0.00E+00 7.85E-06 0.00E+00 4.91E-06 0.00E+00 4.59E-06
0.00E+00 7.85E-06 4.91E-06 0.00E+00 4.59E-06 7.85E-06
0542 0.00E+00 2.85E-06 0.00E+00 6.93E-06 0.00E+00 4.30E-06 0.00E+00 4.08E-06
0.00E+00 6.93E-06 4.30E-06 0.00E+00 4.08E-06 6.93E-06
0543 0.00E+00 2.03E-06 0.00E+00 4.93E-06 0.00E+00 3.05E-06 0.00E+00 2.90E-06
0.00E+00 4.93E-06 3.05E-06 0.00E+00 2.90E-06 4.93E-06
0544 0.00E+00 3.15E-06 0.00E+00 7.64E-06 0.00E+00 4.74E-06 0.00E+00 4.49E-06
0.00E+00 7.64E-06 4.74E-06 0.00E+00 4.49E-06 7.64E-06
0545 0.00E+00 2.74E-06 0.00E+00 6.68E-06 0.00E+00 4.12E-06 0.00E+00 3.94E-06
0.00E+00 6.68E-06 4.12E-06 0.00E+00 3.94E-06 6.68E-06

0546 0.00E+00 1.78E-06 0.00E+00 5.01E-06 0.00E+00 2.67E-06 0.00E+00 3.23E-06
0.00E+00 5.01E-06 2.67E-06 0.00E+00 3.23E-06 5.01E-06
0547 0.00E+00 2.84E-06 0.00E+00 6.98E-06 0.00E+00 4.27E-06 0.00E+00 4.14E-06
0.00E+00 6.98E-06 4.27E-06 0.00E+00 4.14E-06 6.98E-06
0548 0.00E+00 2.10E-06 0.00E+00 5.05E-06 0.00E+00 3.15E-06 0.00E+00 2.95E-06
0.00E+00 5.05E-06 3.15E-06 0.00E+00 2.95E-06 5.05E-06
0549 0.00E+00 1.62E-06 0.00E+00 3.93E-06 0.00E+00 2.43E-06 0.00E+00 2.31E-06
0.00E+00 3.93E-06 2.43E-06 0.00E+00 2.31E-06 3.93E-06
0550 0.00E+00 2.46E-06 0.00E+00 6.07E-06 0.00E+00 3.71E-06 0.00E+00 3.60E-06
0.00E+00 6.07E-06 3.71E-06 0.00E+00 3.60E-06 6.07E-06
0551 0.00E+00 1.88E-06 0.00E+00 4.66E-06 0.00E+00 2.83E-06 0.00E+00 2.78E-06
0.00E+00 4.66E-06 2.83E-06 0.00E+00 2.78E-06 4.66E-06
0552 0.00E+00 1.70E-06 0.00E+00 4.21E-06 0.00E+00 2.56E-06 0.00E+00 2.51E-06
0.00E+00 4.21E-06 2.56E-06 0.00E+00 2.51E-06 4.21E-06
0553 0.00E+00 1.65E-06 0.00E+00 4.03E-06 0.00E+00 2.48E-06 0.00E+00 2.39E-06
0.00E+00 4.03E-06 2.48E-06 0.00E+00 2.39E-06 4.03E-06
0554 0.00E+00 1.92E-06 0.00E+00 4.61E-06 0.00E+00 2.89E-06 0.00E+00 2.68E-06
0.00E+00 4.61E-06 2.89E-06 0.00E+00 2.68E-06 4.61E-06
0555 0.00E+00 1.24E-06 0.00E+00 3.38E-06 0.00E+00 1.86E-06 0.00E+00 2.14E-06
0.00E+00 3.38E-06 1.86E-06 0.00E+00 2.14E-06 3.38E-06
0556 0.00E+00 1.22E-06 0.00E+00 3.09E-06 0.00E+00 1.84E-06 0.00E+00 1.86E-06
0.00E+00 3.09E-06 1.84E-06 0.00E+00 1.86E-06 3.09E-06
0557 0.00E+00 9.34E-07 0.00E+00 2.62E-06 0.00E+00 1.41E-06 0.00E+00 1.69E-06
0.00E+00 2.62E-06 1.41E-06 0.00E+00 1.69E-06 2.62E-06
0558 0.00E+00 1.29E-05 0.00E+00 2.21E-05 0.00E+00 1.94E-05 0.00E+00 9.18E-06
0.00E+00 2.21E-05 1.94E-05 0.00E+00 9.18E-06 2.21E-05
0559 0.00E+00 1.13E-05 0.00E+00 1.93E-05 0.00E+00 1.70E-05 0.00E+00 8.02E-06
0.00E+00 1.93E-05 1.70E-05 0.00E+00 8.02E-06 1.93E-05
0560 0.00E+00 3.53E-06 0.00E+00 8.59E-06 0.00E+00 5.31E-06 0.00E+00 5.06E-06
0.00E+00 8.59E-06 5.31E-06 0.00E+00 5.06E-06 8.59E-06
0561 0.00E+00 3.48E-06 0.00E+00 1.34E-05 0.00E+00 5.24E-06 0.00E+00 9.92E-06
0.00E+00 1.34E-05 5.24E-06 0.00E+00 9.92E-06 1.34E-05

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 6.2.0
** Lakes Environmental Software Inc.
** Date: 10/15/2009
** File: C:\Lakes\Reedley\ReedHRA.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\BFD\BFD.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 4 6 MONTH PERIOD
   POLLUTID OTHER
   RUNORNOT RUN
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION STCK1 POINT 282991.252 4051101.623 0.0
** DESCRSRC Idling
   LOCATION STCK2 POINT 282923.178 4051106.434 0.0
** DESCRSRC Loading Point
   LOCATION STCK3 POINT 282923.178 4051101.879 0.0
** DESCRSRC Breathing Point
   LOCATION VOL1 VOLUME 282981.515 4051105.606 0.0
** DESCRSRC Refueling
   LOCATION VOL2 VOLUME 282981.515 4051105.606 0.0
** DESCRSRC Spillage
   LOCATION AREA1 AREA 282913.484 4051267.928 0.0
   LOCATION AREA2 AREA 282919.484 4051268.357 0.0
   LOCATION AREA3 AREA 282925.340 4051268.450 0.0
   LOCATION AREA4 AREA 282931.354 4051268.701 0.0
   LOCATION AREA5 AREA 282937.031 4051268.893 0.0
   LOCATION AREA6 AREA 282939.211 4051263.659 0.0
   LOCATION AREA7 AREA 282939.205 4051256.759 0.0
   LOCATION AREA8 AREA 282939.462 4051249.701 0.0
   LOCATION AREA9 AREA 282939.555 4051242.888 0.0
   LOCATION AREA10 AREA 282939.648 4051235.843 0.0
   LOCATION AREA11 AREA 282939.648 4051228.765 0.0
   LOCATION AREA12 AREA 282939.734 4051221.859 0.0
   LOCATION AREA13 AREA 282939.991 4051214.715 0.0
   LOCATION AREA14 AREA 282939.898 4051207.743 0.0
   LOCATION AREA15 AREA 282940.163 4051200.685 0.0
   LOCATION AREA16 AREA 282940.077 4051193.786 0.0
   LOCATION AREA17 AREA 282940.434 4051186.608 0.0
   LOCATION AREA18 AREA 282940.520 4051179.557 0.0
   LOCATION AREA19 AREA 282940.513 4051172.578 0.0
   LOCATION AREA20 AREA 282940.520 4051165.520 0.0
   LOCATION AREA21 AREA 282940.685 4051158.356 0.0
   LOCATION AREA22 AREA 282940.778 4051151.457 0.0
   LOCATION AREA23 AREA 282940.823 4051144.185 0.0
   LOCATION AREA24 AREA 282941.025 4051137.440 0.0
   LOCATION AREA25 AREA 282941.025 4051130.191 0.0
   LOCATION AREA26 AREA 282940.956 4051123.212 0.0
```

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LOCATION AREA27 AREA 282941.227 4051116.302 0.0
LOCATION AREA28 AREA 282941.227 4051109.222 0.0
LOCATION AREA29 AREA 282941.126 4051102.377 0.0
LOCATION AREA30 AREA 282941.530 4051095.132 0.0
LOCATION AREA31 AREA 282946.241 4051093.449 0.0
LOCATION AREA32 AREA 282952.909 4051093.348 0.0
LOCATION AREA33 AREA 282959.273 4051093.348 0.0
LOCATION AREA34 AREA 282965.739 4051093.449 0.0
LOCATION AREA35 AREA 282972.205 4051093.550 0.0
LOCATION AREA36 AREA 282978.772 4051093.449 0.0
LOCATION AREA37 AREA 282985.339 4051093.449 0.0
LOCATION AREA38 AREA 282991.501 4051093.449 0.0
** Source Parameters **
SRCPARAM STCK1 1 3.840 366.000 51.71000 0.100
SRCPARAM STCK2 1 3.660 291.000 0.00035 0.051
SRCPARAM STCK3 1 3.660 288.710 0.00011 0.051
SRCPARAM VOL1 1 4.000 3.023 1.860
SRCPARAM VOL2 1 4.000 3.023 1.860
SRCPARAM AREA1 0.07463 1.830 3.658 3.658 0.000
SRCPARAM AREA2 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA3 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA4 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA5 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA6 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA7 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA8 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA9 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA10 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA11 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA12 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA13 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA14 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA15 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA16 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA17 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA18 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA19 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA20 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA21 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA22 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA23 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA24 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA25 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA26 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA27 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA28 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA29 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA30 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA31 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA32 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA33 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA34 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA35 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA36 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA37 0.07463 1.830 3.658 3.658 0.000 0.000
SRCPARAM AREA38 0.07463 1.830 3.658 3.658 0.000 0.000

** Building Downwash **
BUILDHGT STCK1        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK1        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK1        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK1        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK1        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK1        0.00     0.00     0.00     0.00     0.00     0.00

BUILDHGT STCK2        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK2        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK2        0.00     0.00     0.00     0.00     0.00     0.00
BUILDHGT STCK2        0.00     0.00     0.00     0.00     0.00     0.00
```

BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
BUILDLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00

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XBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
XBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
XBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00

YBADJ     STCK1        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK1        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK1        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK1        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK1        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK1        0.00      0.00      0.00      0.00      0.00      0.00

YBADJ     STCK2        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK2        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK2        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK2        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK2        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK2        0.00      0.00      0.00      0.00      0.00      0.00

YBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00
YBADJ     STCK3        0.00      0.00      0.00      0.00      0.00      0.00

SRCGROUP AREA1 AREA1
SRCGROUP AREA10 AREA10
SRCGROUP AREA11 AREA11
SRCGROUP AREA12 AREA12
SRCGROUP AREA13 AREA13
SRCGROUP AREA14 AREA14
SRCGROUP AREA15 AREA15
SRCGROUP AREA16 AREA16
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SRCGROUP AREA18 AREA18
SRCGROUP AREA19 AREA19
SRCGROUP AREA2 AREA2
SRCGROUP AREA20 AREA20
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SRCGROUP AREA26 AREA26
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SRCGROUP AREA28 AREA28
SRCGROUP AREA29 AREA29
SRCGROUP AREA3 AREA3
SRCGROUP AREA30 AREA30
SRCGROUP AREA31 AREA31
SRCGROUP AREA32 AREA32
SRCGROUP AREA33 AREA33
SRCGROUP AREA34 AREA34
SRCGROUP AREA35 AREA35
SRCGROUP AREA36 AREA36
SRCGROUP AREA37 AREA37
SRCGROUP AREA38 AREA38
SRCGROUP AREA4 AREA4
SRCGROUP AREA5 AREA5
SRCGROUP AREA6 AREA6
SRCGROUP AREA7 AREA7
SRCGROUP AREA8 AREA8
SRCGROUP AREA9 AREA9
SRCGROUP STCK1 STCK1
SRCGROUP STCK2 STCK2
SRCGROUP STCK3 STCK3
SRCGROUP VOL1 VOL1
SRCGROUP VOL2 VOL2
SO FINISHED
```

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**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "UCART1" "Receptors generated from Uniform Cartesian Grid"
   DISCCART    281347.01   4051905.82    0.00    0.00
   DISCCART    281430.01   4051905.82    0.00    0.00
   DISCCART    281513.01   4051905.82    0.00    0.00
   DISCCART    281596.01   4051905.82    0.00    0.00
   DISCCART    281679.01   4051905.82    0.00    0.00
   DISCCART    281762.01   4051905.82    0.00    0.00
   DISCCART    281845.01   4051905.82    0.00    0.00
   DISCCART    281928.01   4051905.82    0.00    0.00
   DISCCART    282011.01   4051905.82    0.00    0.00
   DISCCART    282094.01   4051905.82    0.00    0.00
   DISCCART    282177.01   4051905.82    0.00    0.00
   DISCCART    282260.01   4051905.82    0.00    0.00
   DISCCART    282343.01   4051905.82    0.00    0.00
   DISCCART    282426.01   4051905.82    0.00    0.00
   DISCCART    282509.01   4051905.82    0.00    0.00
   DISCCART    281347.01   4051991.82    0.00    0.00
   DISCCART    281430.01   4051991.82    0.00    0.00
   DISCCART    281513.01   4051991.82    0.00    0.00
   DISCCART    281596.01   4051991.82    0.00    0.00
   DISCCART    281679.01   4051991.82    0.00    0.00
   DISCCART    281762.01   4051991.82    0.00    0.00
   DISCCART    281845.01   4051991.82    0.00    0.00
   DISCCART    281928.01   4051991.82    0.00    0.00
   DISCCART    282011.01   4051991.82    0.00    0.00
   DISCCART    282094.01   4051991.82    0.00    0.00
   DISCCART    282177.01   4051991.82    0.00    0.00
   DISCCART    282260.01   4051991.82    0.00    0.00
   DISCCART    282343.01   4051991.82    0.00    0.00
   DISCCART    282426.01   4051991.82    0.00    0.00
   DISCCART    282509.01   4051991.82    0.00    0.00
   DISCCART    281347.01   4052077.82    0.00    0.00
   DISCCART    281430.01   4052077.82    0.00    0.00
   DISCCART    281513.01   4052077.82    0.00    0.00
   DISCCART    281596.01   4052077.82    0.00    0.00
   DISCCART    281679.01   4052077.82    0.00    0.00
   DISCCART    281762.01   4052077.82    0.00    0.00
   DISCCART    281845.01   4052077.82    0.00    0.00
   DISCCART    281928.01   4052077.82    0.00    0.00
   DISCCART    282011.01   4052077.82    0.00    0.00
   DISCCART    282094.01   4052077.82    0.00    0.00
   DISCCART    282177.01   4052077.82    0.00    0.00
   DISCCART    282260.01   4052077.82    0.00    0.00
   DISCCART    282343.01   4052077.82    0.00    0.00
   DISCCART    282426.01   4052077.82    0.00    0.00
   DISCCART    282509.01   4052077.82    0.00    0.00
   DISCCART    281347.01   4052163.82    0.00    0.00
   DISCCART    281430.01   4052163.82    0.00    0.00
   DISCCART    281513.01   4052163.82    0.00    0.00
   DISCCART    281596.01   4052163.82    0.00    0.00
   DISCCART    281679.01   4052163.82    0.00    0.00
   DISCCART    281762.01   4052163.82    0.00    0.00
   DISCCART    281845.01   4052163.82    0.00    0.00
   DISCCART    281928.01   4052163.82    0.00    0.00
   DISCCART    282011.01   4052163.82    0.00    0.00
   DISCCART    282094.01   4052163.82    0.00    0.00
   DISCCART    282177.01   4052163.82    0.00    0.00
   DISCCART    282260.01   4052163.82    0.00    0.00
   DISCCART    282343.01   4052163.82    0.00    0.00
   DISCCART    282426.01   4052163.82    0.00    0.00
   DISCCART    282509.01   4052163.82    0.00    0.00
   DISCCART    281347.01   4052249.82    0.00    0.00
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DISCCART	281430.01	4052249.82	0.00	0.00
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   DISCCART    282509.01   4053109.82    0.00    0.00
** DESCRREC "" ""
   DISCCART    282718.21   4050989.97    0.00    0.00
   DISCCART    282758.11   4050967.79    0.00    0.00
   DISCCART    282802.45   4050945.62    0.00    0.00
   DISCCART    282842.36   4050919.02    0.00    0.00
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   DISCCART    282684.95   4051014.35    0.00    0.00
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   DISCCART    282589.62   4051063.13    0.00    0.00
** DESCRREC "UCART1" "Receptors generated from Uniform Cartesian Grid"
   DISCCART    282527.92   4051476.54    0.00    0.00
   DISCCART    282587.92   4051476.54    0.00    0.00
   DISCCART    282647.92   4051476.54    0.00    0.00
   DISCCART    282707.92   4051476.54    0.00    0.00
   DISCCART    282527.92   4051541.54    0.00    0.00
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   DISCCART    282647.92   4051671.54    0.00    0.00
   DISCCART    282707.92   4051671.54    0.00    0.00
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   DISCCART    282123.42   4051346.46    0.00    0.00
   DISCCART    282188.42   4051346.46    0.00    0.00
   DISCCART    282253.42   4051346.46    0.00    0.00
   DISCCART    282318.42   4051346.46    0.00    0.00
   DISCCART    282383.42   4051346.46    0.00    0.00
   DISCCART    282448.42   4051346.46    0.00    0.00
   DISCCART    282513.42   4051346.46    0.00    0.00
   DISCCART    282058.42   4051421.46    0.00    0.00
   DISCCART    282123.42   4051421.46    0.00    0.00
   DISCCART    282188.42   4051421.46    0.00    0.00
   DISCCART    282253.42   4051421.46    0.00    0.00
   DISCCART    282318.42   4051421.46    0.00    0.00
   DISCCART    282383.42   4051421.46    0.00    0.00
   DISCCART    282448.42   4051421.46    0.00    0.00
   DISCCART    282513.42   4051421.46    0.00    0.00
   DISCCART    282058.42   4051496.46    0.00    0.00
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DISCCART	282188.42	4051496.46	0.00	0.00
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DISCCART	281513.59	4051799.77	0.00	0.00
DISCCART	281597.29	4051799.77	0.00	0.00
DISCCART	281680.99	4051799.77	0.00	0.00
DISCCART	281764.69	4051799.77	0.00	0.00
DISCCART	281848.39	4051799.77	0.00	0.00
DISCCART	281932.09	4051799.77	0.00	0.00
DISCCART	282015.79	4051799.77	0.00	0.00
DISCCART	281346.19	4051877.02	0.00	0.00
DISCCART	281429.89	4051877.02	0.00	0.00
DISCCART	281513.59	4051877.02	0.00	0.00
DISCCART	281597.29	4051877.02	0.00	0.00
DISCCART	281680.99	4051877.02	0.00	0.00
DISCCART	281764.69	4051877.02	0.00	0.00
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DISCCART	282015.79	4051877.02	0.00	0.00
DISCCART	282529.42	4051873.35	0.00	0.00
DISCCART	282636.42	4051873.35	0.00	0.00
DISCCART	282743.42	4051873.35	0.00	0.00

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   DISCCART     283064.42    4051873.35     0.00     0.00
   DISCCART     283171.42    4051873.35     0.00     0.00
   DISCCART     283278.42    4051873.35     0.00     0.00
   DISCCART     283385.42    4051873.35     0.00     0.00
   DISCCART     283492.42    4051873.35     0.00     0.00
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   DISCCART     282850.42    4051978.35     0.00     0.00
   DISCCART     282957.42    4051978.35     0.00     0.00
   DISCCART     283064.42    4051978.35     0.00     0.00
   DISCCART     283171.42    4051978.35     0.00     0.00
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   DISCCART     283385.42    4051978.35     0.00     0.00
   DISCCART     283492.42    4051978.35     0.00     0.00
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   DISCCART     282636.42    4052083.35     0.00     0.00
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   DISCCART     282636.42    4052188.35     0.00     0.00
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   DISCCART     282957.42    4052188.35     0.00     0.00
   DISCCART     283064.42    4052188.35     0.00     0.00
   DISCCART     283171.42    4052188.35     0.00     0.00
   DISCCART     283278.42    4052188.35     0.00     0.00
   DISCCART     283385.42    4052188.35     0.00     0.00
   DISCCART     283492.42    4052188.35     0.00     0.00
   DISCCART     282529.42    4052293.35     0.00     0.00
   DISCCART     282636.42    4052293.35     0.00     0.00
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   DISCCART     282850.42    4052293.35     0.00     0.00
   DISCCART     282957.42    4052293.35     0.00     0.00
   DISCCART     283064.42    4052293.35     0.00     0.00
   DISCCART     283171.42    4052293.35     0.00     0.00
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   DISCCART     282774.95    4050216.32     0.00     0.00
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   DISCCART     283896.07    4050444.70     0.00     0.00
   DISCCART     283660.78    4051102.14     0.00     0.00
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   DISCCART     283709.22    4051413.56     0.00     0.00
   DISCCART     284096.77    4051524.29     0.00     0.00
   DISCCART     283695.38    4051904.92     0.00     0.00
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   DISCCART    284103.69   4052667.70    0.00    0.00
   DISCCART    284220.39   4052719.91    0.00    0.00
   DISCCART    284100.62   4052363.68    0.00    0.00
   DISCCART    284168.18   4052357.53    0.00    0.00
   DISCCART    284229.60   4052375.96    0.00    0.00
   DISCCART    284109.83   4052495.73    0.00    0.00
   DISCCART    284377.01   4051921.45    0.00    0.00
   DISCCART    284103.69   4052102.64    0.00    0.00
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   DISCCART    284853.02   4051847.75    0.00    0.00
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   DISCCART    283661.47   4050207.83    0.00    0.00
** DESCRREC "UCART1" "Receptors generated from Uniform Cartesian Grid"
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   DISCCART    284252.51   4050035.65    0.00    0.00
   DISCCART    284412.51   4050035.65    0.00    0.00
   DISCCART    284572.51   4050035.65    0.00    0.00
   DISCCART    284092.51   4050135.65    0.00    0.00
   DISCCART    284252.51   4050135.65    0.00    0.00
   DISCCART    284412.51   4050135.65    0.00    0.00
   DISCCART    284572.51   4050135.65    0.00    0.00
   DISCCART    284092.51   4050235.65    0.00    0.00
   DISCCART    284252.51   4050235.65    0.00    0.00
   DISCCART    284412.51   4050235.65    0.00    0.00
   DISCCART    284572.51   4050235.65    0.00    0.00
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** DESCRREC "" ""
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   DISCCART    283312.82   4049984.37    0.00    0.00
   DISCCART    283316.43   4049883.20    0.00    0.00
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   DISCCART    283544.04   4049886.82    0.00    0.00
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   DISCCART    283703.02   4049771.20    0.00    0.00
   DISCCART    283894.50   4049872.37    0.00    0.00
   DISCCART    283948.70   4049796.49    0.00    0.00
   DISCCART    284035.41   4049702.56    0.00    0.00
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   DISCCART    281860.41   4050631.09    0.00    0.00
   DISCCART    281469.23   4051138.15    0.00    0.00
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE C:\Lakes\MET\Fresno\2004-2008.SFC
   PROFFILE C:\Lakes\MET\Fresno\2004-2008.PFL
   SURFDATA 93193 2004 FRESNO/AIR_TERMINAL
   UAIRDATA 23230 2004 OAKLAND/WSO_AP
   PROFBASE 101 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 4 1ST
   RECTABLE 6 1ST
   RECTABLE MONTH 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 AREA1 1ST REEDHRA.AD\01H1G001.PLT
   PLOTFILE 4 AREA1 1ST REEDHRA.AD\04H1G001.PLT
   PLOTFILE 6 AREA1 1ST REEDHRA.AD\06H1G001.PLT
   PLOTFILE MONTH AREA1 1ST REEDHRA.AD\MOH1G001.PLT
   PLOTFILE PERIOD AREA1 REEDHRA.AD\PE00G001.PLT
   PLOTFILE 1 AREA10 1ST REEDHRA.AD\01H1G002.PLT
   PLOTFILE 4 AREA10 1ST REEDHRA.AD\04H1G002.PLT
   PLOTFILE 6 AREA10 1ST REEDHRA.AD\06H1G002.PLT
   PLOTFILE MONTH AREA10 1ST REEDHRA.AD\MOH1G002.PLT
   PLOTFILE PERIOD AREA10 REEDHRA.AD\PE00G002.PLT
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   PLOTFILE 4 AREA11 1ST REEDHRA.AD\04H1G003.PLT
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   PLOTFILE PERIOD AREA11 REEDHRA.AD\PE00G003.PLT
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   PLOTFILE 4 AREA12 1ST REEDHRA.AD\04H1G004.PLT
   PLOTFILE 6 AREA12 1ST REEDHRA.AD\06H1G004.PLT
   PLOTFILE MONTH AREA12 1ST REEDHRA.AD\MOH1G004.PLT
   PLOTFILE PERIOD AREA12 REEDHRA.AD\PE00G004.PLT
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PLOTFILE MONTH AREA13 1ST REEDHRA.AD\MOH1G005.PLT
PLOTFILE PERIOD AREA13 REEDHRA.AD\PE00G005.PLT
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PLOTFILE MONTH AREA16 1ST REEDHRA.AD\MOH1G008.PLT
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PLOTFILE MONTH AREA17 1ST REEDHRA.AD\MOH1G009.PLT
PLOTFILE PERIOD AREA17 REEDHRA.AD\PE00G009.PLT
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PLOTFILE MONTH AREA24 1ST REEDHRA.AD\MOH1G017.PLT
PLOTFILE PERIOD AREA24 REEDHRA.AD\PE00G017.PLT
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PLOTFILE 6 AREA25 1ST REEDHRA.AD\06H1G018.PLT
PLOTFILE MONTH AREA25 1ST REEDHRA.AD\MOH1G018.PLT
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PLOTFILE 4 AREA26 1ST REEDHRA.AD\04H1G019.PLT
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PLOTFILE MONTH AREA26 1ST REEDHRA.AD\MOH1G019.PLT
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ATTACHMENT H

California Air Resources Board 2008 Estimated Annual Average Emissions
- San Joaquin Valley Air Basin

ALMANAC EMISSION PROJECTION DATA (PUBLISHED IN 2009)

2008 Estimated Annual Average Emissions

SAN JOAQUIN VALLEY AIR BASIN

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.
See detailed information.
Start a new query.

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
FUEL COMBUSTION	36.1	11.1	36.3	57.9	12.8	7.4	6.9	6.7
WASTE DISPOSAL	285.7	2.6	0.5	0.2	0.1	0.4	0.1	0.1
CLEANING AND SURFACE COATINGS	17.7	15.3	0.0	0.0	-	0.1	0.1	0.1
PETROLEUM PRODUCTION AND MARKETING	134.5	36.1	1.1	0.4	0.2	0.2	0.2	0.1
INDUSTRIAL PROCESSES	20.6	18.6	4.0	21.4	7.0	29.2	17.8	10.4
*** TOTAL STATIONARY SOURCES**	**494.6**	**83.7**	**41.8**	**80.0**	**20.1**	**37.4**	**25.1**	**17.5**
AREAWIDE SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
SOLVENT EVAPORATION	63.7	58.9	-	-	-	-	-	-
MISCELLANEOUS PROCESSES	900.1	90.6	268.4	17.9	1.1	471.2	250.9	67.7
*** TOTAL AREAWIDE SOURCES**	**963.7**	**149.5**	**268.4**	**17.9**	**1.1**	**471.2**	**250.9**	**67.7**
MOBILE SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
ON-ROAD MOTOR VEHICLES	87.0	79.2	705.6	330.0	0.7	14.7	14.6	11.8
OTHER MOBILE SOURCES	62.9	56.9	336.5	138.2	1.2	9.3	9.1	8.3
*** TOTAL MOBILE SOURCES**	**149.9**	**136.1**	**1042.1**	**468.2**	**1.9**	**24.0**	**23.7**	**20.2**
NATURAL (NON-ANTHROPOGENIC) SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
NATURAL SOURCES	265.9	235.2	347.5	10.6	3.3	36.6	35.2	29.8
*** TOTAL NATURAL (NON-ANTHROPOGENIC) SOURCES**	**265.9**	**235.2**	**347.5**	**10.6**	**3.3**	**36.6**	**35.2**	**29.8**
GRAND TOTAL FOR SAN JOAQUIN VALLEY AIR BASIN	**1874.0**	**604.5**	**1699.7**	**576.7**	**26.3**	**569.1**	**334.9**	**135.2**

Start a new query.

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ATTACHMENT I

California Air Resources Board 2008 Estimated Annual Average Emissions
- Fresno County

ALMANAC EMISSION PROJECTION DATA (PUBLISHED IN 2009)

2008 Estimated Annual Average Emissions

FRESNO COUNTY

All emissions are represented in Tons per Day and reflect the most current data provided to ARB
See detailed information.
Start a new query.

FRESNO COUNTY COUNTY - SAN JOAQUIN VALLEY AIR BASIN

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
FUEL COMBUSTION	3.0	0.8	8.6	11.6	4.5	1.3	1.2	1.2
WASTE DISPOSAL	195.5	1.5	0.1	0.0	0.0	0.1	0.0	0.0
CLEANING AND SURFACE COATINGS	7.9	6.2	-	-	-	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING	17.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL PROCESSES	5.5	5.2	0.3	5.0	3.4	4.9	2.9	1.7
*** TOTAL STATIONARY SOURCES**	**229.0**	**16.7**	**8.9**	**16.6**	**8.0**	**6.3**	**4.2**	**2.9**
AREAWIDE SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
SOLVENT EVAPORATION	16.2	15.1	-	-	-	-	-	-
MISCELLANEOUS PROCESSES	168.1	21.2	110.3	6.9	0.5	132.1	72.0	21.7
*** TOTAL AREAWIDE SOURCES**	**184.3**	**36.3**	**110.3**	**6.9**	**0.5**	**132.1**	**72.0**	**21.7**
MOBILE SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
ON-ROAD MOTOR VEHICLES	18.8	17.2	154.7	63.3	0.1	2.8	2.8	2.2
OTHER MOBILE SOURCES	14.7	13.4	77.3	25.5	0.2	1.7	1.6	1.5
*** TOTAL MOBILE SOURCES**	**33.5**	**30.6**	**232.0**	**88.9**	**0.4**	**4.5**	**4.4**	**3.7**
NATURAL (NON-ANTHROPOGENIC) SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
NATURAL SOURCES	68.9	63.9	14.6	0.5	0.1	1.5	1.5	1.3
*** TOTAL NATURAL (NON-ANTHROPOGENIC) SOURCES**	**68.9**	**63.9**	**14.6**	**0.5**	**0.1**	**1.5**	**1.5**	**1.3**
TOTAL FRESNO COUNTY IN SAN JOAQUIN VALLEY	**515.7**	**147.4**	**365.9**	**112.9**	**9.0**	**144.5**	**82.1**	**29.5**
GRAND TOTAL FOR FRESNO COUNTY	**515.7**	**147.4**	**365.9**	**112.9**	**9.0**	**144.5**	**82.1**	**29.5**

Start a new query.

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ATTACHMENT J

California Air Resources Board 2020 Forecasted Annual Average Emissions

ALMANAC EMISSION PROJECTION DATA (PUBLISHED IN 2009)

2020 Estimated Annual Average Emissions

FRESNO COUNTY

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.
See detailed information.
Start a new query

FRESNO COUNTY COUNTY - SAN JOAQUIN VALLEY AIR BASIN

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
FUEL COMBUSTION	2.9	0.6	7.9	9.0	5.3	1.4	1.3	1.3
WASTE DISPOSAL	234.7	1.7	0.1	0.0	0.0	0.1	0.0	0.0
CLEANING AND SURFACE COATINGS	10.3	8.1	-	-	-	0.0	0.0	0.0
PETROLEUM PRODUCTION AND MARKETING	18.1	3.1	0.0	0.0	0.0	0.0	0.0	0.0
INDUSTRIAL PROCESSES	6.2	5.8	0.3	6.3	4.1	5.5	3.3	2.0
* TOTAL STATIONARY SOURCES	272.1	19.4	8.3	15.4	9.5	7.1	4.7	3.3
AREAWIDE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
SOLVENT EVAPORATION	17.3	16.0	-	-	-	-	-	-
MISCELLANEOUS PROCESSES	196.0	23.0	109.3	6.6	0.5	136.5	74.0	21.6
* TOTAL AREAWIDE SOURCES	213.3	39.0	109.3	6.6	0.5	136.5	74.0	21.6
MOBILE SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
ON-ROAD MOTOR VEHICLES	9.4	8.6	68.8	25.8	0.2	1.9	1.9	1.3
OTHER MOBILE SOURCES	12.2	11.2	79.1	14.3	0.3	1.0	1.0	0.8
* TOTAL MOBILE SOURCES	21.6	19.8	147.9	40.1	0.4	2.9	2.9	2.1
NATURAL (NON-ANTHROPOGENIC) SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
NATURAL SOURCES	68.9	63.9	14.6	0.5	0.1	1.5	1.5	1.3
* TOTAL NATURAL (NON-ANTHROPOGENIC) SOURCES	68.9	63.9	14.6	0.5	0.1	1.5	1.5	1.3
TOTAL FRESNO COUNTY IN SAN JOAQUIN VALLEY	575.9	142.1	280.2	62.5	10.6	148.1	83.1	28.3
GRAND TOTAL FOR FRESNO COUNTY	575.9	142.1	280.2	62.5	10.6	148.1	83.1	28.3

Start a new query.

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ALMANAC EMISSION PROJECTION DATA (PUBLISHED IN 2009)

2020 Estimated Annual Average Emissions

SAN JOAQUIN VALLEY AIR BASIN

All emissions are represented in Tons per Day and reflect the most current data provided to ARB.

See detailed information.

Start a new query.

STATIONARY SOURCES	TOG	ROG	CO	NOX	SOX	PM	PM10	PM2.5
FUEL COMBUSTION	35.0	9.5	37.7	49.8	15.4	8.1	7.4	7.0
WASTE DISPOSAL	343.6	3.2	0.6	0.3	0.1	0.5	0.2	0.1
CLEANING AND SURFACE COATINGS	22.4	19.3	0.0	0.0	-	0.2	0.2	0.2
PETROLEUM PRODUCTION AND MARKETING	141.1	33.8	1.2	0.5	0.2	0.2	0.2	0.2
INDUSTRIAL PROCESSES	23.6	21.3	4.3	24.2	8.5	32.8	20.0	11.9
*** TOTAL STATIONARY SOURCES**	**565.8**	**87.0**	**43.8**	**74.8**	**24.3**	**41.8**	**27.9**	**19.4**
AREAWIDE SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
SOLVENT EVAPORATION	70.2	64.4	-	-	-	-	-	-
MISCELLANEOUS PROCESSES	1111.1	106.3	268.4	17.1	1.1	502.5	265.8	69.6
*** TOTAL AREAWIDE SOURCES**	**1181.2**	**170.7**	**268.4**	**17.1**	**1.1**	**502.5**	**265.8**	**69.6**
MOBILE SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
ON-ROAD MOTOR VEHICLES	45.2	41.3	330.8	140.4	0.9	9.9	9.8	6.9
OTHER MOBILE SOURCES	49.9	45.7	345.2	83.3	1.6	6.5	6.3	5.6
*** TOTAL MOBILE SOURCES**	**95.1**	**87.0**	**676.0**	**223.7**	**2.5**	**16.5**	**16.1**	**12.5**
NATURAL (NON-ANTHROPOGENIC) SOURCES	**TOG**	**ROG**	**CO**	**NOX**	**SOX**	**PM**	**PM10**	**PM2.5**
NATURAL SOURCES	265.9	235.2	347.5	10.6	3.3	36.6	35.2	29.8
*** TOTAL NATURAL (NON-ANTHROPOGENIC) SOURCES**	**265.9**	**235.2**	**347.5**	**10.6**	**3.3**	**36.6**	**35.2**	**29.8**
GRAND TOTAL FOR SAN JOAQUIN VALLEY AIR BASIN	**2108.0**	**579.9**	**1335.8**	**326.2**	**31.1**	**597.3**	**344.9**	**131.4**

Start a new query.

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Appendix D

Reconnaissance Level Biological Survey Report

RECONNAISSANCE LEVEL BIOLOGICAL SURVEY REPORT

Prepared For:

Kings Canyon Unified School District

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Fresno County, California

August 2009

Prepared by:

Jason Thomas

Biologist

Gavin O'Leary

Biologist

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Appendices

Appendix A – CDFG CNDDB Report, USFWS Report, and CNPS Report
Appendix B – Site Plan and Aerial Photographs

1. INTRODUCTION

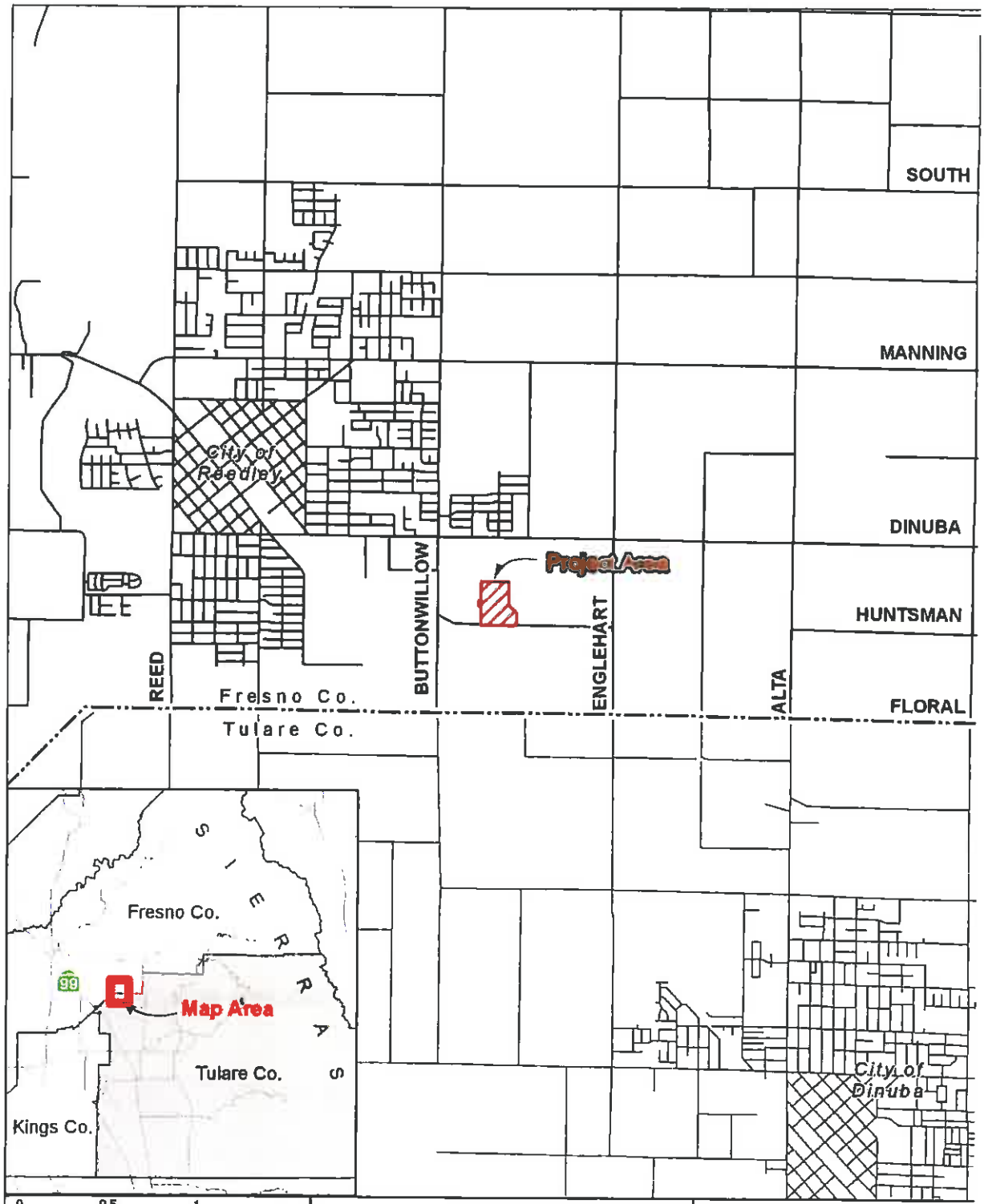
The proposed Project requiring the survey and subsequent report is for construction of a school bus transport yard on a farm/residence, located at 20346 E. Huntsman, Reedley, California, which will be referred to as the "Project" through the rest of this document (**Figure 1**). The Project property contains approximately 22 acres and is directly adjacent to and East of the City of Reedley in Fresno County, California. The parcel is located on the Northern side of Huntsman Avenue and ¼ miles East of Buttonwillow Ave. According to the Public Land Survey System the parcel is in the Northwest ¼ of Township 15 South, Range 23 East, Section 36, from the Mount Diablo Meridian.

Included in this report are details of a reconnaissance level biological survey, site description, evaluation of potential occurrence for special status species and habitats, findings of potential impacts to biological resources (wildlife, plants, or natural communities), and recommendations to avoid potential impacts of the Project.

2. REGULATORY OBJECTIVES

The objective of this investigation was to evaluate the potential impact of the Project to plants, animals, and natural communities that would be affected by the proposed Project. The California Department of Fish and Game (**CDFG**) and the United States Fish and Wildlife Service (**USFWS**) have listed many species as threaten, endangered, or as candidates for state or federal listing. Other species have been designated as "species of special concern" by the CDFG. The California Native Plant Society (**CNPS**) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special-status species". This report identifies and addresses potential Project related effects on special-status animal and plant species that could potentially be present on the Project site. Special-status species may be listed under one or more of the following categories:

- Federal Endangered
- Federal Threatened
- Federal Candidate
- MBTA- protected under the auspices of the Migratory Bird Treaty Act
- State Endangered
- State Threatened
- State Rare
- State Species of Special Concern



PROVOST & PRITCHARD CONSULTING GROUP
EST 1968
286 W. Cromwell Ave.
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(559) 449-2700

Figure 1

KCUSD Transport Yard

Project Location

The ultimate goal of the Endangered Species Act (**ESA**) is the recovery (and subsequent conservation) of endangered and threatened species and the ecosystems on which they depend. A variety of methods and procedures are used to recover listed species, such as protective measures to prevent extinction or further decline and on-the-ground activities for managing and monitoring endangered and threatened species.

The objectives of the reconnaissance level biological survey for the Project were to:

- Describe existing biotic conditions,
- Evaluate the likelihood of sensitive plant and animal species,
- Identify potential impacts and cumulative impacts on sensitive species that could result from the implementation of the proposed Project, and
- Identify mitigation measures that would avoid impacts or reduce impacts to a level that would be less than significant

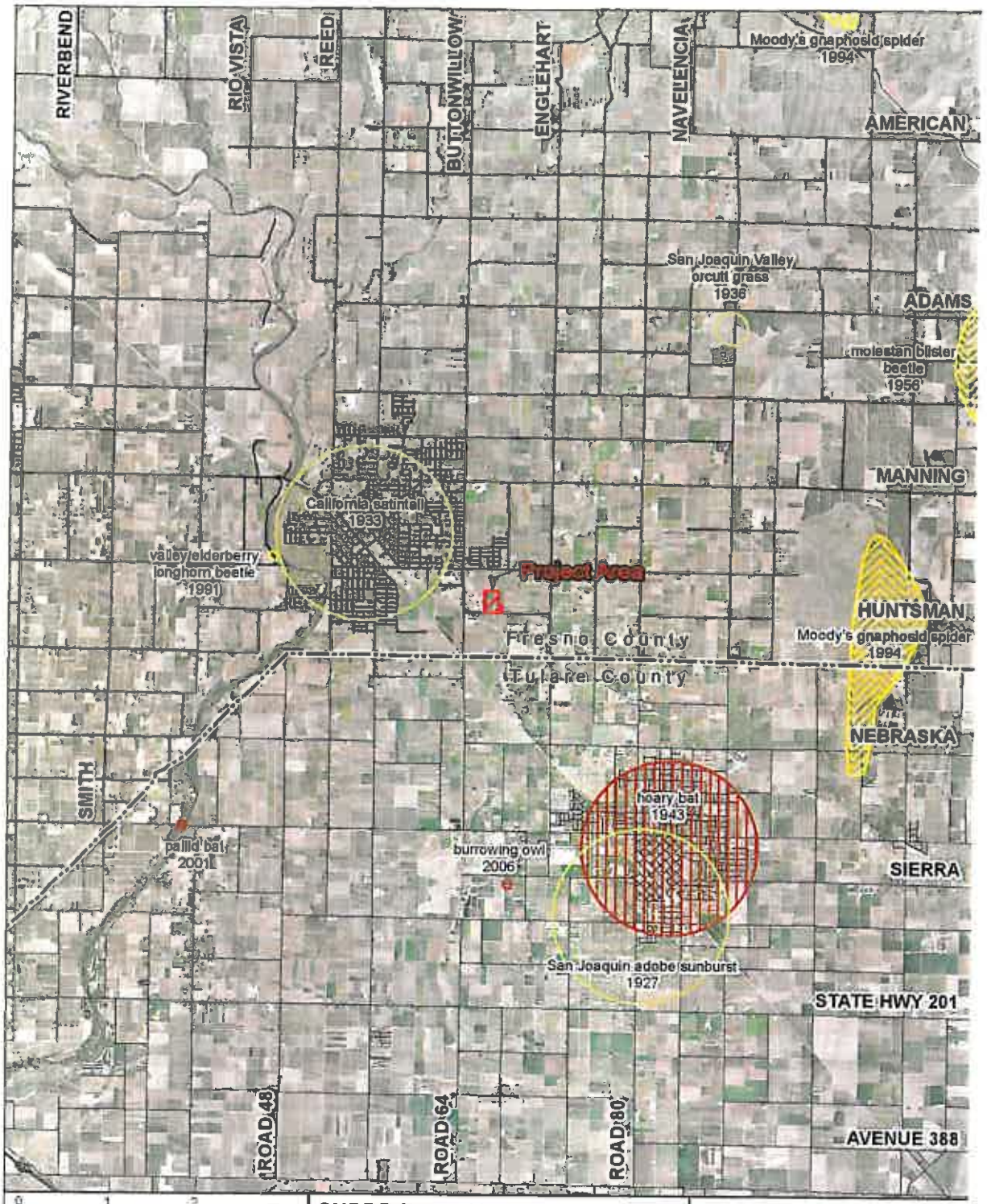
3. METHODOLOGY

A query of the California Natural Diversity Database (**CNDDB**), maintained by the California Department of Fish and Game, was conducted to provide information on species of concern in the Project and surrounding area. A species list was obtained for the Reedley USGS 7.5 minute quadrangle (9 quads) to provide information on special status species (**Figure 2**) that have the potential to occur in the vicinity of the Project (See **Appendix A** for the results of the CNDDB query). A review of the National Wetlands Inventory (**NWI**) maps for the respective quad was also conducted (**Figure 3**). The inventory shows a small area classified as freshwater pond over ½ mile from the project site and another over 2/3 of a mile from the site. Although it is not included in the NWI data, Travers Creek flows North to South within 200 feet of the project site's Eastern edge.

In addition, prior to conducting the reconnaissance level field survey, a query of the CNDDB for eight additional quads was searched to create a list of sensitive species or species with special regulatory status under state or federal law. The search included queries from California Department of Fish and Game, United States Fish and Wildlife Service, and the California Native Plant Society. The following U.S. Geologic Survey quads were used in the species queries and included the site location quad and the surrounding eight quads respectively: Reedley (356C), Sanger (357A), Wahtoke (356B), Orange Cove North (356A), Selma (357D), Orange Cove South (356D), Burris Park (335A), Traver (334B), Monson (334A). Species and habitats identified in this search were evaluated for their potential to occur at the Project site and to be impacted by the Project. **Table 1** summarizes these findings.

Table 1 is a compilation of the various queries and includes the species scientific and common name, code for status designation, and probability of occurrence in the Project site vicinity. Species with the potential to occur or found during the survey were included in this report.

The second part of the investigation was to conduct a reconnaissance level biological survey at the site location subject to the permit process. Two biologists conducted a visual survey at the project site and surrounding area on July 8, 2009. Survey findings are described in **Section 5**, and are also summarized on **Table 1**.



PROVOST & PRITCHARD CONSULTING GROUP
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Fresno, CA 93711-6162
(559) 449-2700

Figure 2

KCUSD Transport Yard

CNDDB Species Records

Table 1: Potential Species On or Within the Project

Listed or special status species and natural communities with potential to occur on the site or within the site vicinity. Search results of USGS 7.5 minute quad containing Project site and eight surrounding quads: Reedley (356C), Sanger (357A), Wahtoke (356B), Orange Cove North (356A), Selma (357D), Orange Cove South (356D), Burris Park (335A), Traver (334B), Monson (334A)

Scientific Name	Common Name	Regulatory Status			Habitat	Survey	Occurrence Evaluation
		Federal	State	CNPS		Observation	
PLANTS							
Atriplex depressa	brittlescale			1B.2	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools	A	Habitat Absent
Atriplex erecticaulis	Earlimart orache			1B	Chenopod scrub, valley and foothill grassland	A	Habitat Absent
Atriplex miniscula	lesser saltscale			1B.1	Chenopod scrub, playas, valley and foothill grassland/alkaline, sandy	A	Habitat Absent
Chamaesyce hooveri	Hoover's spurge	T,X		1B.2	Valley and foothill grassland	A	Habitat Absent
Delphinium recurvatum	recurved larkspur			1B	Chenopod scrub, cismontane woodland, valley and foothill grassland/ alkaline	A	Regional Potential. See Section 5.5
Eryngium spinosepalum	Spiny-sepaled button-celery			1B.2	Valley and foothill grassland, vernal pools	A	Habitat Absent
Imperata brevifolia	California satintail			2.1	chaparral, coastal Scrub, mojavean desert scrub, meadows and seeps, riparian scrub	A	Habitat Absent

Scientific Name	Common Name	Regulatory Status			Habitat	Survey	Occurrence Evaluation
		Federal	State	CNPS		Observation	
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	T,X	E	1B.1	Vernal Pools	A	Habitat Absent
Pseudobahia peirsonii	San Joaquin adobe sunburst	T	E	1B.1	Cismontane woodland, valley and foothill grassland	A	Habitat Absent
Tuctoria greenei	Greene's tuctoria	E	R	1B.1	Vernal Pools	A	Habitat Absent
INVERTEBRATE							
Branchinecta lynchi	vernal pool fairy shrimp	T,X			Ephemeral freshwater habitats such as vernal pools or swales	A	Habitat Absent
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	T			Riparian forests, elderberry shrubs/trees	A	Habitat Absent
Lepidurus packardi	vernal pool tadpole shrimp	E			Ephemeral freshwater habitats such as vernal pools or swales	A	Habitat Absent
Lytta molesta	molestan blister beetle				Annual grassland, foothill woodland and atriplex scrub, dried vernal pools	A	Habitat Absent
Talanites moodyae	Moody's gnaphosid spider				Serpentine endemic	A	Habitat Absent
AMPHIBIANS							
Ambystoma californiense	California tiger salamander, central population	T			Found in annual grassland habitat and grassy understory of valley-foothill hardwood habitats	A	Habitat Absent
Lithobates pipiens	Northern leopard frog				Shoreline cover, submerged and emergent aquatic vegetation, native range E. of Sierras	A	Habitat Absent

Scientific Name	Common Name	Regulatory Status			Habitat	Survey	Occurrence Evaluation
		Federal	State	CNPS		Observation	
Rana aurora draytonii	California red-legged frog	*T*			*Lowlands & Foothills in or near permanent water with dense shrubby or emergent riparian vegetation*	*A*	*Habitat Absent*
Spea hammondii	western spadefoot		*SC*		*Primarily in grasslands, but also found in orchard and vineyard habitat*	*A*	*Habitat Absent*
REPTILES							
Actinemys marmorata	western pond turtle		*SC*		*Permanent aquatic habitat with access to basking areas and sandy upland for laying eggs and hibernating.*	*A*	*Regional Potential. See Section 5.6*
Gambelia sila	blunt-nosed leopard lizard	*E*	*E*		*Sparsely vegetated alkali and desert scrub habitats*	*A*	*Regional Potential. See Section 5.1*
Thamnophis gigas	giant garter snake	*T*			*Marshes, sloughs and creeks*	*A*	*Out of Expected Geographic Range*
BIRDS							
Athene cunicularia	burrowing owl		*SC*		*Open, dry annual or perennial grasslands, deserts & scrublands w/ low-growing vegetation. Underground nester using mammal burrows (ground squirrel)*	*A*	*Regional Potential. See Section 5.1*
Coccyzus americanus occidentalis	western yellow-billed cuckoo	*C*	*E*		*Riparian forest nester, along broad, lower flood-bottoms of larger river systems.*	*A*	*Habitat Absent, not seen locally since 1902*
MAMMALS							

Scientific Name	Common Name	Regulatory Status			Habitat	Survey	Occurrence Evaluation
		Federal	State	CNPS		Observation	
Antrozous pallidus	pallid bat		SC		Open habitats. Roosts in caves, rock crevices and buildings near foraging areas.	A	Habitat Absent, existing building will not be impacted
Lasiurus cinereus	Hoary bat				Open habitats or habitat mosaics with tree cover and open feeding areas, roosts in dense foliage.	A	Habitat Absent
Dipodomys nitratoides exilis	Fresno kangaroo rat	E	E		Alkali sink-open grassland habitats in Western Fresno Couny, bare alkaline clay soil	A	Habitat Absent
Eumops perotis californicus	western mastiff bat		SC		Open semi-arid to arid habitats. Roosts in crevices in cliffs, high buildings, trees and tunnels.	A	No potential roosting areas are being removed
Vulpes macrotis mutica	San Joaquin kit fox	E	T		Annual grasslands, grassy open habitats dominated by scattered brush and shrubs, sometimes forage in agricultural areas	A	Regional Potential. See Section 5.2
FISH							
Hypomesus transpacificus	delta smelt	T			California Delta aquatic habitat	A	Out of Expected Geographic Range
NATURAL COMMUNITY							
Great Valley Valley Oak Riparian Forest			CN		Intermittently flooded, seasonally saturated soils. Dominated by oak with grass association.	A	Regional Potential. See Section 5.2
Northern Claypan Vernal Pool			CN		Old neutral to alkaline silicone-cemented hardpan soils, intergrades with marsh	A	Habitat absent

Scientific Name	Common Name	Regulatory Status			Habitat	Survey	Occurrence Evaluation
		Federal	State	CNPS		Observation	
Northern Hardpan Vernal Pool			CN		Old, very acidic Iron-Silicon cemented hardpan soils, hummocky with mounds between depressions	A	Habitat absent
Valley Sacaton Grassland			CN		Alkali soils dominated by salt grass or ryegrass series	A	Habitat Absent

***Federal Status** (Federal)*
E - Listed Endangered
T - Listed Threatened
P - Proposed for listing
C - Candidate for listing
X - Critical Habitat designated for this species
PX - Proposed Critical Habitat

***State Status** (State)*
E - Listed Endangered
T - Listed Threatened
R - Listed Rare
C - Candidate for listing
D - Delisted, previously listed
SC – CDFG Species of Concern
CN – Recorded in CNDDB for conservation purposes

California Native Plant Society List (CNPS)
1A - Plant presumed extinct in CA
1B - Plants rare, threatened, or endangered in CA and elsewhere
2 - Plants rare, threatened, or endangered in CA but more common elsewhere
3 - Plants which more information is needed
4 - Plants of limited distribution

Reconnaissance Biological Survey Observation (Survey Observation)
P – Present
A – Absent

Occurrence Evaluation

Observed at Project Site –	Species or natural community were observed at the Project site during the reconnaissance biological survey
Regional Potential –	Species or natural community have been previously recorded near or at the Project location
Habitat Potential –	Species have not been previously recorded near or at the Project site, but habitat potentially associated the species was observed at the Project site during the reconnaissance biological survey. This may include habitat for potential foraging, nests, or burrows.
Habitat Absent –	Habitat to potentially support species was not observed during the reconnaissance biological survey, and it is not likely that it exists at the Project site.
Out of Expected Geographic Range –	The Project site is out of the expected geographic range of the species or natural community, not likely to occur.

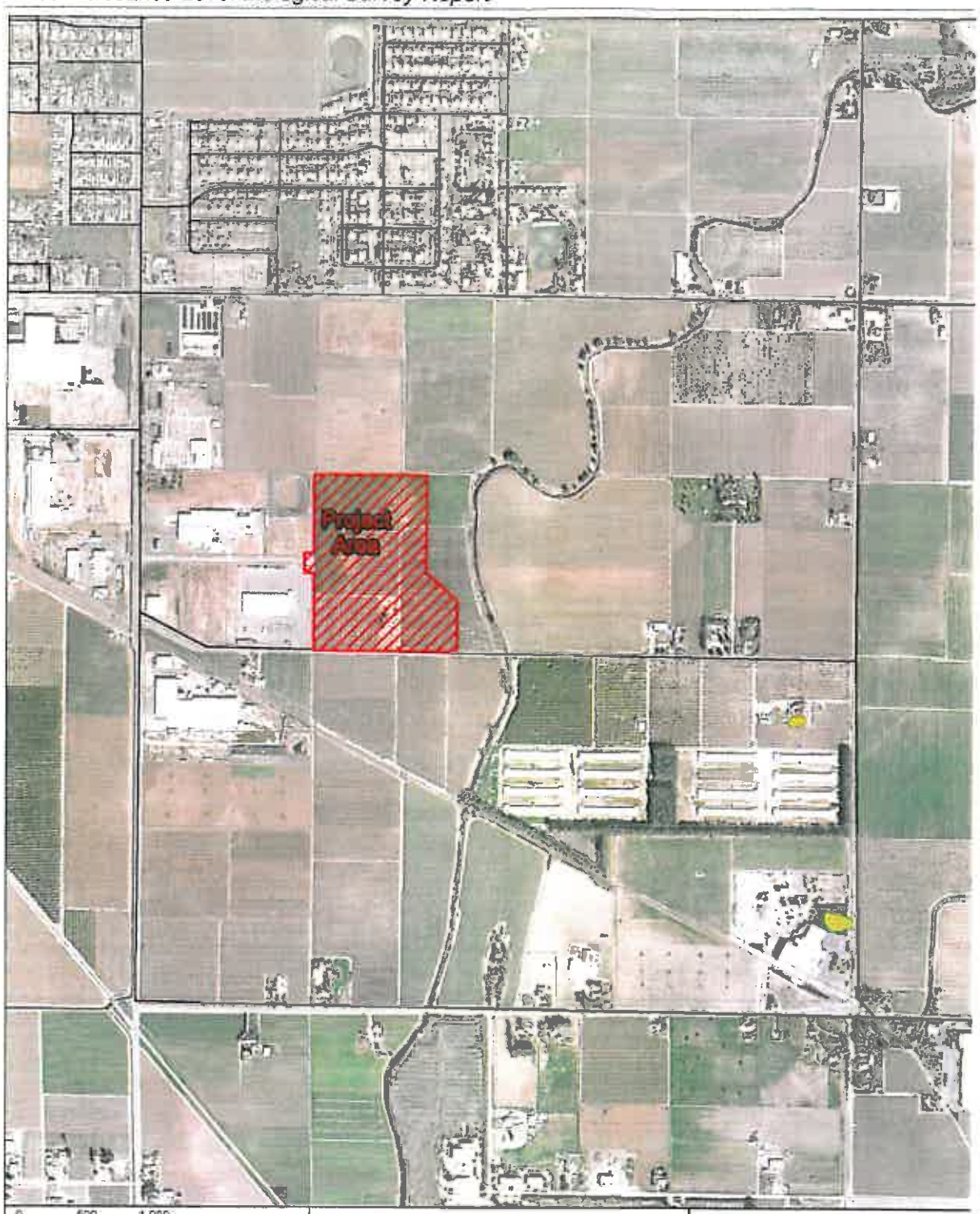

Figure 3

KCUSD Transport Yard

National Wetlands

4. SITE DESCRIPTION AND EXISTING BIOLOGICAL CONDITIONS

The project is located at 20346 E. Huntsman, Fresno County, and is south of Dinuba Avenue and east of Buttonwillow Avenue, in Section 36 of Township 15 South, Range 23 East, Mt. Diablo Baseline and Meridian, adjacent to and east of the City of Reedley (**Figure 1**). The Project consists of a 24-acre school transit yard with approximately with garage and shop buildings, an office building and bus parking lots (See Site Plan in **Appendix B**).

The surrounding properties are primarily agricultural farmland including orchards, row crops, abandoned vineyard, pasture, food packing/industrial facilities, a ponding basin and a riparian area (Travers Creek). The project area occurs within a portion of parcel 370-240-13T. The riparian area at the eastern edge of the parcel is 170 ft away from the nearest edge of the proposed Project site boundary. There is riparian vegetation along the stream corridor distinctive from the vegetation on the site. Vegetation includes tree tobacco (Nicotiana glauca), blackberry (Rubus discolor), and willow (Salix sp.). There are also large clumps of prickly pear cactus along the creek bank.

A complete list of wildlife and plants observed during the survey are in **Table 2**.

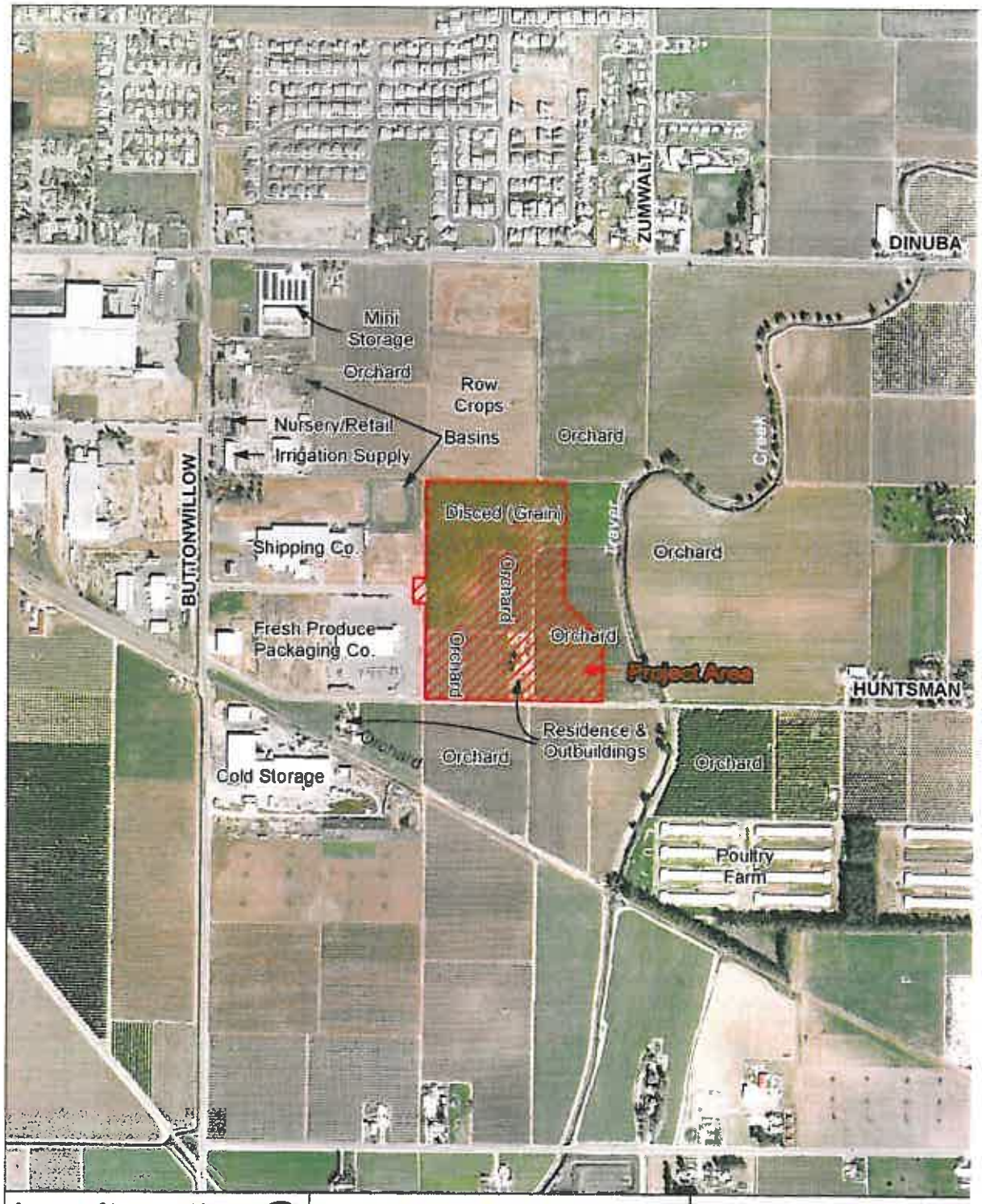

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Figure 4

KCUSD Transport Yard

Current Land Use

Table 2 – Flora & Fauna Species Observed During the Field Survey

Scientific Name	Common Name
Flora	
Tribulus terrestris	*puncturevine*
Amaranthus albus	*pigweed*
Geranium sp.	*cranesbill*
Bromus rigidus	*Ripgut brome*
Salsola sp.	*thistle*
Fauna	
Turdus migratorius	*American robin*
Carpodacus mexicanus	*House finch*
Spermophilus beecheyi	*California ground squirrel*
Cathartes aura	*Turkey vulture*
Zenaida macroura	*Mourning dove*
Tyrannus verticalis	*Western kingbird*
Mimus polyglottos	*Northern mockingbird*

5. SURVEY FINDINGS

In the following section, several key protected wildlife species with regional relevance to the Project site are discussed.

Hoary bat (*L. cinereus*), pallid bat (Antrozous pallidus), California satintail (Imperata brevifolia), San Joaquin adobe sunburst (Pseudobahia peirsonii), San Joaquin Valley orcutt grass (Orcuttia inaequalis), Moody's gnaphosid spider (Talanites moodyae), valley elderberry longhorn beetle (Desmocerus californicus dimorphus), burrowing owl (Athene cunicularia) were not observed during the survey but have been documented within 5 miles of the Project site, and are recorded in RareFind 3, a portion of the California Natural Diversity Database maintained by the California Department of Fish and Game.

5.1. CALIFORNIA SATINTAIL

The California satintail (*Imperata brevifolia*) is a conspicuous grass species that spreads from scaly rhizomes and has a white feathery panicle (inflorescence) up to one foot long. *I. Brevifolia* was recorded near the town of Reedley in one CNDDB record but the location data from that record is not clear. That observation was made in 1933 when the town was significantly less developed. It is likely that the record was associated with riparian vegetation as the location data mentions the plant was found at a canal and this satintail species tends to inhabit moist places and denser scrub habitats (and meadows) of which riparian scrub is the only type that is available in the Reedley area. None of the habitat types listed for *I. brevifolia* are present in the Project site. However outside the project area about 170 feet to the East is a riparian corridor. As long as construction traffic and site drainage are not permitted to enter the riparian corridor, potential California satintail habitat would not be impacted by the Project.

5.2. SAN JOAQUIN KIT FOX

The San Joaquin kit fox is listed as a federal endangered and California threatened species. San Joaquin kit fox adults stand about 12 inches tall and have an average total length of 30-32 inches. They can be distinguished by a black-tipped tail, long

conspicuous ears, and lack of a black stripe on the top of the tail when compared to a grey fox (*Urocyon cinereoargenteus*). San Joaquin kit foxes are primarily active at night. They inhabit various human impacted habitats, including grasslands and scrublands with active oil fields, agricultural fields (row crops, orchards, irrigated pasture, vineyards), and grazed annual grasslands. Native vegetation communities of the San Joaquin Valley are also utilized by San Joaquin kit foxes. Dens characteristic of the San Joaquin kit fox vary, but are generally described as having 2-18 openings which are taller than they are wide and approximately 8-10 inches in diameter.

No San Joaquin kit foxes or San Joaquin kit fox dens were observed at the Project site or surrounding property during the reconnaissance biological survey. No burrows large enough to house kit fox dens were observed. The nearest occurrence record listed in CNDDB for San Joaquin kit fox was observed about 10 miles away. It is not likely that San Joaquin kit fox would be impacted by the Project.

5.3. BATS

Two bat species have been observed and recorded within 5 miles of the Project in the CNDDB: pallid bat (*Antrozous pallidus*), and hoary bat (*Lasiurus cinereus*),. These bats forage in open areas and over water features such as lakes and ponds which are not available in or around the project site. The outbuildings on site have wide open eaves and do not provide protection or cover to potential roosting bats. It is not likely that bats would be impacted by the project.

5.4. INVERTEBRATES

Moody's gnaphosid spider (*Talanites moodyae*) and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) are two species with very specific habitat requirements. These two species have been recorded within 5 miles of the Project. Neither species' habitat requirements are met within the Project or surrounding area. *T. moodyae* is endemic to serpentine soil communities and *D. californicus dimorphus* is dependent on a specific host, the elderberry tree/shrub that is associated with riparian corridors. There is on riparian vegetation in the Project area. There is a riparian corridor about 170 feet to the East however most of the plant species observed there were introduced. No elderberry was observed in the Project or in the nearby riparian corridor. The Project is not expected to impact Moody's gnaphosid spider or valley elderberry longhorn beetle.

5.5. SAN JOAQUIN ADOBE SUNBURST

San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*) only grows in heavy adobe clay soils that retain moisture longer in the dry season. The soil textures on the project site are loams and sands. The soil conditions are not viable for San Joaquin adobe sunburst.

5.6. OTHER SENSITIVE NATIVE PLANTS

Earlimart orache, lesser saltscale, brittlescale, and recurved larkspur are native plant species associated with chenopod scrub and valley grassland vegetation communities in alkaline or saline soils. These species are typically found on land that has never been disturbed for cultivation. These species were recorded on properties about 17 miles from the project site. The Project site has been under intensive cultivation for decades and does not have alkaline or saline soils so it is not provide typical habitat for these plants species.

San Joaquin Valley Orcutt grass was recorded about 7.5 miles from the project site in 1936. However this species is dependent on vernal pools which require clay soils and are not present in the area around the Project and are found primarily in the Sierra foothills and foothill/valley interface at least 8 miles to the East.

None of these species or associated vegetation communities was observed at the Project site during the reconnaissance level biological survey. The proposed transit yard is on a piece of land that has been cultivated with orchard trees and used as a family residence for many years. It is not likely that the proposed Project will impact sensitive native plants or sensitive vegetation communities.

5.7. BURROWING OWL

In 2006, two adult burrowing owls (*Athene cunicularia*) were observed about 3.0 miles from the Project at a burrow in a fallow field that five years before had been a vineyard. Burrowing owls can establish burrows near residential or farming operations. They are dependent on availability of both open areas (such as grazing land) to hunt prey, and burrows. Due to this dependency burrowing owls are closely associated with populations of California ground squirrels (*Spermophilus beecheyi*) which excavate appropriately sized burrows. There are a large number of active ground squirrel burrows on the northern portion of the Project site. However the ground squirrel burrows are in a field that is irrigated when cropped and the burrows are subject to inundation. Burrowing owls typically select burrow sites that are slightly above the surrounding soil surface to avoid inundation otherwise their young would be flooded. As a result none of the burrows seen on the Project site are suitable for burrowing owl use. It is not likely that the proposed Project will impact burrowing owls.

6. IMPACT ASSESSMENT AND MITIGATION MEASURES

6.1. IMPACT ASSESSMENT

The Project at KCUSD's Huntsman Avenue property includes the conversion of 24 acres of cultivated farm land (including a residence) over to a school transportation yard. Ground disturbance will occur on the project site. Hoary bat (*L. cinereus*), pallid bat (Antrozous pallidus), California satintail (Imperata brevifolia), San Joaquin adobe sunburst (Pseudobahia peirsonii), San Joaquin Valley orcutt grass (Orcuttia inaequalis),

Moody's gnaphosid spider (Talanites moodyae), valley elderberry longhorn beetle (Desmocerus californicus dimorphus), and burrowing owl (Athene cunicularia) were not observed during the survey, but have been documented near the Project site. It is not likely that the Project, would impact those species.

6.2. MEASURES TO MINIMIZE ANY POTENTIAL IMPACTS TO WILDLIFE, INCLUDING SAN JOAQUIN KIT FOX

- Construction, storage, travel and other types of disturbance should be restricted to the 24 acre Project site and not take place in the offsite land adjacent to the riparian corridor of Travers Creek. Trucks and equipment vehicles should approach from Huntsman or the western access road rather than the dirt road along the riparian/orchard interface. If this restriction is not possible then a more extensive biological survey of the riparian corridor would be necessary to determine if impacts will require further mitigation.

- Maintaining the current cable and lock system in place at the southern access to the corridor from Huntsman will continue to discourage traffic along the offsite riparian corridor. Adding signage in English along the west-to-east dirt access road to the riparian corridor will further discourage Project traffic from within the parcel.

- Vehicles should use slow speeds (<15 miles per hour), especially at night, when driving through or around the Project site to minimize potential for striking or disturbing animals. San Joaquin kit fox and other animals are vulnerable to collisions with autos.

- Pipes and culverts should be inspected before being moved or altered to prevent wildlife from being injured or trapped.

- If special status species are encountered during an inspection, they should be left alone to passively exit the area unless otherwise authorized by CDFG or USFWS.

- Removal of trees should occur outside of bird nesting season to minimize impact to nesting activity.

- Any migratory birds and their nests should be not be disturbed as outlined in the Migratory Bird Treaty Act of 1918(MBTA). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in Section 50 of the Code of Federal Regulations(CFR) Part 10, including feathers or other parts, nests, eggs or products, except as allowed by implementing regulations (50 CFR 21).

7. CONCLUSION

Implementation of the Project is not likely to result in impacts on species or natural communities with special status or listed under state or federal legal protection.

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Appendix A
California Natural Diversity Database Reports
United States Fish and Wildlife Service Reports
California Native Plant Society List

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	California saltmarsh *Imperata brevifolia*	PMPOA3D020			G2	S2.1	2.1
2	California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	unknown code...	G2G3	S2S3	SC
3	Earlimart orache *Atriplex erecticaulis*	PDCHE042V0			G2	S2.2	1B.2
4	Great Valley Mixed Riparian Forest	CTT61420CA			G2	S2.2	
5	Greene's tuctoria *Tuctoria greenei*	PMPOA6N010	Endangered	Rare	G2	S2.2	1B.1
6	Hoover's spurge *Chamaesyce hooveri*	PDEUP0D150	Threatened		G2	S2.1	1B.2
7	Moody's gnaphosid spider *Talanites moodyae*	ILARA98020			G1G2	S1S2	
8	Northern Claypan Vernal Pool	CTT44120CA			G1	S1.1	
9	Northern Hardpan Vernal Pool	CTT44110CA			G3	S3.1	
10	San Joaquin Valley orcutt grass *Orcuttia inaequalis*	PMPOA4G060	Threatened	Endangered	G2	S2.1	1B.1
11	San Joaquin adobe sunburst *Pseudobahia peirsonii*	PDAST7P030	Threatened	Endangered	G2	S2.1	1B.1
12	San Joaquin kit fox *Vulpes macrotis mutica*	AMAJA03041	Endangered	Threatened	G4T2T3	S2S3	
13	Valley Sacaton Grassland	CTT42120CA			G1	S1.1	
14	burrowing owl *Athene cunicularia*	ABNSB10010			G4	S2	SC
15	hoary bat *Lasiurus cinereus*	AMACC05030			G5	S4?	
16	lesser saltscale *Atriplex minuscula*	PDCHE042M0			G1	S1.1	1B.1
17	molestan blister beetle *Lytta molesta*	IICOL4C030			G2	S2	
18	northern leopard frog *Lithobates pipiens*	AAABH01170			G5	S2	SC
19	pallid bat *Antrozous pallidus*	AMACC10010			G5	S3	SC
20	recurved larkspur *Delphinium recurvatum*	PDRAN0B1J0			G2	S2.2	1B.2
21	spiny-sepaled button-celery *Eryngium spinosepalum*	PDAPI0Z0Y0			G2	S2.2	1B.2
22	valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened		G3T2	S2	
23	vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened		G3	S2S3	
24	vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered		G3	S2S3	
25	western mastiff bat *Eumops perotis californicus*	AMACD02011			G5T4	S3?	SC

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
26 western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC
27 western spadefoot *Spea hammondii*	AAABF02020			G3	S3	SC
28 western yellow-billed cuckoo *Coccyzus americanus occidentalis*	ABNRB02022	Candidate	Endangered	G5T3Q	S1	

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 090707121939

Database Last Updated: January 29, 2009

Quad Lists

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus

delta smelt (T)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)

Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii

California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila

blunt-nosed leopard lizard (E)

Thamnophis gigas

giant garter snake (T)

Mammals

Dipodomys nitratoides exilis

Fresno kangaroo rat (E)

Dipodomys nitratoides nitratoides

Tipton kangaroo rat (E)

Vulpes macrotis mutica

San Joaquin kit fox (E)

Plants

Chamaesyce hooveri

Critical habitat, Hoover's spurge (X)

Hoover's spurge (T)

Orcuttia inaequalis

Critical habitat, San Joaquin Valley Orcutt grass (X)

San Joaquin Valley Orcutt grass (T)

Pseudobahia peirsonii

San Joaquin adobe sunburst (T)

Quads Containing Listed, Proposed or Candidate Species:

MONSON (334A)
TRAVER (334B)
BURRIS PARK (335A)
ORANGE COVE NORTH (356A)
WAHTOKE (356B)
REEDLEY (356C)
ORANGE COVE SOUTH (356D)
SANGER (357A)
SELMA (357D)

County Lists

Fresno County

Listed Species

Invertebrates

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardi

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Fish

Oncorhynchus (=Salmo) clarki henshawi

Lahontan cutthroat trout (T)

Oncorhynchus (=Salmo) clarki seleniris

Paiute cutthroat trout (T)

Oncorhynchus mykiss
Central Valley steelhead (T) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii
California red-legged frog (T)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Thamnophis gigas
giant garter snake (T)

Birds

Gymnogyps californianus
California condor (E)

Mammals

Dipodomys ingens
giant kangaroo rat (E)

Dipodomys nitratoides exilis
Critical habitat, Fresno kangaroo rat (X)
Fresno kangaroo rat (E)

Dipodomys nitratoides nitratoides
Tipton kangaroo rat (E)

Ovis canadensis californiana
Sierra Nevada (=California) bighorn sheep (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Calyptridium pulchellum
Mariposa pussy-paws (T)

Camissonia benitensis
San Benito evening-primrose (T)

Castilleja campestris ssp. succulenta
Critical habitat, succulent (=fleshy) owl's-clover (X)
succulent (=fleshy) owl's-clover (T)

Caulanthus californicus
California jewelflower (E)

Cordylanthus palmatus
palmate-bracted bird's-beak (E)

Monolopia congdonii (=Lembertia congdonii)
San Joaquin woolly-threads (E)

Orcuttia inaequalis
Critical habitat, San Joaquin Valley Orcutt grass (X)
San Joaquin Valley Orcutt grass (T)

Orcuttia pilosa
Critical habitat, hairy Orcutt grass (X)

Pseudobahia bahiifolia
Hartweg's golden sunburst (E)

Pseudobahia peirsonii
San Joaquin adobe sunburst (T)

Sidalcea keckii
Critical habitat, Keck's checker-mallow (X)
Keck's checker-mallow (=checkerbloom) (E)

Candidate Species

Amphibians

Bufo canorus
Yosemite toad (C)

Rana muscosa
mountain yellow-legged frog (C)

Mammals

Martes pennanti
fisher (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental

documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

> Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.

  During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

  Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning

process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

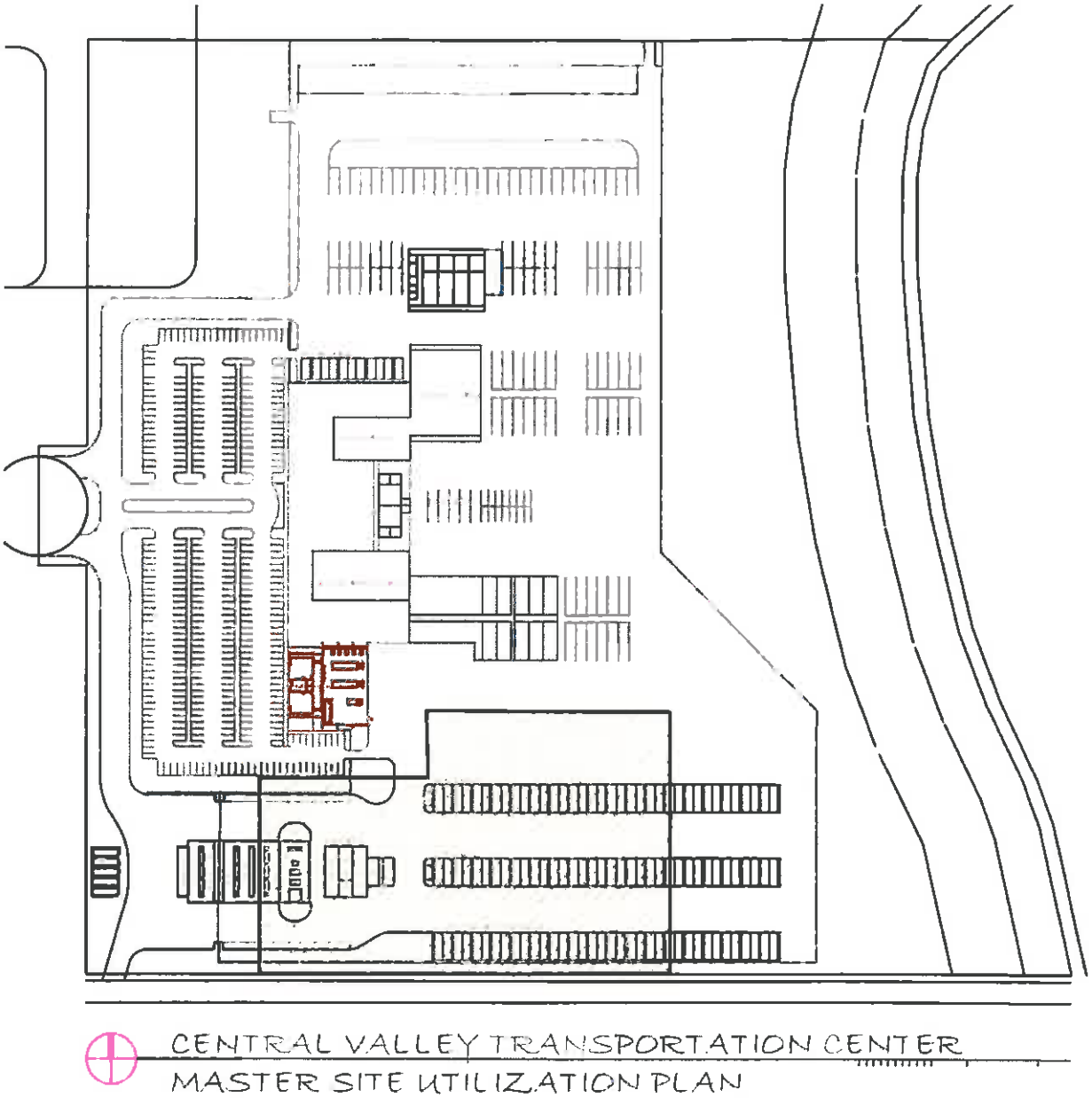
Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be October 05, 2009.

California Native Plant Society
Inventory of Rare and Endangered Plants
Topo Quad Search:
Reedley (356C), Sanger (357A), Wahtoke (356B), Orange Cove North (356A), Selma (357D), Orange Cove South (356D), Burris Park (335A), Traver (334B), Monson (334A)

Sci. Name	Common Name	CNPS List	CA Rank	US Rank	CA Status	US Status
Atriplex depressa	brittlescale	List 1B.2	S2.2	G2Q		
Atriplex erecticaulis	Earlimart orache	List 1B.2	S2.2	G2		
Atriplex minuscula	lesser saltscale	List 1B.1	S1.1	G1		
Chamaesyce hooveri	Hoover's spurge	List 1B.2	S2.1	G2		Threatened
Delphinium recurvatum	recurved larkspur	List 1B.2	S2.2	G2		
Eryngium spinosepalum	spiny-sepaled button-celery	List 1B.2	S2.2	G2		
Imperata brevifolia	California satintail	List 2.1	S2.1	G2		
Mimulus acutidens	Kings River monkeyflower	List 3	S2?	G2?Q		
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	List 1B.1	S2.1	G2	Endangered	Threatened
Pseudobahia peirsonii	San Joaquin adobe sunburst	List 1B.1	S2.1	G2	Endangered	Threatened

Appendix B
Site Plan
Photographs



Developed Area = 27 Acres

Site Plan

Photo 1: Harvested grain field in the northern portion of project site. View is westward. There was a very high density of active ground squirrel (*Spermophilus beecheyi*) burrows in this field.

Photo 2: View South along road at eastern edge of property through orchard.

Photo 4: Typical view of orchard row. Orchards appear to contain only stone fruit on property. Furrows are relatively deep to facilitate flood irrigation. Also low vegetation is controlled so that no significant herb layer is visible.

Photo 5: House at southern end of Project parcel along Huntsman. Vegetation in front of house is part of family garden. Large tree (about 50 feet) is a sycamore. No nests were detected by binoculars during the survey, but some could have escaped detection due to density of foliage.

Photo 6: Dry ponding basin East of northeastern corner of Project parcel. At least a dozen ground squirrels escaped to the basin during the approach to the offsite orchard North of the basin.

Photo 7: Gravel and dirt drive separating Project parcel from packing business to West. Stacks behind the fence are plastic wrapped boxes full of empty fruit packing crates.

Photo 8: View East from northern edge of parcel. Stumps in the left (North) half of photo are from abandoned orchard offsite. Harvested grain field on right (South) is part of the Project parcel.

Photo 9: Riparian area along ditch that is offsite and East of Project parcel. View is eastward. Dense branches in background in front of offsite orchard and in right foreground are from stacked wood slash. These may be from orchards or landscaping waste. Tree tobacco is visible to left.

Photo 10: Small (3ft) Pomegranate trees South of Project parcel across Huntsman Ave.

Appendix E

Cultural Resources Records and Sacred Land File Search

RSO Consulting

Archaeological and Historical Resource Management

September 25, 2009

Ms. Emily Bowen, LEED AP
Provost and Pritchard Engineering
130 N. Garden Street
Visalia, CA 93291

Re: Cultural Resources Records Search for the Reedley Schools Transportation Center

Dear Ms. Bowen:

Per your request, a cultural resources records search (RS#09-291b; RSOC Project No. 200902) was conducted for the above-referenced project on July 21, 2009, at the Southern San Joaquin Valley Historical Resources Information Center at California State University, Bakersfield. The Project Area (PA) consists of approximately 40 acres designated as the future location of the Reedley Schools Transportation Center (see Figure 1).

The results of the records search showed that no surveys have been performed on the Project Area. One survey has been performed within one-half mile of the Project Area (Kus 1997) with negative results for cultural resources. Billart (2000) reported negative results of a survey within one-half mile to one mile of the Project Area. No archaeological or historical sites have been recorded within the Project Area or within one-half to one mile of the Project Area. The records search included an examination of the *National Register of Historic Places, the California Register of Historical Resources, California Points of Historical Interest, California Inventory of Historic Resources, California State Historic Landmarks Registry,* and the HRIC files of pertinent historical and archaeological data.

The Project Area was part of lands originally designated for school purposes under the California Enabling Act of 1853. The 76 Land and Water Company secured the rights to the land in order to build an irrigation system for some 30,000 acres in southern Fresno County and northern Tulare County, east of the Kings River (see Figure 2). The company took its name from Tulare State senator and cattleman Thomas Fowler's "76 Ranch" which had significant land holdings in the area (Hoover et al., 2002:545). The irrigation system was constructed and sold to the Alta Irrigation District in 1890.

The Project Area has not been surveyed and as such, the possibility remains that cultural resources do exist there and may be identifiable at this time. *We recommend that the Project Area be surveyed by a qualified archaeologist.*

The invoice for this records search is enclosed. If you have any further questions or concerns, please feel free to contact me at 661-663-8671 or by email at rso1consulting@gmail.com

Sincerely,

Rebecca S. Orfila

Rebecca S. Orfila, M.A., RPA
Principal

References

Billart, Lorna
2000 Nextel Communications Wireless Telecommunications Service Facility, Site # CA-0372B1, Reedley: 473 E. Dinuba Avenue. Report on file at the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield.

Hoover, Mildred Brooke, Douglas E. Kyle, and Hero Rensch
2002 Historic Spots in California. Stanford University Press, pg. 545

Kus, J.
1997 Negative Archaeological Survey Report for Proposed Industrial Park. Report on file at the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield.

Thompson, Thomas H.
1891 Official historical atlas map of Fresno County. Office of the Board of Supervisors of Fresno County, California ... Compiled, drawn and published from personal examinations and surveys by Thos. H. Thompson, Tulare, California, 1891. Township 15 South, Range 23 East, pg. 85.

U. S. Government for the State of California
1853 An Act to Provide for the Survey of the Public Lands in California, the Granting of Preemption Rights therein, and for Other Purposes. Section 6.

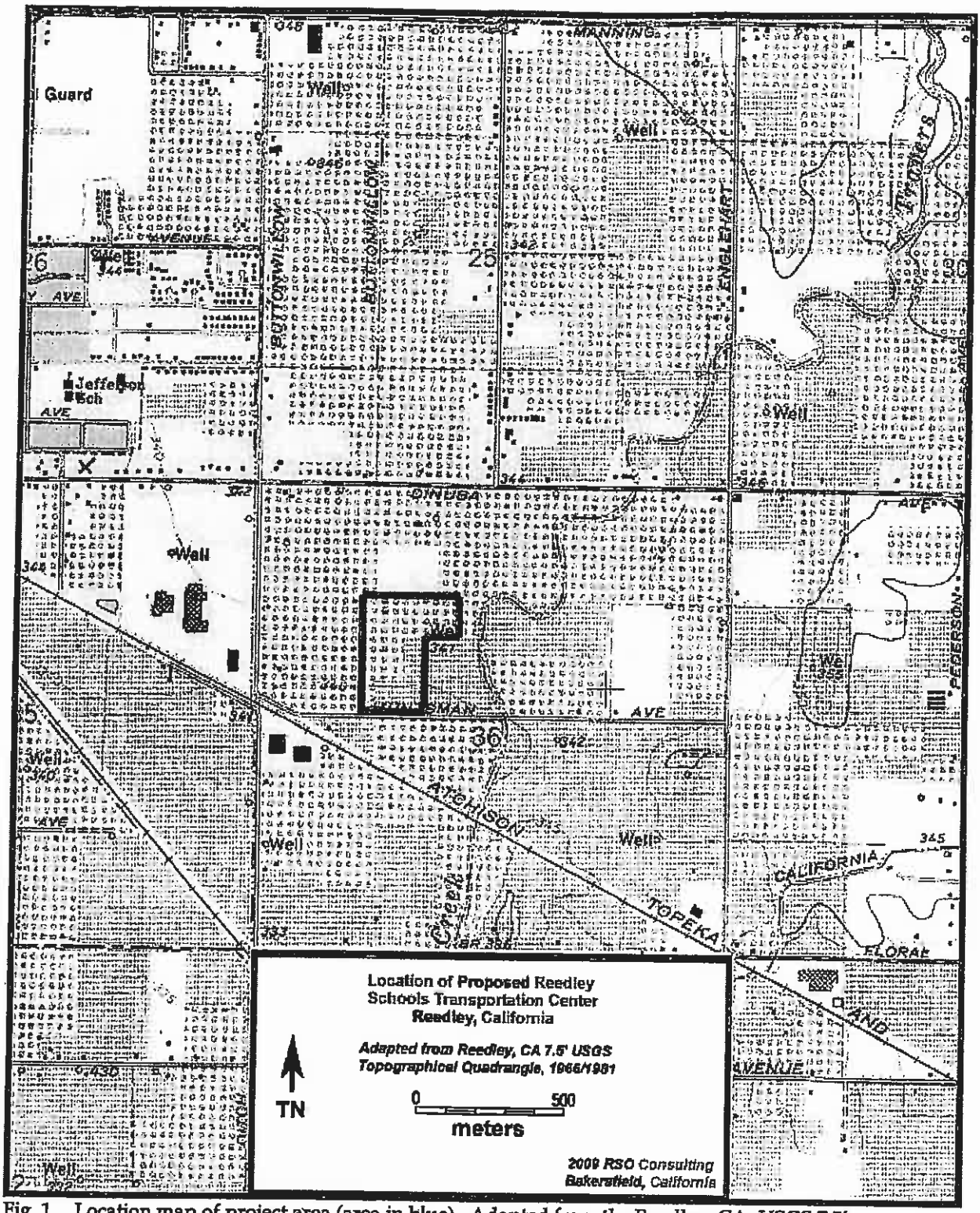


Fig. 1. Location map of project area (area in blue). Adapted from the Reedley, CA, USGS 7.5' topographic quadrangle.

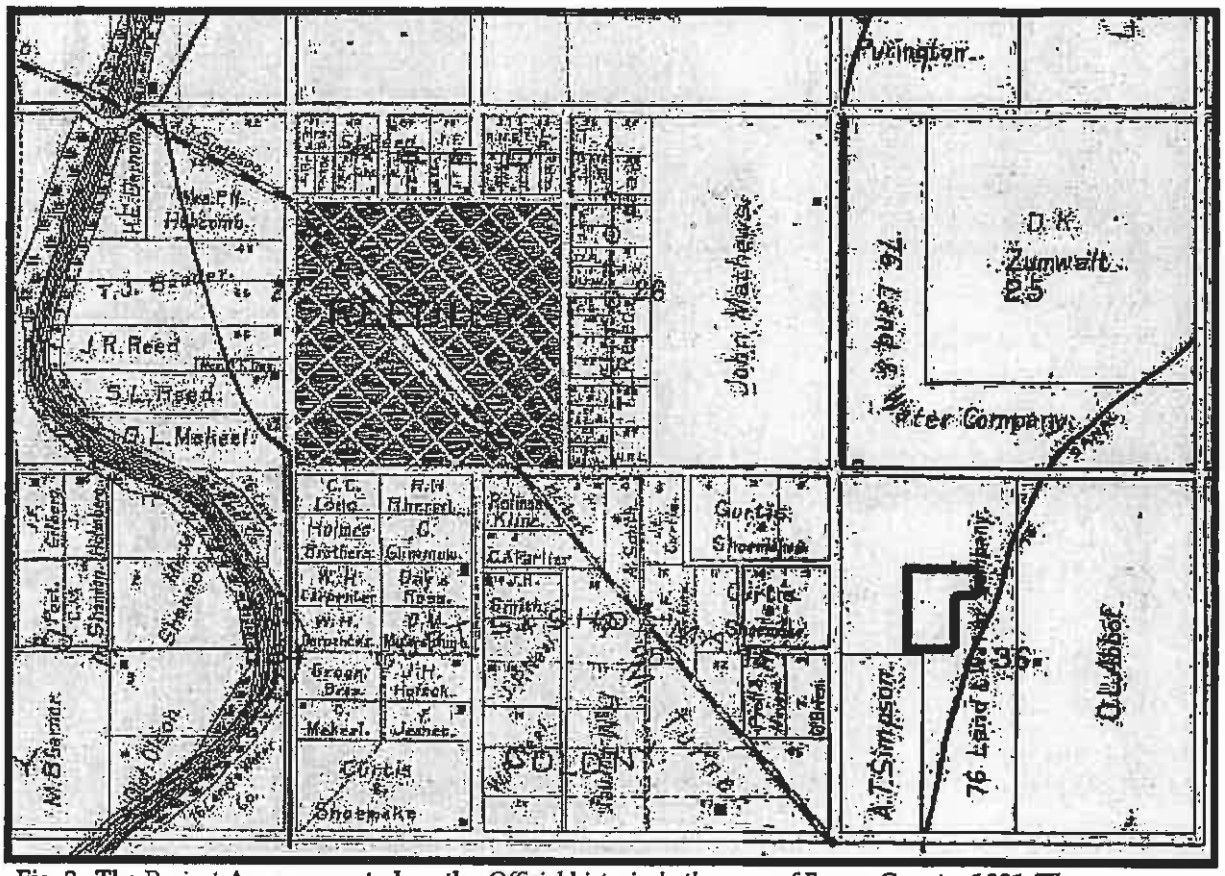


Fig. 2. The Project Area presented on the *Official historical atlas map of Fresno County, 1891* (Thompson 1891:85).

Consultation with the Native American Heritage Commission has been started. Per their request, we are doing a Cultural Survey of the site on Oct 13. A report will be generated shortly thereafter of the findings.

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

September 14 2009

Ms. Rebecca S. Orfila, M.A., RPA, CCRPH, Principal Investigator
RSO CONSULTING
10514 Dorchester Street
Bakersfield, CA 93311

Sent by e-mail to: rso1consulting@gmail.com
No. pages: 2

Re: Request for a Sacred Lands File Search and Native American Contacts List **for a Proposed. Reedley School Transportation Center;** located in the City of Reedley; Fresno County, California

Dear Ms. Orfila:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources (c.f. CA Public Resources Code §21070), was able to perform a record search of its Sacred Lands File (SLF) for the affected project area (APE) requested. The California Environmental Quality Act (CEQA; CA Public Resources Code Section 21000 – 21177)) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." The NAHC SLF search **did not indicate** the presence of Native American cultural resources within one-half - mile radius of the project area (APE) of the proposed project (APE). There are however, Native American cultural resources in close proximity to the APE.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and individuals as 'consulting parties' under both state and federal law.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Enclosed are the names of the nearest tribes and interested Native American individuals that the NAHC recommends as 'consulting parties,' for this purpose, that may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We recommend that you contact persons on the attached list of Native American contacts. A Native American Tribe or Tribal Elder may be the only source of information about a cultural resource. Furthermore, we suggest that you contact the California Historic Resources Information System (CHRIS) at the Office of Historic Preservation Coordinator's office (at (916) 653-7278, for referral to the nearest Information Center of which there are 11.

Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C. 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 [f]*et se),* and NAGPRA (25 U.S.C. 3001-3013), as appropriate.

Lead agencies should consider avoidance, as defined in Section 15370 of the California Environmental Quality Act (CEQA) when significant cultural resources could be affected by a project. Also, Public Resources Code Section 5097.98 and Health & Safety Code Section 7050.5

provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery. Discussion of these should be included in your environmental documents, as appropriate.

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code §5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code §6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance' may also be protected the under Section 304 of the NHPA or at the Secretary of the Interior' discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C, 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibly threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Attachment: Native American Contacts List (NOTE: we further recommend that other forms of 'proof of mailing or proof of contact be utilized instead of 'Return Receipt Requested' Certified or Registered Mail.) Further, we suggest a follow-up telephone call to the contacts if the replies are not received or need clarification.

Appendix F

Traffic Impact Study

JULY 2009

09-1202

Central Valley Transportation

REEDLEY, CA

TRAFFIC IMPACT STUDY

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222 N. Garden, Suite 100
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tpgconsulting@tpgconsulting.net
www.tpgconsulting.net

TPG Consulting Incorporated

TRAFFIC IMPACT STUDY

FOR THE

CENTRAL VALLEY TRANSPORTATION CENTER

Reedley, California

July 2009

Prepared for:
Provost & Pritchard Consulting Group
130 N. Garden St.
Visalia, CA 93291

Prepared by:
TPG Consulting, Inc.
222 N Garden, Suite 100
Visalia, CA 93291
(559) 739-8072

Charles Clouse, AICP, PTP, Principal-in-Charge
Wally Hutcheson, TE Project Manager
Nabor Solorio, Graphics
Carlos Salazar Jr., Technician

This report and the data contained herein have been prepared expressly for the purposes of this project. The use of this data, the conclusions contained in the report or the information provided herein by individuals or agencies is done so at their sole discretion and at their own responsibility. Publication of this document does not warrant the use of the data, the conclusions or the information for any purpose other than that described within this report.

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TRAFFIC IMPACT STUDY
FOR THE
CENTRAL VALLEY TRANSPORTATION CENTER

INTRODUCTION

This Traffic Impact Study (TIS) was prepared to assess the traffic impacts due to the proposed Central Valley Transportation Center (Project), which will be located on the north side of Huntsman Avenue, east of the Olson Avenue terminus, in Reedley, CA. The Project site is currently occupied by a single-family dwelling unit and vacant land. The proposed Project will consist of fueling, maintenance, storage, and administrative facilities for the Kings Canyon Unified School District (KCUSD) and the City of Reedley Public Works Department. This study evaluates the impacts of the proposed development on adjacent intersection operations. Figure 1 shows the Project location.

The Project study area for the analysis of traffic impacts extends from Dinuba Ave. (north) to Huntsman Ave. (south) on Buttonwillow Ave. This report analyzes (3) intersections for two (2) time periods (weekday AM and PM peak hours). Unsignalized intersection levels of service (LOS) were calculated using *Synchro 7.0* software. The *Synchro 7.0* software is based on the *2000 Highway Capacity Manual (HCM 2000)* methodology, which is also an industry standard. Roundabout levels of service were calculated using *Sidra Intersection 3.2* software, which is also and industry standard. Signal warrants were prepared using the *California Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways*. The analysis methodology used in this report is summarized in Appendix A.

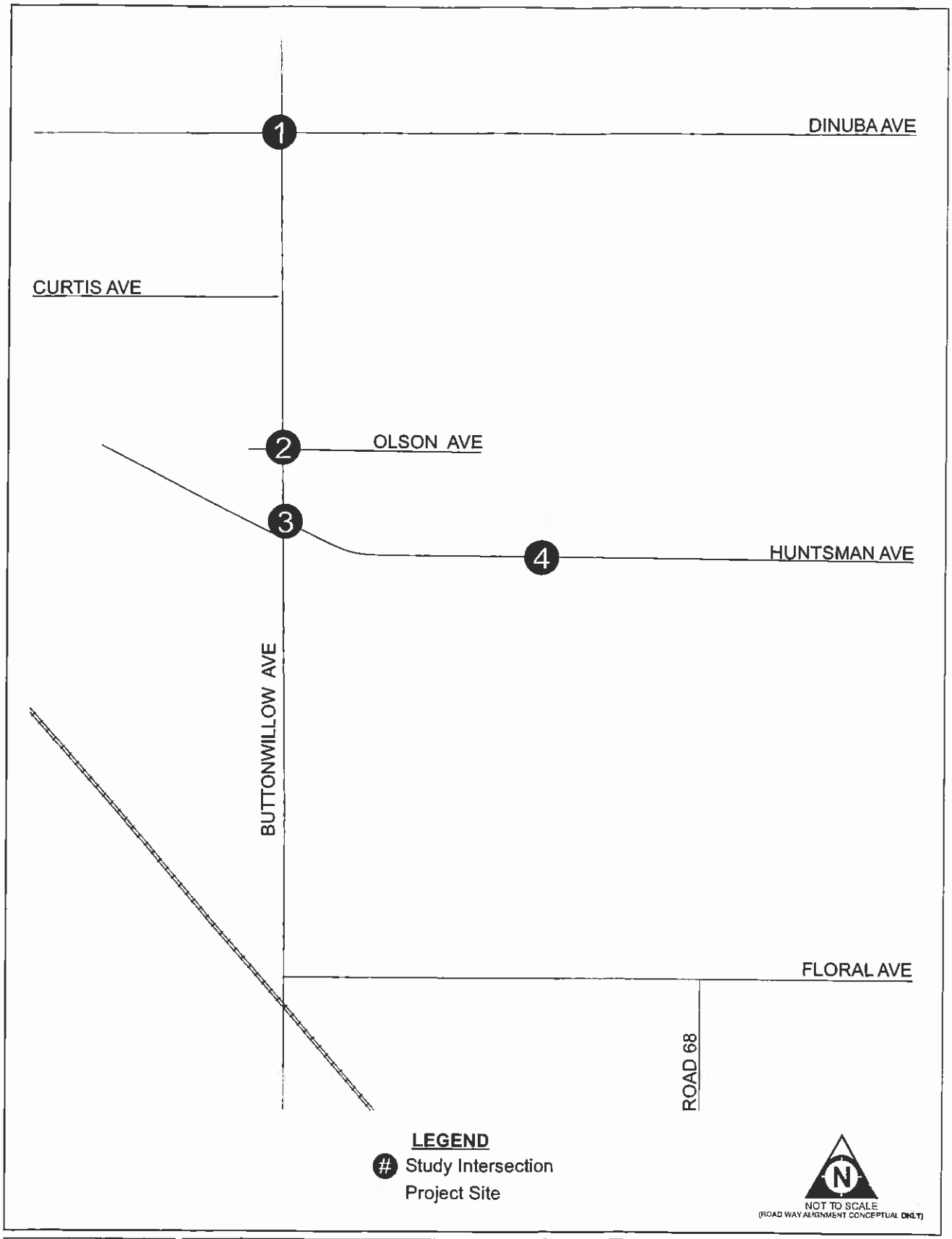
To analyze the traffic impacts resulting from the build out of the Project, the following five (5) scenarios were evaluated:

- Existing (2009) Traffic Conditions
- Existing Plus Project Traffic Conditions
- 2030 No Project Traffic Conditions
- 2030 Project Traffic Conditions

The 2030 No Project/Project scenarios were prepared using the latest Council of Fresno County Governments (COFCG) regional traffic demand model (Model).

The following intersections were analyzed:

- Buttonwillow Avenue at Dinuba Avenue
- Buttonwillow Avenue at Olson Avenue
- Buttonwillow Avenue at Huntsman Avenue
- Project Driveway at Huntsman Avenue



TPG Consulting Incorporated

VICINITY MAP

Central Valley Transportation
Reedley, CA

Figure 1

09-1202

EXECUTIVE SUMMARY

Level of Service

Table 1 shows the levels of service for the study intersections for the various analysis scenarios. As shown in Table 1, all of the study intersections are currently operating and are projected to continue to operate at or above the City of Reedley's adopted level of service standard.

Signal Warrants

Peak Hour signal warrants were also prepared for all unsignalized study intersections. Based on the warrant, a traffic signal is warranted for the Buttonwillow Avenue at Dinuba Avenue intersection in the Existing and Existing Plus Project scenario. Since this intersection is not projected to operate below the adopted level of service standard and a roundabout is already planned for this intersection, installation of a traffic signal is not recommended. The remaining study intersections do not currently or are not projected to satisfy the warrant.

Recommendations

As described above, no impacts are identified at the study intersections, with or without the proposed Project. As such, no additional roadway improvements are recommended for the study area.

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TABLE 1:
WEEKDAY LEVELS OF SERVICE SUMMARY FOR THE S

Intersection		2030 Project	
		LOS AM/PM	Delay[1] AM/PM (secs)
Buttonwillow Avenue at Dinuba Avenue		A/A	8.9/9.6
Buttonwillow Avenue at Olson Avenue			
• NB Left-Through		A/A	0.0/0.2
• SB Left-Through-Right		A/A	3.4/1.7
• EB Approach	7	C/C	15.6/17.4
• WB Approach	4	B/B	11.2/14.0
Buttonwillow Avenue at Huntsman Avenue			
• SB Left-Through		A/A	0.4/0.4
• WB Approach		A/B	9.5/10.6
Project Driveway at Huntsman Avenue			
• EB Left-Through		A/A	1.8/1.1
• SB Approach		A/A	8.4/8.6

[1] *delay per vehicle* *secs = seconds* *n/a = not analyzed*

PROJECT

The proposed Project will consist of fueling, maintenance, storage, and administrative facilities for KCUSD and the City of Reedley Public Works Department. Additional entities will also use the facility to fuel and/or store and maintain their fleets. The proposed Project will combine the current daily operations of the KCUSD transportation facilities and the Reedley Public Works Department into one facility. The Project will also incorporate CNG fueling facilities and solar collection and charging facilities.

Project Site Use

The Project will provide operational facilities for the following KCUSD components:

- School busses
- Motor-pool vehicles
- Service vehicles
- Transportation office and shop personnel

The City of Reedley's operations will consist of:

- Public Works Department office and field staff
    - Parks Maintenance
    - Street Maintenance
    - Disposal
    - Water
    - Fleet
    - Administration
- Garbage trucks
- Dial-a-Ride fueling
- Police Department fueling

The Project will also provide fueling facilities for additional operations. H&S Trucking is one such client that will fuel up to 25 trucks each day at the facility. Future expansion may include bus fueling and maintenance for adjacent school districts and fueling for fueling for additional fleets.

Project Trip Generation

The Project trip generation information was developed from operational statements from KCUSD and the City of Reedley. All operations for the proposed facility will be moved from several existing sites within the City of Reedley. Table 2 shows the projected number of daily, AM and PM peak hour trips that would be generated by the various Project components.

TABLE 2:
PROJECT TRIP GENERATION DATA

Uses	Daily (trips)	AM Enter (trips)	AM Exit (trips)	PM Enter (trips)	PM Exit (trips)
KCUSD Busses	310	31	20	34	34
KCUSD Motor-Pool	12	2	2	1	1
KCUSD Service Vehicles	120	6	3	3	6
KCUSD Office Personnel	32	2	0	0	2
KCUSD Shop Personnel	56	0	0	0	0
City of Reedley DPW Staff	144	32	0	0	32
Garbage Trucks	16	0	0	0	0
Dial-a-Ride	50	0	0	0	0
Police Department	unknown	2	2	2	2
H & S Trucking	50	2	2	2	2
Total "Existing" Project Trips	**790+**	**77**	**29**	**42**	**77**
Total 2030 Project Trips	**948+**	**92**	**34**	**50**	**92**

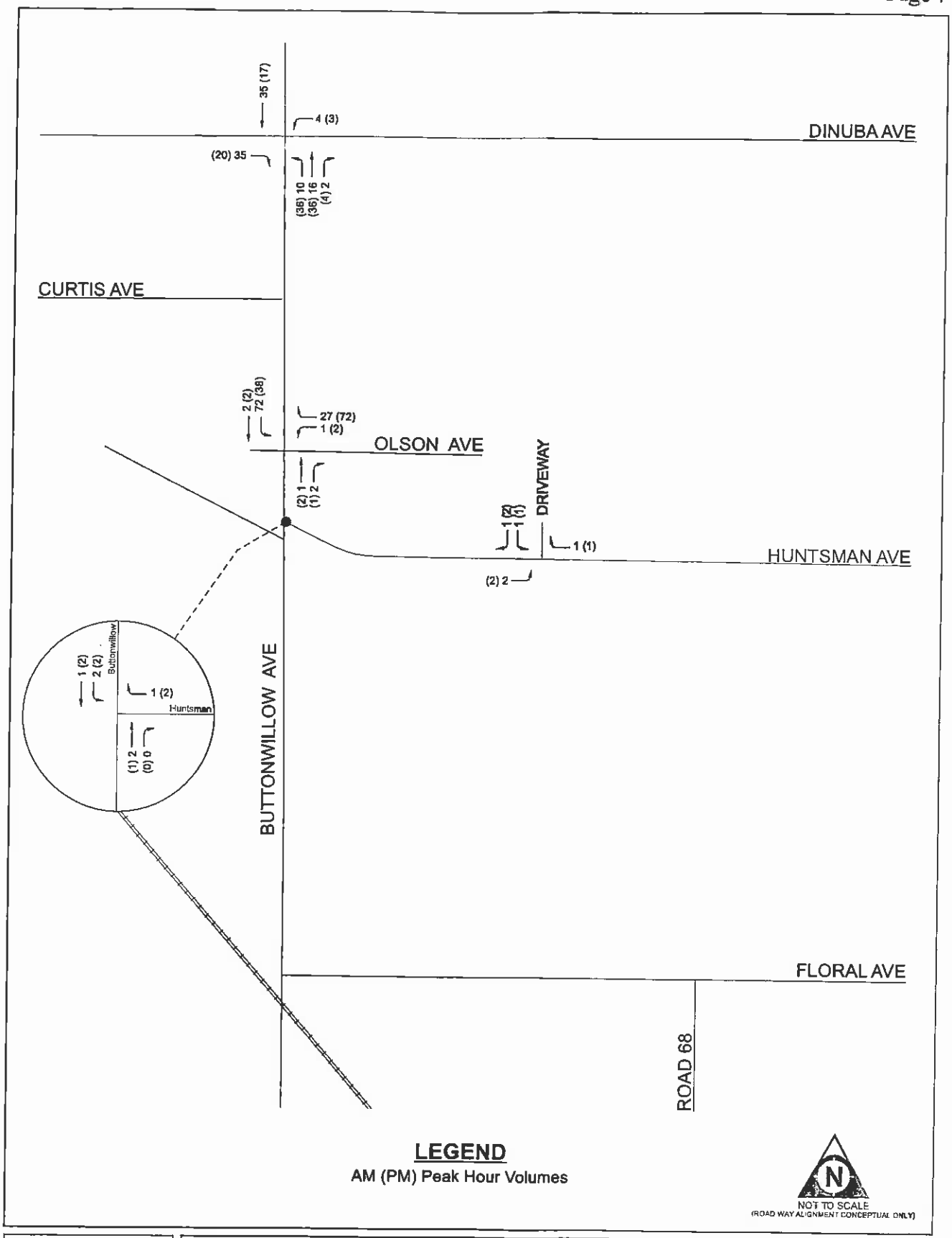
KCUSD = Kings Canyon Unified School District *DPW = Department of Public Works*

Since the Project is anticipating providing fueling and other services to additional entities, some growth is assumed for Project operations by 2030. Since the exact nature and timing of additional trips is unknown, a 20% growth factor was applied to the "Existing" trip generation to develop the proposed 2030 Project trip generation.

As discussed previously, the Project trips shown in Table 2 were developed using the operational information provided by KCUSD and City staff. Many of the Project components operate on schedules outside the typical weekday schedule. For example, the City of Reedley garbage trucks operate between 4:30 AM and 12:00 PM. Therefore certain components may not typically generate trips during the AM and PM peak hours utilized in this analysis.

Project Trip Distribution

Trip distribution for the Project trips was based on the existing traffic flow in the study area as well as the trip characteristics of certain Project components. Primary access is assumed to be located on Olson Avenue, with additional access on Huntsman Avenue. For this analysis, the Huntsman Avenue driveway is only utilized by a small portion of the KCUSD trips. Figures 2 and 3 show the intersection assignment for 2009 and 2030 Project trips, respectively, for all analysis trips.



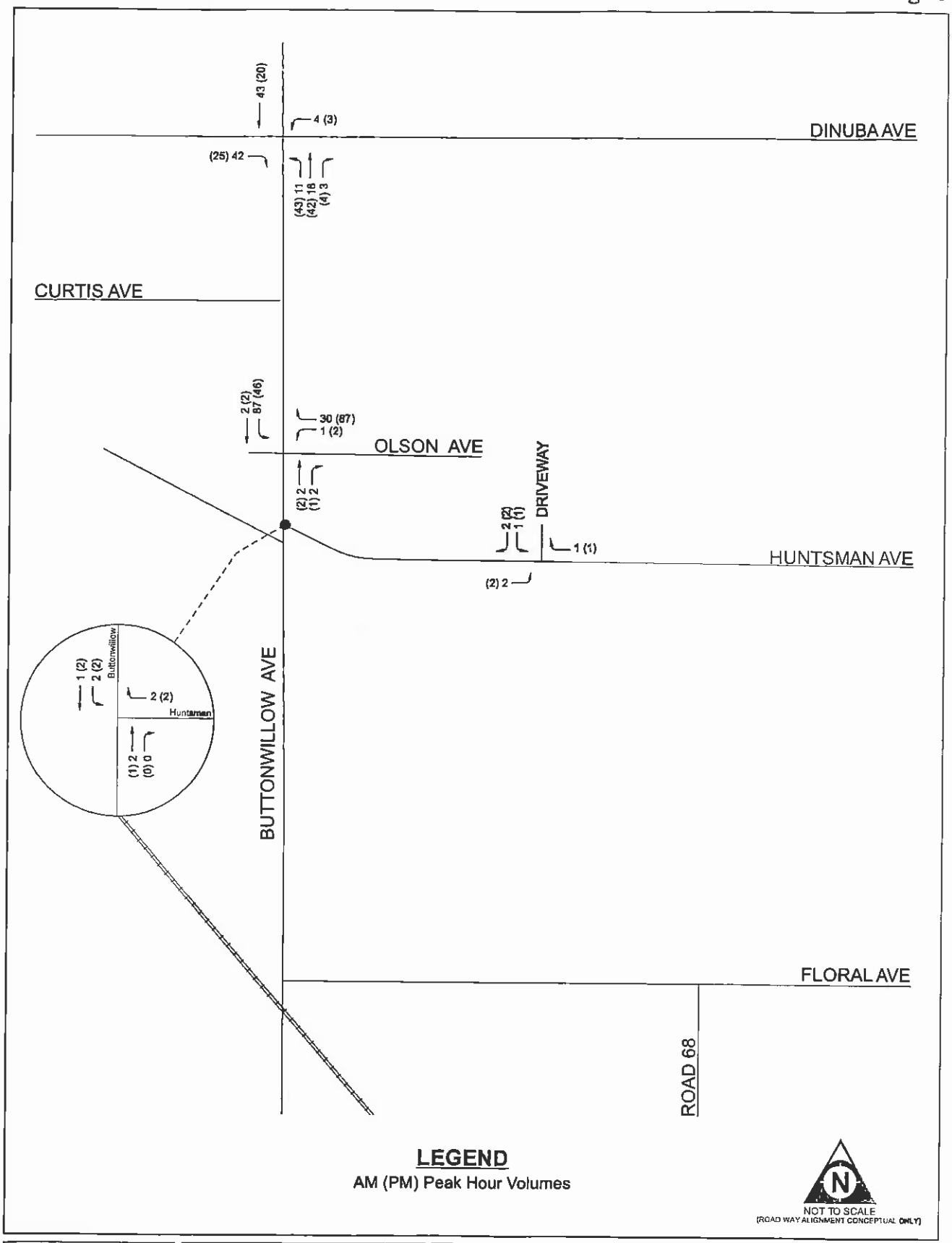
TPG Consulting

TRAFFIC CONDITIONS
Project Trips

Central Valley Transportation
Reedley, CA

Figure 2

09-1202



TPG Consulting Incorporated

TRAFFIC CONDITIONS
2030 Project Trips

Central Valley Transportation
Reedley, CA

Figure 3

09-1202

EXISTING CONDITIONS

The Existing conditions were prepared based on the current traffic volumes and roadway configurations.

Bike Facilities

Currently, there is A Class I bike lane on Dinuba Avenue, east of Buttonwillow Avenue. According to the 2005 *Reedley Bicycle Transportation Plan*, a Class III bike route is planned along Buttonwillow Avenue, east of Dinuba Avenue. A Class II bike lane is planned along Buttonwillow Avenue, north and south of Dinuba Avenue. Class II bike lane provides a striped lane for one-way bicycle travel along a street or highway. A Class III bike route calls for a shared lane with automobiles traveling in the same direction.

Roadways

Table 3 describes the Existing street system in the study area including the street classification, number of lanes, and the posted speed limits.

TABLE 3:
DESCRIPTION OF EXISTING STREET SYSTEM

Street	Classification[1]	No. of Lanes (2-dir)	Posted Speed Limit (mph)
Buttonwillow Avenue	Arterial	2	40-45
Dinuba Avenue	Arterial	2	40-45
Olson Avenue	Local	2	NPS
Huntsman Avenue	Local	2	35

NPS = no posted speed

Table 4 lists the study intersections and their associated intersection control.

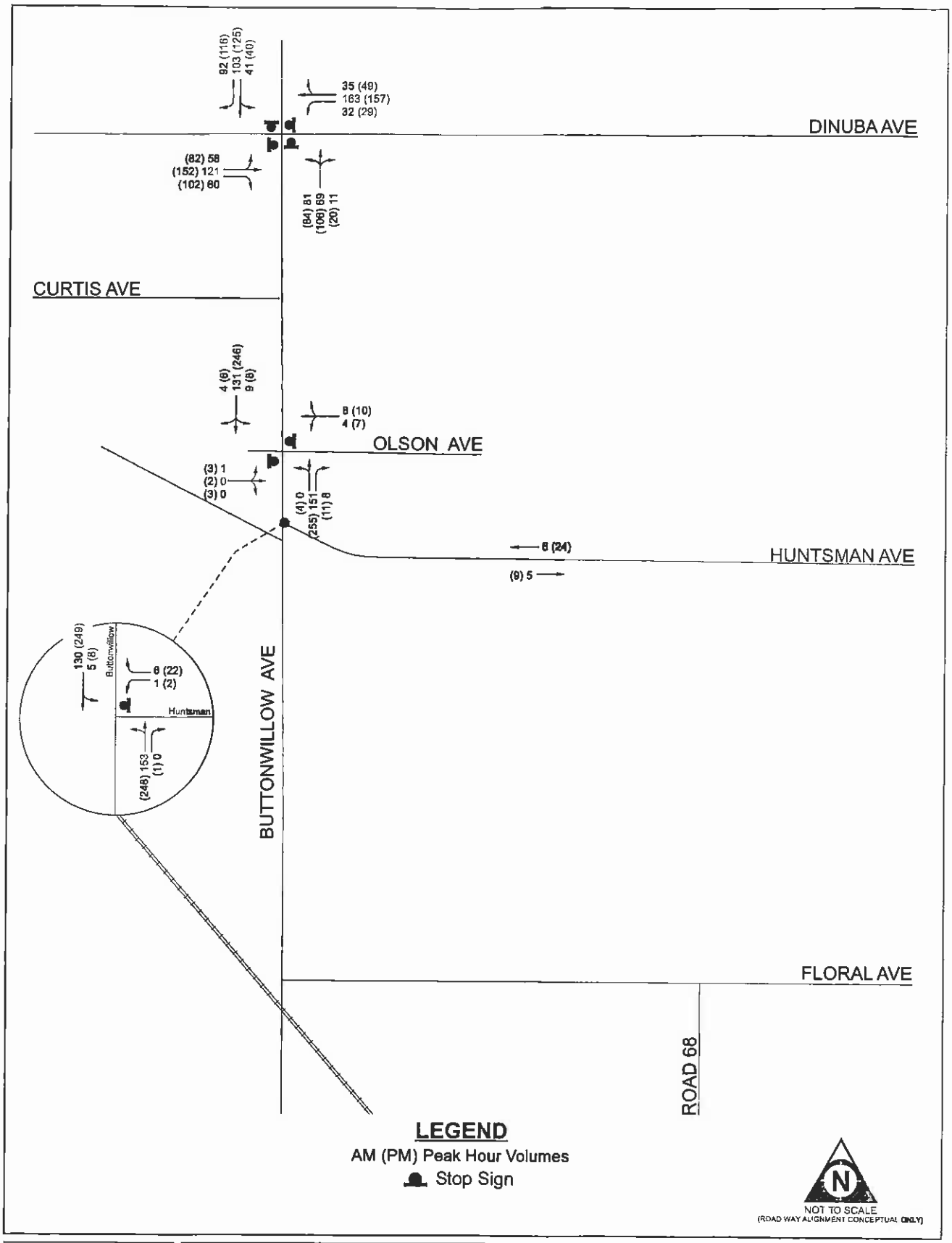
TABLE 4:
EXISTING INTERSECTION CONTROL

Intersection	Signalized/Unsignalized	Type
Buttonwillow Avenue at Dinuba Avenue	Unsignalized	AWSC
Buttonwillow Avenue at Olson Avenue	Unsignalized	TWSC
Buttonwillow Avenue at Huntsman Avenue	Unsignalized	TWSC

AWSC= All-Way Stop Controlled *TWSC = Two-Way Stop Controlled*

Level of Service

The Existing intersection lane configurations, intersection control, and peak hour traffic volumes are shown on Figure 4. Using the lane configurations and volumes shown on Figure 4, the intersections were analyzed for Existing levels of service. Table 5 shows the Existing levels of service for the study intersections. The Existing intersection levels of service calculations are included in Appendix B.



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TRAFFIC CONDITIONS
Existing

Central Valley Transportation
Reedley, CA

Figure 4

09-1202

TABLE 5:
EXISTING CONDITIONS ANALYSIS
INTERSECTION WEEKDAY LEVEL OF SERVICE

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[1] (secs)	LOS	Delay[1] (secs)
Buttonwillow Avenue at Dinuba Avenue	A	9.5	B	10.3
Buttonwillow Avenue at Olson Avenue				
• NB Left-Through	A	0.0	A	0.2
• SB Left-Through-Right	A	0.5	A	0.3
• EB Approach	B	10.9	B	12.3
• WB Approach	B	10.4	B	12.6
Buttonwillow Avenue at Huntsman Avenue				
• SB Left-Through	A	0.3	A	0.3
• WB Approach	A	9.3	B	10.0

[1] *Delay per vehicle* *secs = seconds* *NB = northbound* *SB = Southbound*
EB = eastbound *WB = Westbound*

As shown in Table 5, all the study intersections are currently operating at or above the appropriate adopted level or service standard in the Existing conditions scenario.

Signal Warrants

Peak Hour signal warrants were also prepared for the following unsignalized study intersections:

- Buttonwillow Avenue at Dinuba Avenue
- Buttonwillow Avenue at Olson Avenue
- Buttonwillow Avenue at Huntsman Avenue

Based on the Peak Hour signal warrants, the Buttonwillow Avenue at Dinuba Avenue intersection currently satisfies the warrant. The remaining unsignalized study intersections do not currently meet the Peak Hour signal warrant in the Existing conditions scenario. These warrant analyses are limited to the peak hour volume warrant only and other conditions may exist which meet other traffic signal warrants. Copies of the warrant analyses are included in Appendix C.

EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project traffic conditions were developed using the Existing traffic volumes shown in Figure 4 and the Project trips shown in Figure 2.

Level of Service

The Existing Plus Project intersection lane configurations, intersection controls, and peak hour traffic volumes are shown on Figure 5. Using the lane configurations and volumes shown on Figure 5, the intersections were analyzed for Existing Plus Project levels of service. Table 6 shows the Existing Plus Project levels of service for the study intersections. The Existing Plus Project intersection levels of service calculations are included in Appendix D.

TABLE 6:
EXISTING PLUS PROJECT CONDITIONS ANALYSIS
INTERSECTION WEEKDAY LEVEL OF SERVICE

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[1] (secs)	LOS	Delay[1] (secs)
Buttonwillow Avenue at Dinuba Avenue	A	9.9	B	11.5
Buttonwillow Avenue at Olson Avenue				
• NB Left-Through	A	0.0	A	0.2
• SB Left-Through-Right	A	3.2	A	1.5
• EB Approach	B	13.6	B	14.4
• WB Approach	B	10.6	B	12.3
Buttonwillow Avenue at Huntsman Avenue				
• SB Left-Through	A	0.4	A	0.4
• WB Approach	A	9.3	B	10.1
Project Driveway at Huntsman Avenue				
• EB Left-Through	A	2.1	A	1.3
• SB Approach	A	8.5	A	8.5

[1] *Delay per vehicle* *secs = seconds* *NB = northbound* *SB = Southbound*
EB = eastbound *WB = Westbound*

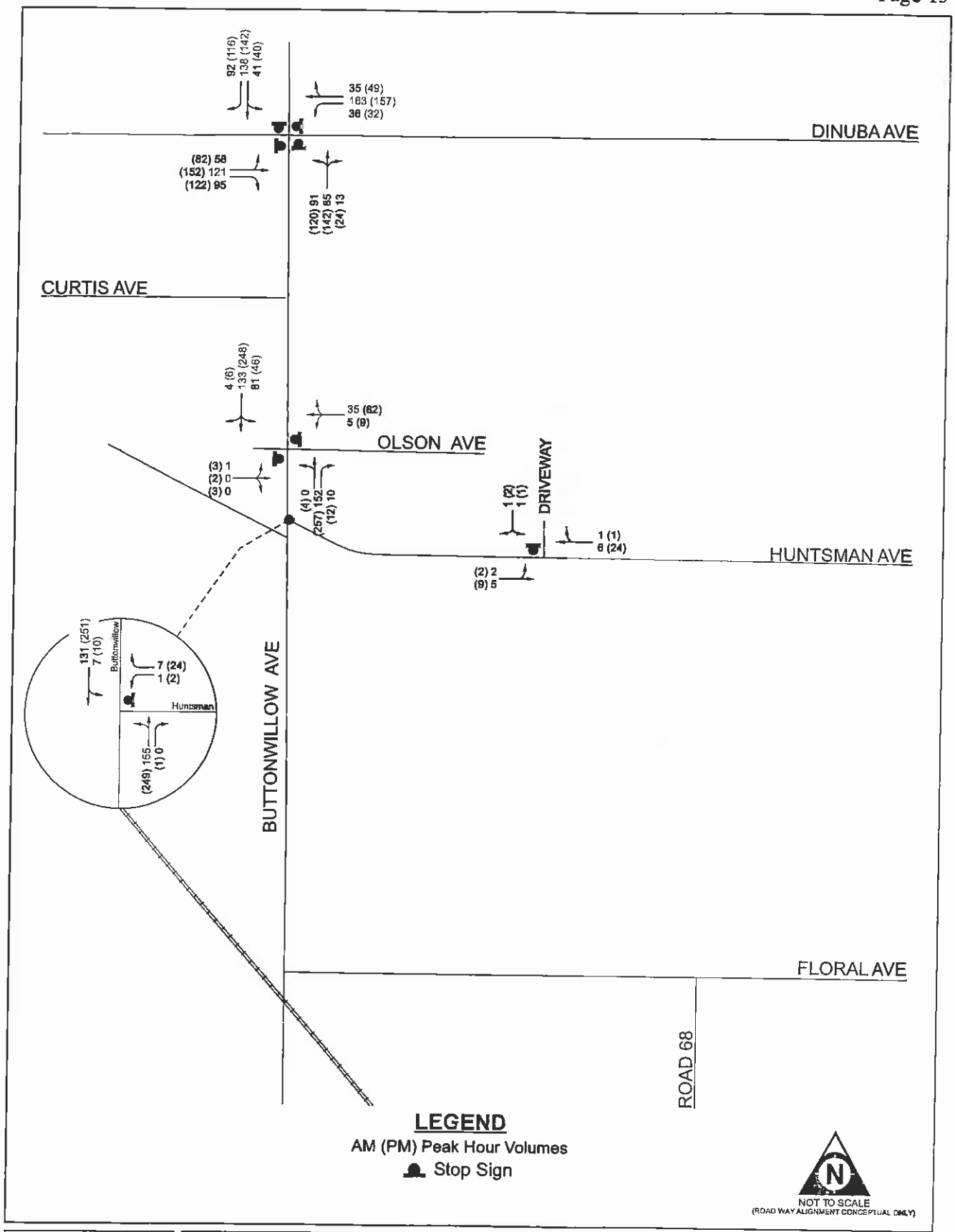
As shown in Table 6, all the study intersections are projected to operate at or above the appropriate adopted level or service standard in the Existing Plus Project conditions scenario.

Signal Warrants

Peak Hour signal warrants were also prepared for the following unsignalized study intersections:

- Buttonwillow Avenue at Dinuba Avenue
- Buttonwillow Avenue at Olson Avenue
- Buttonwillow Avenue at Huntsman Avenue

As previously identified, the Buttonwillow Avenue at Dinuba Avenue intersection is projected to continue to satisfy the warrant. The remaining unsignalized study intersections are not projected to meet the Peak Hour signal warrant in the Existing Plus Project conditions scenario. These warrant analyses are limited to the peak hour volume warrant only and other conditions may exist which meet other traffic signal warrants. Copies of the warrant analyses are included in Appendix E.



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TRAFFIC CONDITIONS
Existing + Project

Central Valley Transportation
Reedley, CA

Figure 5

09-1202

2030 NO PROJECT CONDITIONS

The 2030 No Project traffic conditions were developed using the 2030 No Project traffic volumes calculated using the COFCG Model as described in the Methodology included in Appendix A. The installation of a roundabout at the Buttonwillow Avenue at Dinuba Avenue intersection is assumed to occur prior to 2030, and is therefore included in the 2030 No Project analysis.

Level of Service

The 2030 No Project intersection lane configurations, intersection controls, and peak hour traffic volumes are shown on Figure 6. Using the lane configurations and volumes shown on Figure 6, the intersections were analyzed for 2030 No Project levels of service. Table 7 shows the 2030 No Project levels of service for the study intersections. The 2030 No Project intersection levels of service calculations are included in Appendix F.

TABLE 7:
2030 NO PROJECT CONDITIONS ANALYSIS
INTERSECTION WEEKDAY LEVEL OF SERVICE

Intersection	AM Peak Hour		PM Peak Hour	
	LOS	Delay[1] (secs)	LOS	Delay[1] (secs)
Buttonwillow Avenue at Dinuba Avenue	A	8.6	A	8.9
Buttonwillow Avenue at Olson Avenue				
• NB Left-Through	A	0.0	A	0.2
• SB Left-Through-Right	A	0.5	A	0.3
• EB Approach	B	11.8	B	13.7
• WB Approach	B	11.0	B	14.4
Buttonwillow Avenue at Huntsman Avenue				
• SB Left-Through	A	0.3	A	0.3
• WB Approach	A	9.6	B	10.6

[1] *Delay per vehicle* *secs = seconds* *NB = northbound* *SB = Southbound*
EB = eastbound *WB = Westbound*

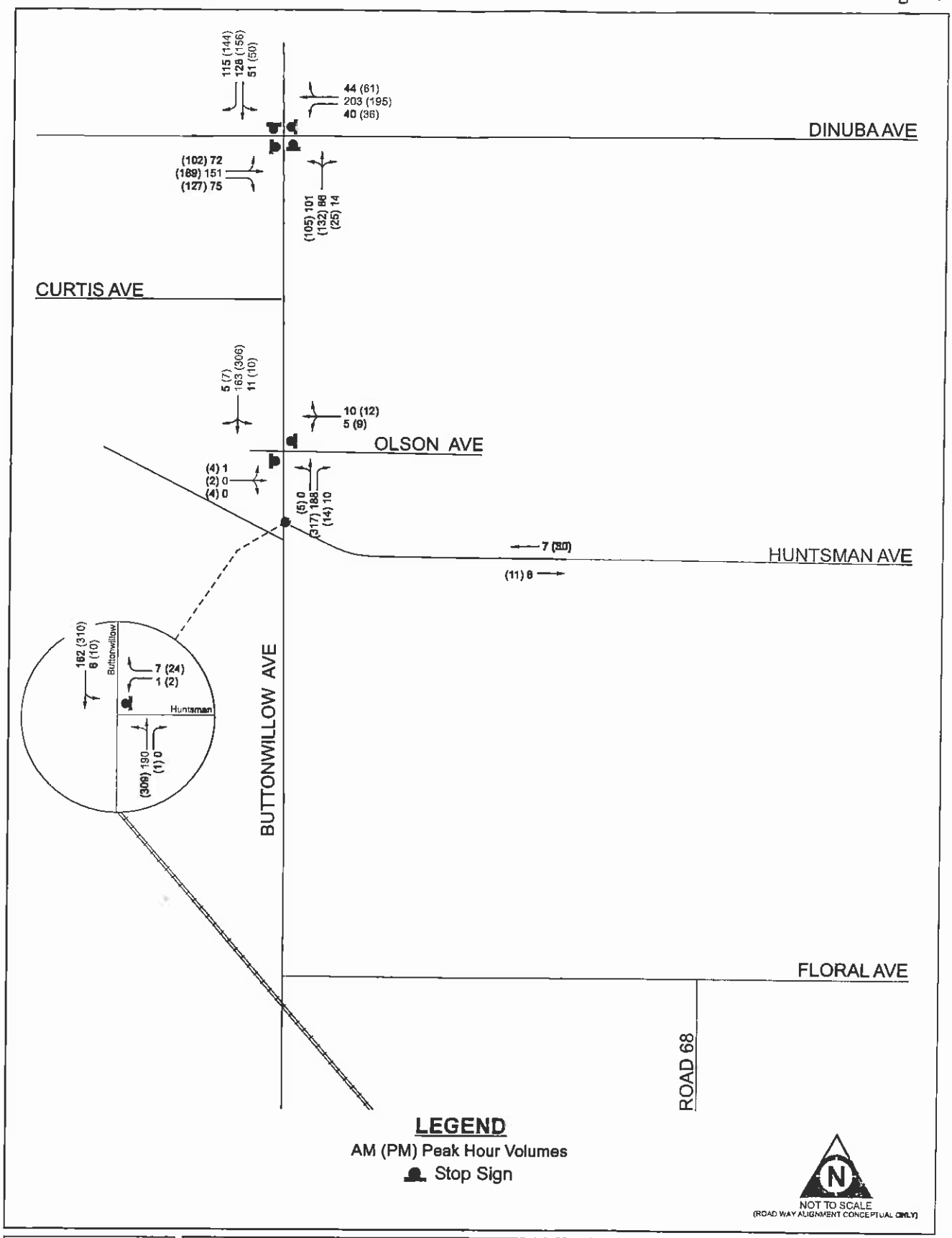
As shown in Table 7, all the study intersections are projected to operate at or above the appropriate adopted level or service standard in the 2030 No Project conditions scenario.

Signal Warrants

Peak Hour signal warrants were also prepared for the following unsignalized study intersections:

- Buttonwillow Avenue at Olson Avenue
- Buttonwillow Avenue at Huntsman Avenue

Based on the Peak Hour signal warrants, the unsignalized study intersections are not projected to meet the Peak Hour signal warrant in the 2030 No Project conditions scenario. The signal warrant was not prepared for the Buttonwillow Avenue at Dinuba Avenue intersection since a roundabout has already been installed as the preferred traffic control device. These warrant analyses are limited to the peak hour volume warrant only and other conditions may exist which meet other traffic signal warrants. Copies of the warrant analyses are included in Appendix G.



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TRAFFIC CONDITIONS
2030 No Project

Central Valley Transportation
Reedley, CA

Figure 6

09-1202

2030 PROJECT CONDITIONS

The 2030 Project traffic conditions were developed using the 2030 No Project traffic volumes shown on Figure 6 and the Project trips shown in Figure 3.

Level of Service

The 2030 Project intersection lane configurations, intersection controls, and peak hour traffic volumes are shown on Figure 7. Using the lane configurations and volumes shown on Figure 7, the intersections were analyzed for 2030 Project levels of service. Table 8 shows the 2030 Project levels of service for the study intersections. The 2030 Project intersection levels of service calculations are included in Appendix H.

TABLE 8:
2030 PROJECT CONDITIONS ANALYSIS
INTERSECTION WEEKDAY LEVEL OF SERVICE

	AM Peak Hour		PM Peak Hour	
Intersection	LOS	Delay[1] (secs)	LOS	Delay[1] (secs)
Buttonwillow Avenue at Dinuba Avenue	A	8.9	A	9.6
Buttonwillow Avenue at Olson Avenue				
• NB Left-Through	A	0.0	A	0.2
• SB Left-Through-Right	A	3.4	A	1.7
• EB Approach	C	15.6	C	17.4
• WB Approach	B	11.2	B	14.0
Buttonwillow Avenue at Huntsman Avenue				
• SB Left-Through	A	0.4	A	0.4
• WB Approach	A	9.5	B	10.6
Project Driveway at Huntsman Avenue				
• EB Left-Through	A	1.8	A	1.1
• SB Approach	A	8.4	A	8.6

[1] *Delay per vehicle* *secs = seconds* *NB = northbound* *SB = Southbound*
EB = eastbound *WB = Westbound*

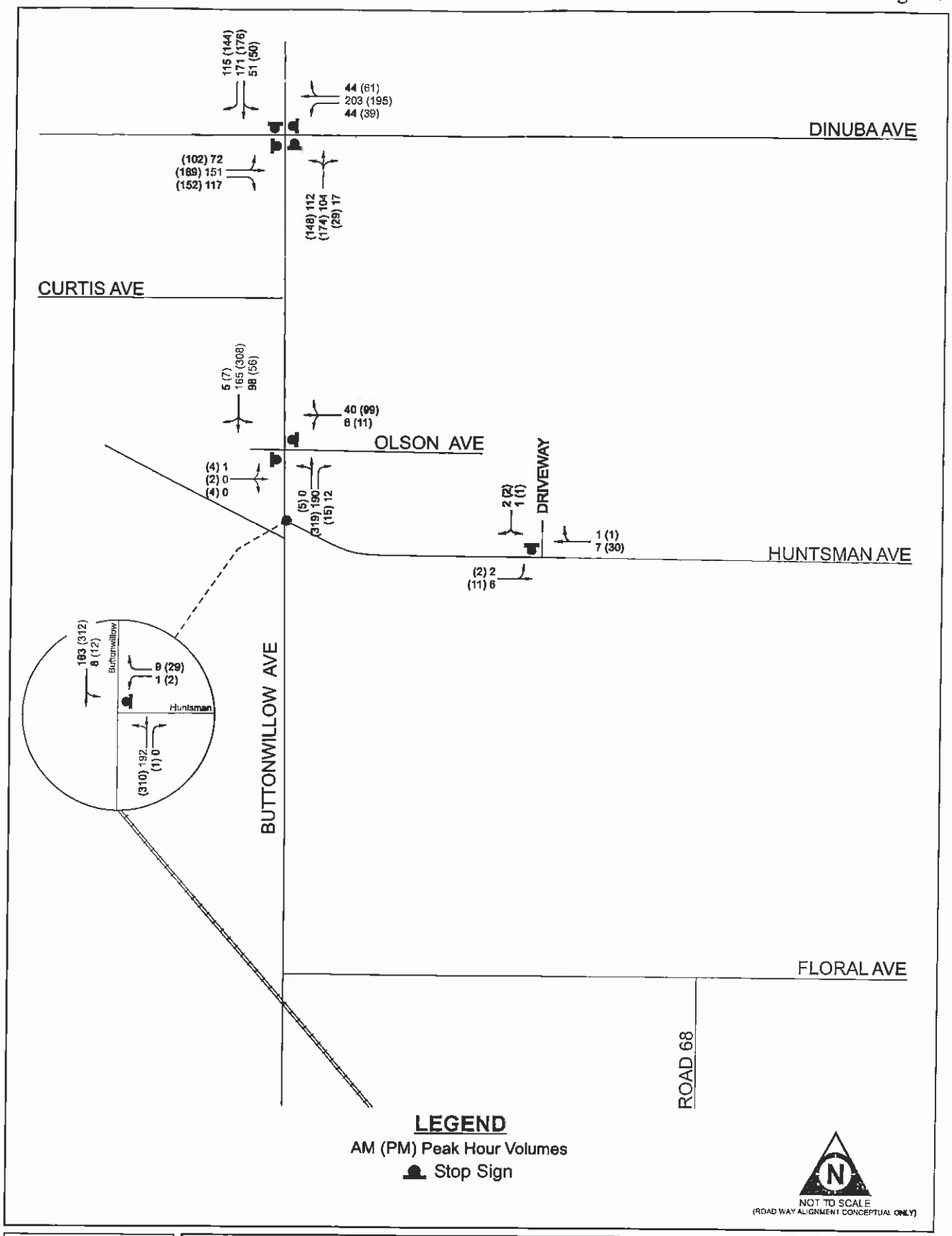
As shown in Table 8, all the study intersections are projected to operate at or above the appropriate adopted level or service standard in the 2030 Project conditions scenario.

Signal Warrants

Peak Hour signal warrants were also prepared for the following unsignalized study intersections:

- Buttonwillow Avenue at Olson Avenue
- Buttonwillow Avenue at Huntsman Avenue

Based on the Peak Hour signal warrants, the unsignalized study intersections are not projected to meet the Peak Hour signal warrant in the 2030 Project conditions scenario. The signal warrant was not prepared for the Buttonwillow Avenue at Dinuba Avenue intersection since a roundabout has already been installed as the preferred traffic control device. These warrant analyses are limited to the peak hour volume warrant only and other conditions may exist which meet other traffic signal warrants. Copies of the warrant analyses are included in Appendix I.



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TRAFFIC CONDITIONS
2030 Project

Central Valley Transportation
Reedley, CA

Figure 7

09-1202

CONCLUSIONS AND RECOMMENDATIONS

Level of Service

As shown above, all of the study intersections are currently operating and are projected to continue to operate at or above the City of Reedley's adopted level of service standard.

Signal Warrants

Based on the Peak Hour signal warrant, a traffic signal is warranted for the Buttonwillow Avenue at Dinuba Avenue intersection in the Existing and Existing Plus Project scenario. Since this intersection is not projected to operate below the adopted level of service standard and a roundabout is already planned for this intersection, installation of a traffic signal is not recommended. The remaining study intersections do not currently or are not projected to satisfy the warrant.

Recommendations

As described above, no impacts are identified at the study intersections, with or without the proposed Project. As such, no additional roadway improvements are recommended for the study area.

APPENDIX A

ANALYSIS METHODOLOGY

ANALYSIS METHODOLOGY

In order to prepare the traffic evaluation for the Project, a variety of data and technical assumptions had to be developed. This section of the report describes the various sources, data and technical assumptions used in this evaluation.

Sources

This report was prepared using information taken from the following sources:

- *2000 Highway Capacity Manual* (*HCM 2000*), Transportation Research Board, 2000.
- *California Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways (FHWA's MUTCD 2003 Edition as amended for use in California)*, California Department of Transportation, Division of Traffic Operations, September 26, 2006.
- *Fresno County Traffic Model*, Council of Fresno County Governments, April 2001.
- *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December, 2002.
- Recommended Procedures for Using Traffic Projections from the Fresno COG Travel Model, Fresno COG Model Steering Committee, December 2002.
- *Sidra Intersection 3.2*, Akcelik and Associates Pty Ltd, 2007.
- *Synchro 7.0*, Trafficware, 2007.
- *Traffic Impact Analysis for Site Development*, A Recommended Practice, ITE, Transportation Planners Council Task Force on Traffic Access/Impact Studies, 2006.

Analysis Time Periods

According to *Traffic Impact Analyses for Site Development*, the overall purpose of a traffic impact study is to determine the project impacts that are likely to occur to the surrounding street system. In order to accomplish this purpose you need to determine what occurs when the peak of the project generated traffic overlays the peak of the street traffic. *Traffic Impact Analyses for Site Development* states "the peak periods [of the adjacent street and highway system] are generally the weekday morning (7-9 a.m.) and evening (4-6 p.m.) peak hours, although local area characteristics occasionally result in other peaks (e.g., at major shopping or recreational centers)". The peak hours analyzed in this study were:

- 7:00 to 9:00 AM
- 4:00 to 6:00 PM

These are the standard peak hours of the street typically used for analysis in the City of Reedley.

Traffic Counts

According to the Caltrans *Guide for the Preparation of Traffic Impact Studies*, one of the common rules for counting vehicular traffic is:

> "Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions."[1]

[1] *Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December 2002, page 4.

Table A1 shows the date and day the Existing intersection count was taken for this Project. Prior to conducting these counts it was verified that these were non-holiday weeks.

TABLE A1:
EXISTING INTERSECTION COUNTS
DATES AND DAYS COUNTED

Intersections	Day	Date
Buttonwillow Avenue at Dinuba Avenue	Wednesday	07/08/09
Buttonwillow Avenue at Olson Avenue	Thursday	07/09/09
Buttonwillow Avenue at Huntsman Avenue	Tuesday	07/07/09

As shown in Table A1, all intersection counts were conducted on days that were appropriate to count.

Fresno County Traffic Model

Background

COFCG is the State Regional Transportation Planning Agency and the federal Metropolitan Planning Organization for Fresno County. As a transportation planning agency, COFCG is responsible for developing and maintaining a microcomputer-based traffic simulation model that represents Fresno County.

Modeling activities are monitored by the Model Steering Committee. This Committee includes representatives from local agencies, private consultants, and others interested in the development and application of the Model to local traffic analysis issues. The Committee provides a focused forum for presentation of traffic related issues to local agency planning and traffic engineering staffs as well as project proponents. Since being formed in 1986, the Committee has developed into a valuable resource to both monitor modeling applications and to provide ongoing direction for continued Model development.

The current Model was adopted by the Model Steering Committee in April 12, 2001 and was developed to analyze proposed land uses, circulation systems, and air quality. This Model covers the entire Fresno County area, and meets or exceeds all State and Federal modeling requirements and is constantly being updated to insure incorporation of the latest planning assumptions. The land use contained in the Model was developed using the land use elements from the following:

- County of Fresno 2000 General Plan - adopted
- City of Clovis 1993 General Plan - adopted
- City of Fresno 2025 General Plan - adopted

Based on these General Plan Land Use elements and associated Land Use maps, it is anticipated that by 2025 the Land Use Plans for the City of Clovis and the City of Fresno will be built out to near capacity. The County of Fresno General Plan has no land use map with which to determine ultimate holding capacity for any given location. If additional in-depth information on the Model is required, the COFCG Fresno County Traffic Model Calibration/Validation Report and Model Documentation are available at www.fresnocog.org or by contacting the COFCG office.

Project Model Use

The Model was used in this study to develop the following pieces of information:

- 2030 background growth increments/rates

The 2009 and 2025 model years were used to create the 2030 background growth increments/rates for the study area roadways. Since the Model has limited network available for the study area of Reedley, growth rates were developed based on Model predicted growth. These growth rates were applied to the existing traffic counts to develop the 2030 traffic volumes.

Intersection Analysis and Volume Adjustments

Intersection heavy vehicle percentages were developed from the Existing conditions count data. Intersection volumes were balanced as appropriate. Heavy vehicle percentages used in the analysis were the greater of either the counted or the *HCM 2000* 2% default. These percentages were used in all scenarios. The urban default peak hour factor of 0.92 was used at all intersection locations in all scenarios.

Network Improvements

One roadway improvement project is identified and included in the traffic analysis. The City of Reedley has planned the installation of a 1-lane roundabout at the intersection of Buttonwillow Avenue and Dinuba Avenue. The roundabout is planned for construction in the near future. Installation of the roundabout is assumed for the 2030 analysis periods.

Signal Warrant Analysis

Peak Hour signal warrants (Warrant 3) were prepared for all unsignalized intersections based on the methodology presented in the *California Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways*, pages 4C-4, 4C-5 and 4C-10. According to the MUTCD, "the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." Therefore prior to making a final determination on installation of a proposed signal, a thorough engineering investigation, including collision history, should be conducted.

Level of Service Analysis Methods

Unsignalized and signalized intersection analyses were completed using *Synchro 7.0*, which incorporates the *HCM 2000* methodologies. *Synchro 7.0* allows for optimization of signals to provide for the greatest reduction in overall intersection delay. This optimization process can result in different signal cycle lengths for both the AM and PM peak hours of a given scenario and across all scenarios. The changing of the signal cycle length somewhat reflects the agency process whereby the agency will adjust intersection signal cycle lengths for differing traffic conditions based on current count data.

Level of Service

For analysis purposes, the *HCM 2000* defines six levels of service for various facility types. The six levels are given letter designations ranging from "A" to "F", with "A" representing the best operating conditions and "F" the worst. Quantifiable measures of effectiveness that best describe the quality of operation on the subject facility type are used to determine the facilities level of service. For signalized and unsignalized intersections, the quantifiable measure of effectiveness is average control delay.[2]

[2] Control delay, according to the *2000 Highway Capacity Manual*, page 16-1, includes initial acceleration delay, queue move-up time, stopped delay, and final acceleration delay.

For all-way stop-controlled (AWSC), signalized, and roundabout intersections, "the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersections as a whole".[3] Level of service for the entire intersection is then based on the aggregated intersection delay. Control delay for two-way stop-controlled (TWSC) intersections, which have stop signs on only the minor street approaches, is per vehicle and is computed for the stop-controlled or minor street movements only since theoretically the through movements on the major street are not experiencing any delay. Since there is no aggregation of delay for a TWSC intersection, there is no intersection level of service as a whole, only levels of service for the individual minor movements. The minor movements generally consist of separate lefts on the major street approaches and all movements on both minor street approaches.

Table A2 shows the six levels of service and their corresponding ranges of average control delay for both signalized, unsignalized, and roundabout intersections. Table A2 also contains a brief traffic flow description for signalized intersections for each level of service category.

TABLE A2: INTERSECTION LEVEL OF SERVICE DESCRIPTION			**Intersections**	
			Signalized / Roundabout	**Unsignalized[1]**
Level of Service	**Conditions**	**Signalized Intersection Description**	**Delay (secs/veh)**	**Delay (secs/veh)**
"A"	Free Flow	*Users experience very low delay. Progression is favorable and most vehicles do not stop at all.*	≤10.0	≤10.0
"B"	Stable Operations	*Vehicles travel with good progression. Some vehicles stop, causing slight delay.*	>10.0 – 20.0	>10.0 – 15.0
"C"	Stable Operations	*Higher delays result from fair progression. A significant number of vehicles stop, although many continue to pass through the intersection without stopping.*	>20.0 to 35.0	>15.0 – 25.0
"D"	Approaching Unstable	*Congestion is noticeable. Progression is unfavorable, with more vehicles stopping rather than passing through the intersection.*	>35.0 – 55.0	>25.0 – 35.0
"E"	Unstable Operations	*Traffic volumes are at capacity. Users experience poor progression and long delays.*	>55.0 – 80.0	>35.0 – 50.0
"F"	Forced Flow	*Intersection's capacity is oversaturated, causing poor progression and unusually long delays.*	>80.0	>50.0

Source: 2000 Highway Capacity Manual, Transportation Research Board.
[1] Unsignalized intersections include TWSC and AWSC

Level of Service Standards

The City of Reedley has adopted a level of service "C" as their standard for traffic impact study purposes.

[3] 2000 HCM, page 16-2.

APPENDIX B

EXISTING CONDITIONS

INTERSECTION LEVELS OF SERVICE CALCULATIONS

Existing AM

1: Dinuba Ave. & Buttonwillow

7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	58	121	60	32	163	35	81	69	11	41	103	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	132	65	35	177	38	88	75	12	45	112	100

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	195	65	212	38	175	157	100
Volume Left (vph)	63	0	35	0	88	45	0
Volume Right (vph)	0	65	0	38	12	0	100
Hadj (s)	0.12	-0.55	0.07	-0.57	0.14	0.09	-0.57
Departure Headway (s)	5.3	3.2	5.2	3.2	5.4	5.4	3.2
Degree Utilization, x	0.28	0.06	0.31	0.03	0.26	0.23	0.09
Capacity (veh/h)	636	1121	647	1121	615	611	1121
Control Delay (s)	10.4	6.4	10.5	6.3	10.3	10.0	6.5
Approach Delay (s)	9.4		9.8		10.3	8.7	
Approach LOS	A		A		B	A	

Intersection Summary			
Delay	9.5		
HCM Level of Service	A		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Existing PM

1: Dinuba Ave. & Buttonwillow

7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	82	152	102	29	157	49	84	106	20	40	125	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	89	165	111	32	171	53	91	115	22	43	136	126

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	254	111	202	53	228	179	126
Volume Left (vph)	89	0	32	0	91	43	0
Volume Right (vph)	0	111	0	53	22	0	126
Hadj (s)	0.12	-0.55	0.07	-0.57	0.11	0.08	-0.57
Departure Headway (s)	5.6	3.2	5.6	3.2	5.6	5.7	3.2
Degree Utilization, x	0.39	0.10	0.31	0.05	0.36	0.28	0.11
Capacity (veh/h)	595	1121	582	1121	582	569	1121
Control Delay (s)	12.1	6.5	11.2	6.4	11.8	11.0	6.6
Approach Delay (s)	10.4		10.2		11.8	9.2	
Approach LOS	B		B		B	A	

Intersection Summary			
Delay	10.3		
HCM Level of Service	B		
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

Existing AM
2: Olson Ave. & Buttonwillow 7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	0	4	0	8	0	151	8	9	131	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	0	4	0	9	0	164	9	10	142	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	337	337	145	328	330	164	147			173		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	337	337	145	328	330	164	147			173		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	100	100	100	99	100	99	100			99		
cM capacity (veh/h)	607	580	903	540	585	769	1435			1386		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	1	13	164	9	157
Volume Left	1	4	0	0	10
Volume Right	0	9	0	9	4
cSH	607	674	1435	1700	1386
Volume to Capacity	0.00	0.02	0.00	0.01	0.01
Queue Length 95th (ft)	0	1	0	0	1
Control Delay (s)	10.9	10.4	0.0	0.0	0.5
Lane LOS	B	B			A
Approach Delay (s)	10.9	10.4	0.0		0.5
Approach LOS	B	B			

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	2	3	7	0	10	4	255	11	8	246	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	2	3	8	0	11	4	277	12	9	267	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	585	586	271	578	577	277	274			289		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	585	586	271	578	577	277	274			289		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	99	99	100	98	100	98	100			99		
cM capacity (veh/h)	412	418	768	357	423	660	1289			1256		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	9	18	282	12	283
Volume Left	3	8	4	0	9
Volume Right	3	11	0	12	7
cSH	501	489	1289	1700	1256
Volume to Capacity	0.02	0.04	0.00	0.01	0.01
Queue Length 95th (ft)	1	3	0	0	1
Control Delay (s)	12.3	12.6	0.2	0.0	0.3
Lane LOS	B	B	A		A
Approach Delay (s)	12.3	12.6	0.1		0.3
Approach LOS	B	B			

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	6	153	0	5	130
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	7	166	0	5	141
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	318	166			166	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318	166			166	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	672	878			1388	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	166	147
Volume Left	1	0	5
Volume Right	7	0	0
cSH	1024	1700	1388
Volume to Capacity	0.01	0.10	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.3	0.0	0.3
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	0.3
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	22	248	1	8	249
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	24	270	1	9	271
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	558	270			271	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	558	270			271	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	97			99	
cM capacity (veh/h)	487	769			1270	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	26	271	279
Volume Left	2	0	9
Volume Right	24	1	0
cSH	838	1700	1270
Volume to Capacity	0.03	0.16	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.0	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	10.0	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX C

EXISTING CONDITIONS

PEAK HOUR SIGNAL WARRANT ANALYSES

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Dinuba Avenue Critical Approach Speed 45 mph

MINOR STREET: Buttonwillow Avenue Critical Approach Speed 40 mph

Critical speed of major street traffic > 40 mph ---------- ☒ or RURAL (R)

In built up area of isolated community of < 10,000 pop. -------- ☐

☐ URBAN (U)

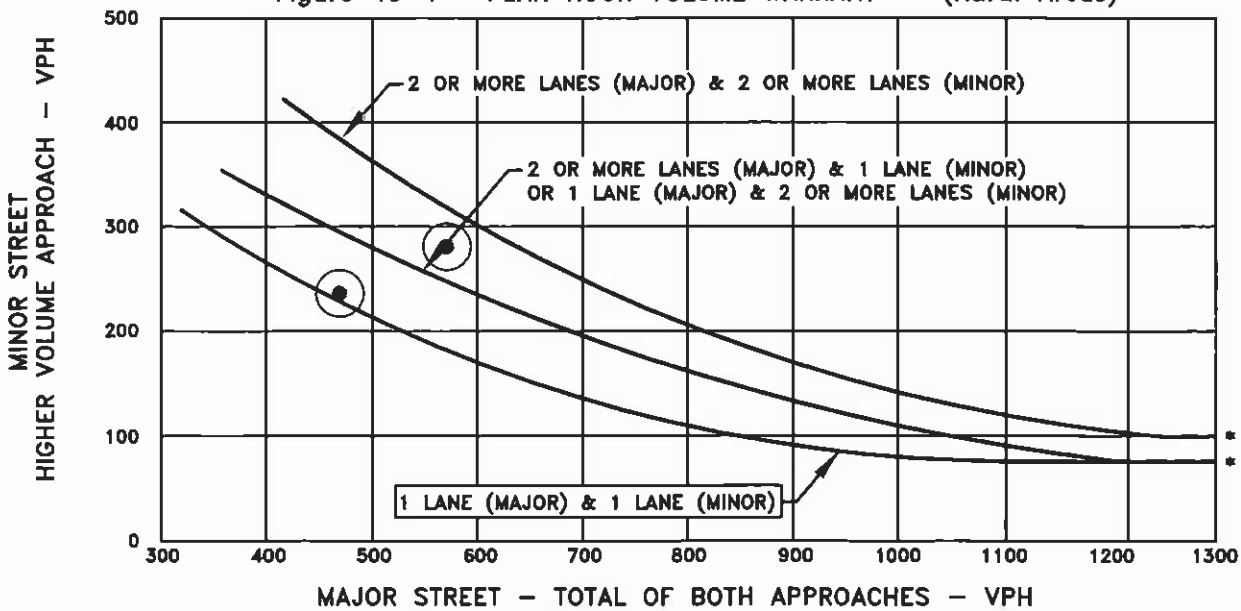
CONDITION: EXISTING

WARRANT 3 – Peak Hour Volume SATISFIED* YES ☒ NO ☐

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		469	571				
Highest Approaches – Minor Street	✓		236	281				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting Incorporated

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Olson Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- [X] RURAL (R)

or

In built up area of isolated community of < 10,000 pop. -------- [ ] URBAN (U)

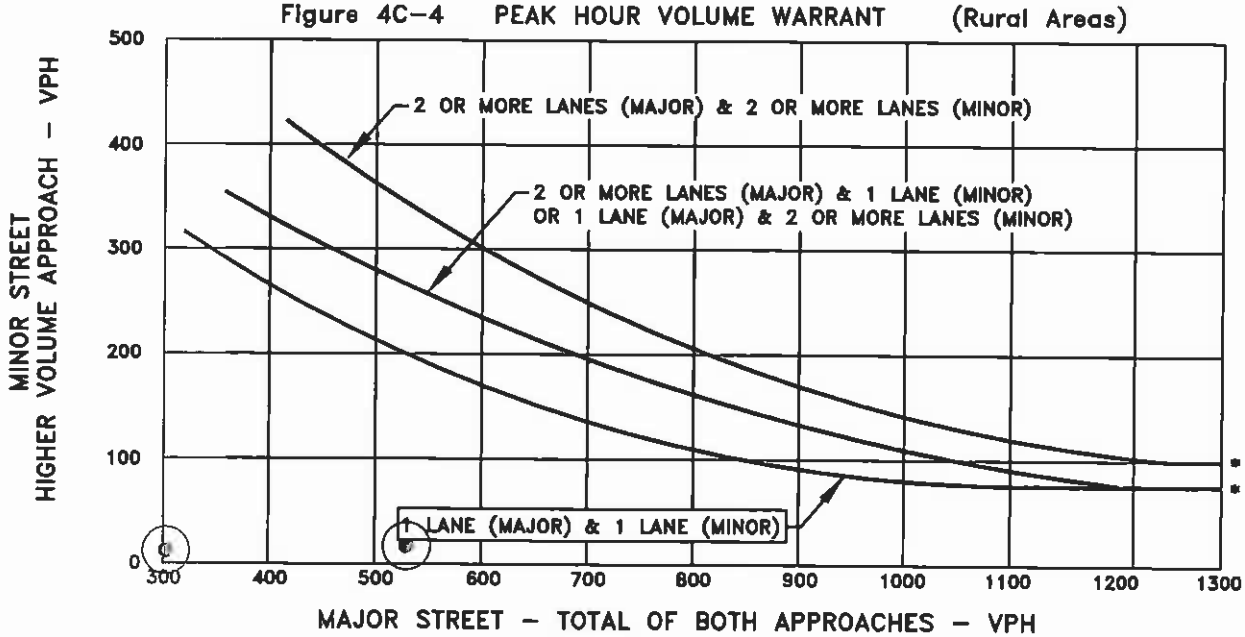
CONDITION: EXISTING

WARRANT 3 – Peak Hour Volume SATISFIED* YES [ ] NO [X]

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		303	530				
Highest Approaches – Minor Street	✓		12	17				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Huntsman Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- ☒ RURAL (R)

or

In built up area of isolated community of < 10,000 pop. -------- ☐

☐ URBAN (U)

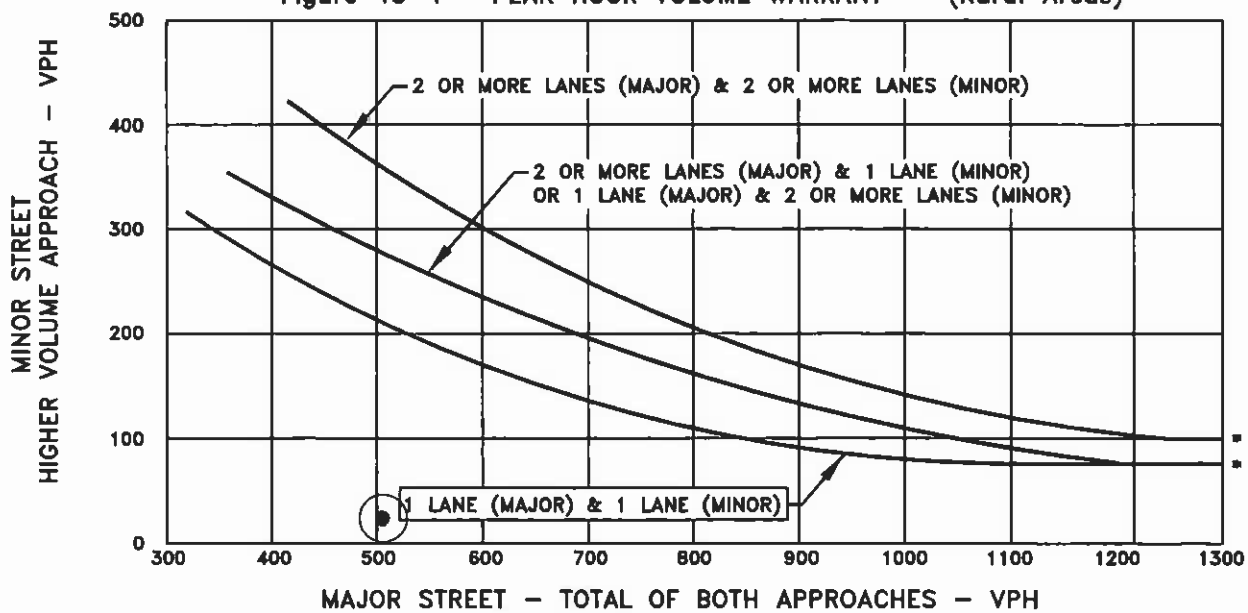
CONDITION: EXISTING

WARRANT 3 – Peak Hour Volume SATISFIED* YES ☐ NO ☒

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		288	506				
Highest Approaches – Minor Street	✓		7	24				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting

APPENDIX D

EXISTING PLUS PROJECT CONDITIONS

INTERSECTION LEVELS OF SERVICE CALCULATIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	58	121	95	36	163	35	91	85	13	41	138	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	132	103	39	177	38	99	92	14	45	150	100

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	195	103	216	38	205	195	100
Volume Left (vph)	63	0	39	0	99	45	0
Volume Right (vph)	0	103	0	38	14	0	100
Hadj (s)	0.12	-0.55	0.07	-0.57	0.14	0.08	-0.57
Departure Headway (s)	5.5	3.2	5.4	3.2	5.5	5.5	3.2
Degree Utilization, x	0.30	0.09	0.33	0.03	0.32	0.30	0.09
Capacity (veh/h)	592	1121	604	1121	592	600	1121
Control Delay (s)	10.9	6.5	11.1	6.3	11.1	10.8	6.5
Approach Delay (s)	9.4		10.4		11.1	9.3	
Approach LOS	A		B		B	A	

Intersection Summary			
Delay	9.9		
HCM Level of Service	A		
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	82	152	122	32	157	49	120	142	24	40	142	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	89	165	133	35	171	53	130	154	26	43	154	126

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total (vph)	254	133	205	53	311	198	126
Volume Left (vph)	89	0	35	0	130	43	0
Volume Right (vph)	0	133	0	53	26	0	126
Hadj (s)	0.12	-0.55	0.07	-0.57	0.12	0.08	-0.57
Departure Headway (s)	6.0	3.2	6.0	3.2	5.8	6.0	3.2
Degree Utilization, x	0.42	0.12	0.34	0.05	0.50	0.33	0.11
Capacity (veh/h)	549	1121	534	1121	575	530	1121
Control Delay (s)	13.2	6.6	12.1	6.4	14.5	11.9	6.6
Approach Delay (s)	11.0		10.9		14.5	9.8	
Approach LOS	B		B		B	A	

Intersection Summary			
Delay	11.5		
HCM Level of Service	B		
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	0	5	0	35	0	152	10	81	133	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	0	5	0	38	0	165	11	88	145	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	526	499	147	488	490	165	149			176		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	526	499	147	488	490	165	149			176		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	100	100	100	99	100	95	100			94		
cM capacity (veh/h)	418	443	900	400	448	768	1433			1382		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	1	43	165	11	237
Volume Left	1	5	0	0	88
Volume Right	0	38	0	11	4
cSH	418	689	1433	1700	1382
Volume to Capacity	0.00	0.06	0.00	0.01	0.06
Queue Length 95th (ft)	0	5	0	0	5
Control Delay (s)	13.6	10.6	0.0	0.0	3.2
Lane LOS	B	B			A
Approach Delay (s)	13.6	10.6	0.0		3.2
Approach LOS	B	B			

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	33.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Existing Plus Project PM
2: Olson Ave. & Buttonwillow

7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	3	2	3	9	0	82	4	257	12	46	248	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	2	3	10	0	89	4	279	13	50	270	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	750	674	273	665	664	279	276			292		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	750	674	273	665	664	279	276			292		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	99	99	100	97	100	86	100			96		
cM capacity (veh/h)	274	360	766	302	365	658	1287			1252		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	9	99	284	13	326
Volume Left	3	10	4	0	50
Volume Right	3	89	0	13	7
cSH	392	589	1287	1700	1252
Volume to Capacity	0.02	0.17	0.00	0.01	0.04
Queue Length 95th (ft)	2	15	0	0	3
Control Delay (s)	14.4	12.3	0.2	0.0	1.5
Lane LOS	B	B	A		A
Approach Delay (s)	14.4	12.3	0.1		1.5
Approach LOS	B	B			

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	45.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	7	155	0	7	131
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	8	168	0	8	142
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	326	168			168	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326	168			168	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	99			99	
cM capacity (veh/h)	664	876			1385	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	168	150
Volume Left	1	0	8
Volume Right	8	0	0
cSH	1001	1700	1385
Volume to Capacity	0.01	0.10	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.3	0.0	0.4
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	0.4
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	24	249	1	10	251
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	26	271	1	11	273
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	566	271			272	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	566	271			272	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	97			99	
cM capacity (veh/h)	482	767			1269	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	28	272	284
Volume Left	2	0	11
Volume Right	26	1	0
cSH	831	1700	1269
Volume to Capacity	0.03	0.16	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	10.1	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.1	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	5	6	1	1	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	5	7	1	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	8				17	7
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	8				17	7
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1613				1000	1075

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	8	8	2
Volume Left	2	0	1
Volume Right	0	1	1
cSH	1613	1700	1036
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	2.1	0.0	8.5
Lane LOS	A		A
Approach Delay (s)	2.1	0.0	8.5
Approach LOS			A

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	9	24	1	1	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	10	26	1	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	27				41	27
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27				41	27
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1587				969	1049

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	12	27	3
Volume Left	2	0	1
Volume Right	0	1	2
cSH	1587	1700	1021
Volume to Capacity	0.00	0.02	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	1.3	0.0	8.5
Lane LOS	A		A
Approach Delay (s)	1.3	0.0	8.5
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX E

EXISTING PLUS PROJECT CONDITIONS

PEAK HOUR SIGNAL WARRANT ANALYSES

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Dinuba Avenue Critical Approach Speed 45 mph

MINOR STREET: Buttonwillow Avenue Critical Approach Speed 40 mph

Critical speed of major street traffic > 40 mph ---------- ☒ RURAL (R)

or

In built up area of isolated community of < 10,000 pop. -------- ☐

☐ URBAN (U)

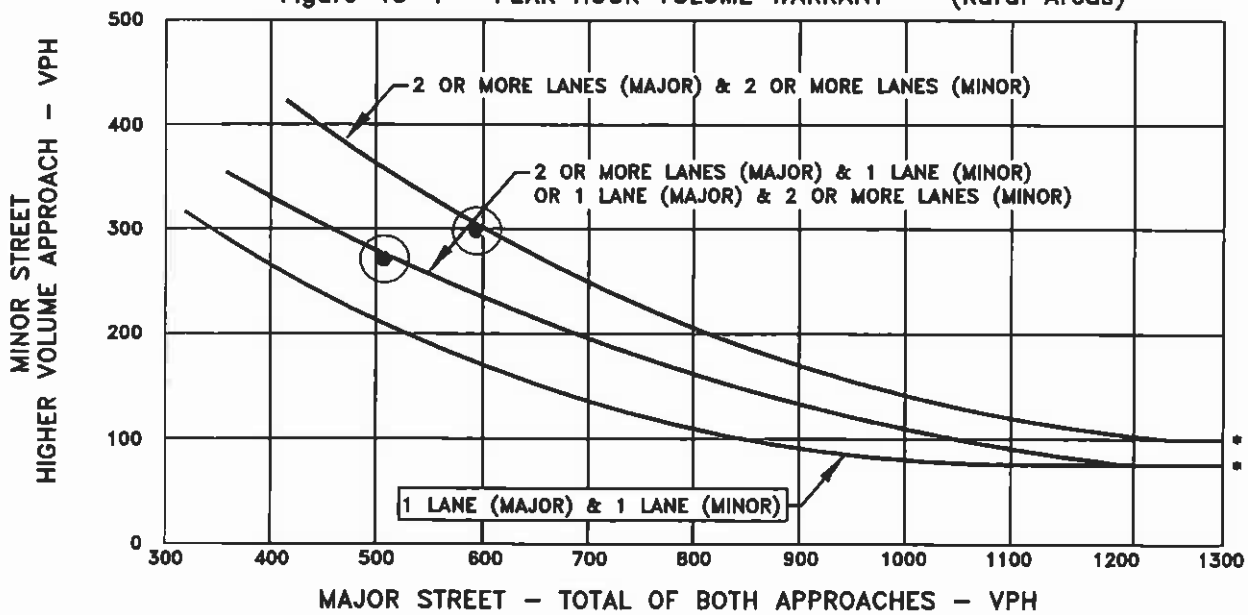
CONDITION: EXISTING PLUS PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES ☒ NO ☐

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		508	594				
Highest Approaches – Minor Street	✓		271	298				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting Incorporated

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Olson Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- ☒ or RURAL (R)

In built up area of isolated community of < 10,000 pop. -------- ☐

☐ URBAN (U)

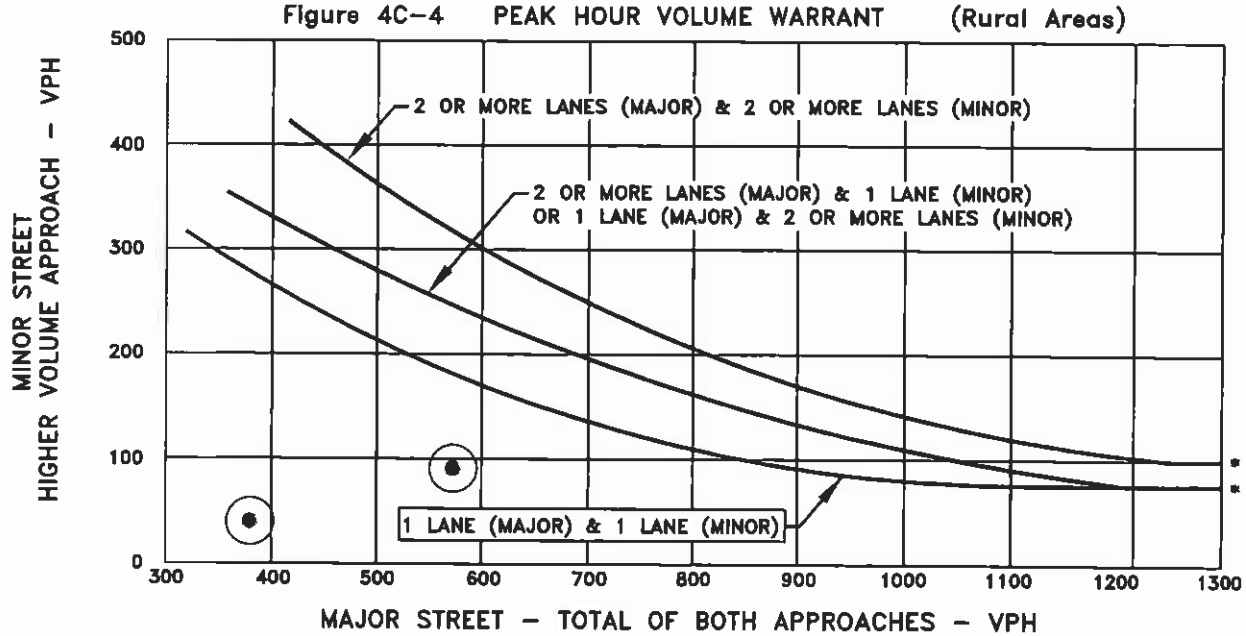
CONDITION: EXISTING PLUS PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES ☐ NO ☒

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		380	573				
Highest Approaches – Minor Street	✓		40	91				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG CONSULTING INCORPORATED

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Huntsman Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- ☒ or RURAL (R)

In built up area of isolated community of < 10,000 pop. -------- ☐

☐ URBAN (U)

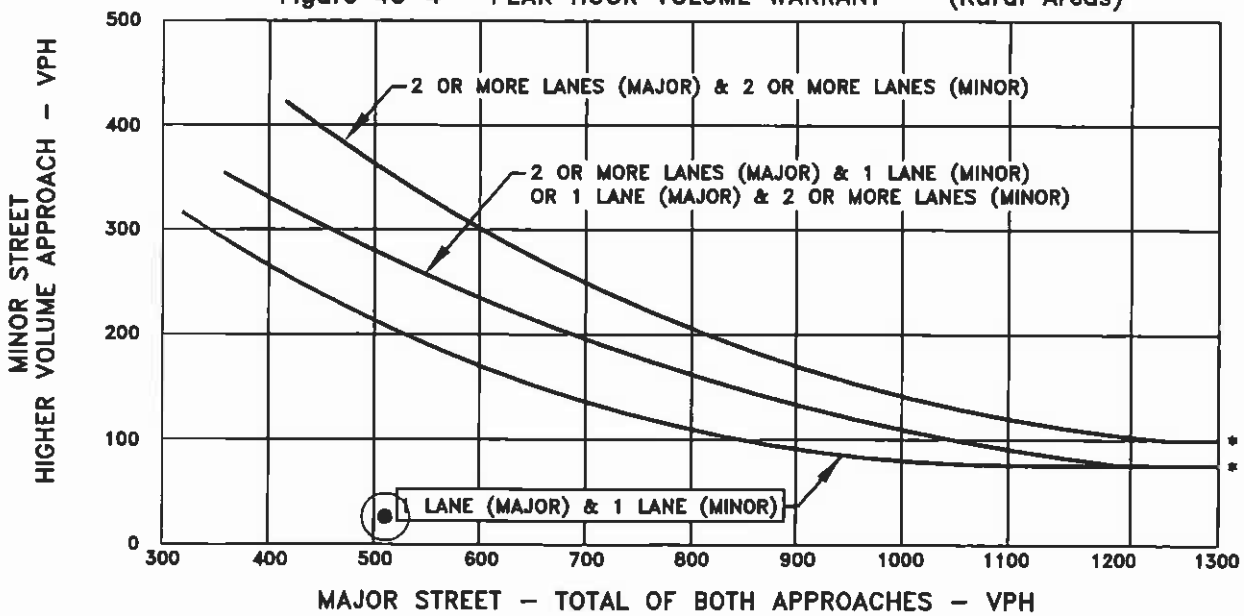
CONDITION: EXISTING PLUS PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES ☐ NO ☒

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		293	511				
Highest Approaches – Minor Street	✓		8	26				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting

APPENDIX F

2030 NO PROJECT CONDITIONS

INTERSECTION LEVELS OF SERVICE CALCULATIONS

SIDRA INTERSECTION

Movement Summary

Dinuba Ave at Buttonwillow Ave

2030 No Project AM Peak Hour

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
NB Buttonwillow Ave										
3L	L	110	4.6	0.235	14.4	LOS B	45	0.53	0.72	28.6
8T	T	93	5.3	0.235	6.1	LOS A	45	0.53	0.53	32.6
8R	R	15	6.7	0.234	7.8	LOS A	45	0.53	0.59	31.7
Approach		**218**	**5.0**	**0.235**	**10.4**	**LOS B**	**45**	**0.53**	**0.63**	**30.3**
WB Dinuba Ave										
1L	L	43	2.3	0.328	14.4	LOS B	65	0.55	0.73	28.5
6T	T	221	1.8	0.329	6.1	LOS A	65	0.55	0.54	32.5
6R	R	48	2.1	0.329	7.8	LOS A	65	0.55	0.60	31.6
Approach		**312**	**1.9**	**0.329**	**7.5**	**LOS A**	**65**	**0.55**	**0.58**	**31.7**
SB Buttonwillow Ave										
7L	L	55	1.8	0.367	15.2	LOS B	74	0.63	0.78	28.3
4T	T	139	2.2	0.366	6.9	LOS A	74	0.63	0.61	32.0
4R	R	125	1.6	0.365	8.6	LOS A	74	0.63	0.65	31.2
Approach		**319**	**1.9**	**0.366**	**9.0**	**LOS A**	**74**	**0.63**	**0.66**	**31.0**
EB Dinuba Ave										
5L	L	78	2.6	0.326	14.1	LOS B	67	0.52	0.71	28.6
2T	T	164	3.0	0.327	5.8	LOS A	67	0.52	0.51	32.7
2R	R	82	2.5	0.327	7.5	LOS A	67	0.52	0.57	31.7
Approach		**323**	**2.8**	**0.327**	**8.2**	**LOS A**	**67**	**0.52**	**0.57**	**31.3**
All Vehicles		**1172**	**2.7**	**0.367**	**8.6**	**LOS A**	**74**	**0.56**	**0.61**	**31.1**

Symbols which may appear in this table:

Following Degree of Saturation
x = 1.00 for Short Lane with resulting Excess Flow
* x = 1.00 due to minimum capacity

Following LOS
- Based on density for continuous movements

Following Queue
- Density for continuous movement

SIDRA INTERSECTION

Movement Summary

Dinuba Ave at Buttonwillow Ave

2030 No Project PM Peak Hour

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
NB Buttonwillow Ave										
3L	L	114	1.8	0.330	15.0	LOS B	67	0.63	0.77	28.3
8T	T	143	2.1	0.331	6.7	LOS A	67	0.63	0.60	32.1
8R	R	27	3.6	0.329	8.4	LOS A	67	0.63	0.65	31.2
Approach		**286**	**2.1**	**0.331**	**10.2**	**LOS B**	**67**	**0.63**	**0.67**	**30.3**
WB Dinuba Ave										
1L	L	39	2.6	0.364	15.1	LOS B	74	0.63	0.78	28.3
6T	T	212	2.8	0.363	6.8	LOS A	74	0.63	0.60	32.0
6R	R	66	3.0	0.363	8.5	LOS A	74	0.63	0.65	31.2
Approach		**317**	**2.8**	**0.363**	**8.2**	**LOS A**	**74**	**0.63**	**0.64**	**31.3**
SB Buttonwillow Ave										
7L	L	54	1.9	0.432	15.3	LOS B	92	0.67	0.79	28.2
4T	T	170	1.8	0.432	7.0	LOS A	92	0.67	0.62	31.9
4R	R	157	1.9	0.432	8.7	LOS A	92	0.67	0.67	31.1
Approach		**379**	**1.8**	**0.433**	**8.9**	**LOS A**	**92**	**0.67**	**0.66**	**30.9**
EB Dinuba Ave										
5L	L	111	1.8	0.463	14.5	LOS B	107	0.62	0.74	28.3
2T	T	205	2.0	0.463	6.2	LOS A	107	0.62	0.55	32.1
2R	R	138	2.2	0.463	7.9	LOS A	107	0.62	0.62	31.3
Approach		**454**	**2.0**	**0.463**	**8.7**	**LOS A**	**107**	**0.62**	**0.62**	**30.8**
All Vehicles		**1436**	**2.2**	**0.463**	**8.9**	**LOS A**	**107**	**0.64**	**0.64**	**30.8**

Symbols which may appear in this table:

Following Degree of Saturation
x = 1.00 for Short Lane with resulting Excess Flow
* x = 1.00 due to minimum capacity

Following LOS
- Based on density for continuous movements

Following Queue
- Density for continuous movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	0	5	0	10	0	188	10	11	163	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	0	5	0	11	0	204	11	12	177	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	419	419	180	408	411	204	183			215		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	419	419	180	408	411	204	183			215		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	100	100	100	99	100	99	100			99		
cM capacity (veh/h)	533	520	863	474	526	729	1392			1337		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	1	16	204	11	195
Volume Left	1	5	0	0	12
Volume Right	0	11	0	11	5
cSH	533	618	1392	1700	1337
Volume to Capacity	0.00	0.03	0.00	0.01	0.01
Queue Length 95th (ft)	0	2	0	0	1
Control Delay (s)	11.8	11.0	0.0	0.0	0.5
Lane LOS	B	B			A
Approach Delay (s)	11.8	11.0	0.0		0.5
Approach LOS	B	B			

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A	
Analysis Period (min)	15			

2030 No Project PM
2: Olson Ave. & Buttonwillow 7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	2	4	9	0	12	5	317	14	10	306	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	2	4	10	0	13	5	345	15	11	333	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	727	729	336	719	717	345	340			360		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	727	729	336	719	717	345	340			360		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	99	99	99	97	100	98	100			99		
cM capacity (veh/h)	329	345	706	283	350	602	1219			1182		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	11	23	350	15	351
Volume Left	4	10	5	0	11
Volume Right	4	13	0	15	8
cSH	423	406	1219	1700	1182
Volume to Capacity	0.03	0.06	0.00	0.01	0.01
Queue Length 95th (ft)	2	4	0	0	1
Control Delay (s)	13.7	14.4	0.2	0.0	0.3
Lane LOS	B	B	A		A
Approach Delay (s)	13.7	14.4	0.2		0.3
Approach LOS	B	B			

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	7	190	0	6	162
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	8	207	0	7	176
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	396	207			207	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396	207			207	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	99			100	
cM capacity (veh/h)	606	834			1341	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	9	207	183
Volume Left	1	0	7
Volume Right	8	0	0
cSH	953	1700	1341
Volume to Capacity	0.01	0.12	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.6	0.0	0.3
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	0.3
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	27	309	1	10	310
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	29	336	1	11	337
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	695	336			337	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	695	336			337	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	99	96			99	
cM capacity (veh/h)	404	706			1200	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	32	337	348
Volume Left	2	0	11
Volume Right	29	1	0
cSH	758	1700	1200
Volume to Capacity	0.04	0.20	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	10.6	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	10.6	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX G

2030 NO PROJECT CONDITIONS

PEAK HOUR SIGNAL WARRANT ANALYSES

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Olson Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- [X] or RURAL (R)

In built up area of isolated community of < 10,000 pop. -------- [ ]

[ ] URBAN (U)

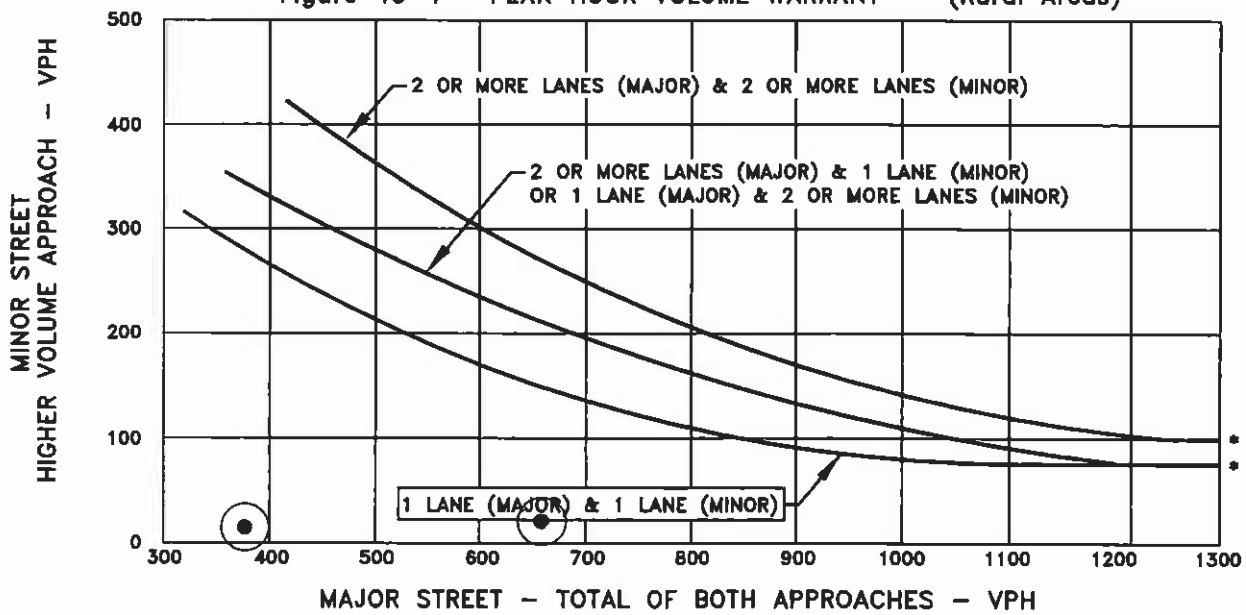
CONDITION: 2030 NO PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES [ ] NO [X]

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		377	659				
Highest Approaches – Minor Street	✓		15	21				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting Incorporated

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Huntsman Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- [X] or RURAL (R)

In built up area of isolated community of < 10,000 pop. -------- [ ] URBAN (U)

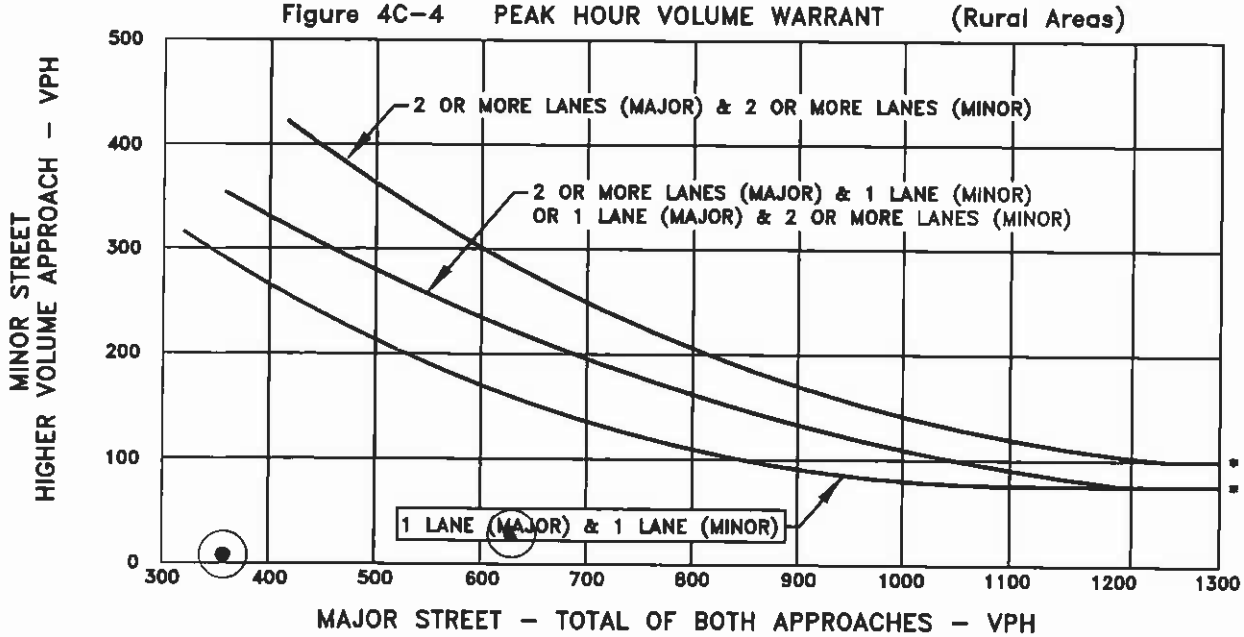
CONDITION: 2030 NO PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES [ ] NO [X]

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		358	630				
Highest Approaches – Minor Street	✓		8	29				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting Incorporated

APPENDIX H

2030 PROJECT CONDITIONS

INTERSECTION LEVELS OF SERVICE CALCULATIONS

SIDRA INTERSECTION

Movement Summary

Dinuba Ave at Buttonwillow Ave

2030 Project AM Peak Hour

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
NB Buttonwillow Ave										
3L	L	122	4.9	0.275	14.5	LOS B	55	0.55	0.73	28.5
8T	T	113	5.3	0.276	6.2	LOS A	55	0.55	0.54	32.5
8R	R	18	5.3	0.275	7.9	LOS A	55	0.55	0.60	31.6
Approach		**254**	**5.1**	**0.275**	**10.3**	**LOS B**	**55**	**0.55**	**0.64**	**30.3**
WB Dinuba Ave										
1L	L	48	2.1	0.343	14.7	LOS B	69	0.58	0.75	28.4
6T	T	221	1.8	0.344	6.4	LOS A	69	0.58	0.56	32.3
6R	R	48	2.1	0.343	8.1	LOS A	69	0.58	0.62	31.4
Approach		**316**	**1.9**	**0.344**	**7.9**	**LOS A**	**69**	**0.58**	**0.60**	**31.5**
SB Buttonwillow Ave										
7L	L	55	1.8	0.426	15.5	LOS B	90	0.68	0.80	28.2
4T	T	186	2.2	0.426	7.2	LOS A	90	0.68	0.64	31.8
4R	R	125	1.6	0.427	8.9	LOS A	90	0.68	0.68	31.0
Approach		**366**	**1.9**	**0.426**	**9.0**	**LOS A**	**90**	**0.68**	**0.68**	**30.9**
EB Dinuba Ave										
5L	L	78	2.6	0.394	14.6	LOS B	85	0.60	0.74	28.4
2T	T	164	3.0	0.394	6.3	LOS A	85	0.60	0.56	32.2
2R	R	127	3.1	0.394	8.0	LOS A	85	0.60	0.62	31.3
Approach		**369**	**3.0**	**0.394**	**8.6**	**LOS A**	**85**	**0.60**	**0.62**	**31.0**
All Vehicles		**1305**	**2.8**	**0.427**	**8.9**	**LOS A**	**90**	**0.61**	**0.63**	**30.9**

Symbols which may appear in this table:

Following Degree of Saturation
x = 1.00 for Short Lane with resulting Excess Flow
* x = 1.00 due to minimum capacity

Following LOS
- Based on density for continuous movements

Following Queue
- Density for continuous movement

SIDRA INTERSECTION

Movement Summary

Dinuba Ave at Buttonwillow Ave

2030 Project PM Peak Hour

Roundabout

Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (ft)	Prop. Queued	Eff. Stop Rate	Aver Speed (mph)
NB Buttonwillow Ave										
3L	L	161	1.9	0.444	15.3	LOS B	98	0.69	0.80	28.2
8T	T	189	2.1	0.444	7.0	LOS A	98	0.69	0.63	31.7
8R	R	32	3.1	0.444	8.7	LOS A	98	0.69	0.68	31.0
Approach		**382**	**2.1**	**0.444**	**10.7**	**LOS B**	**98**	**0.69**	**0.70**	**30.0**
WB Dinuba Ave										
1L	L	42	2.4	0.404	16.0	LOS B	85	0.72	0.83	28.1
6T	T	212	2.8	0.403	7.7	LOS A	85	0.72	0.68	31.6
6R	R	66	3.0	0.402	9.4	LOS A	85	0.72	0.71	30.8
Approach		**320**	**2.8**	**0.403**	**9.1**	**LOS A**	**85**	**0.72**	**0.70**	**30.9**
SB Buttonwillow Ave										
7L	L	54	1.9	0.478	16.1	LOS B	109	0.72	0.84	28.0
4T	T	191	2.1	0.479	7.8	LOS A	109	0.72	0.70	31.6
4R	R	157	1.9	0.479	9.5	LOS A	109	0.72	0.72	30.8
Approach		**401**	**2.0**	**0.479**	**9.6**	**LOS A**	**109**	**0.72**	**0.73**	**30.7**
EB Dinuba Ave										
5L	L	111	1.8	0.505	14.8	LOS B	121	0.67	0.76	28.2
2T	T	205	2.0	0.506	6.5	LOS A	121	0.67	0.58	31.8
2R	R	165	1.8	0.506	8.2	LOS A	121	0.67	0.65	31.0
Approach		**481**	**1.9**	**0.506**	**9.0**	**LOS A**	**121**	**0.67**	**0.64**	**30.6**
All Vehicles		**1584**	**2.1**	**0.506**	**9.6**	**LOS A**	**121**	**0.70**	**0.69**	**30.5**

Symbols which may appear in this table:

Following Degree of Saturation
x = 1.00 for Short Lane with resulting Excess Flow
* x = 1.00 due to minimum capacity

Following LOS
- Based on density for continuous movements

Following Queue
- Density for continuous movement

2030 Project AM
2: Olson Ave. & Buttonwillow

7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	0	0	6	0	40	0	190	12	98	165	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	0	7	0	43	0	207	13	107	179	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	645	615	182	602	604	207	185			220		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	645	615	182	602	604	207	185			220		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	100	100	100	98	100	94	100			92		
cM capacity (veh/h)	340	374	860	328	379	726	1390			1332		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	1	50	207	13	291
Volume Left	1	7	0	0	107
Volume Right	0	43	0	13	5
cSH	340	627	1390	1700	1332
Volume to Capacity	0.00	0.08	0.00	0.01	0.08
Queue Length 95th (ft)	0	6	0	0	7
Control Delay (s)	15.6	11.2	0.0	0.0	3.4
Lane LOS	C	B			A
Approach Delay (s)	15.6	11.2	0.0		3.4
Approach LOS	C	B			

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

2030 Project PM
2: Olson Ave. & Buttonwillow

7/29/2009

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	2	4	11	0	99	5	319	15	56	308	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	2	4	12	0	108	5	347	16	61	335	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	926	834	339	823	822	347	342			363		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	926	834	339	823	822	347	342			363		
tC, single (s)	7.1	6.5	6.2	7.6	6.5	6.7	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	4.0	4.0	3.8	2.2			2.2		
p0 queue free %	98	99	99	95	100	82	100			95		
cM capacity (veh/h)	196	287	704	230	292	600	1217			1179		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	11	120	352	16	403
Volume Left	4	12	5	0	61
Volume Right	4	108	0	16	8
cSH	302	517	1217	1700	1179
Volume to Capacity	0.04	0.23	0.00	0.01	0.05
Queue Length 95th (ft)	3	22	0	0	4
Control Delay (s)	17.4	14.0	0.2	0.0	1.7
Lane LOS	C	B	A		A
Approach Delay (s)	17.4	14.0	0.2		1.7
Approach LOS	C	B			

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	1	9	192	0	8	163
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	10	209	0	9	177
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	403	209			209	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	403	209			209	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	100	99			99	
cM capacity (veh/h)	599	832			1339	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	11	209	186
Volume Left	1	0	9
Volume Right	10	0	0
cSH	924	1700	1339
Volume to Capacity	0.01	0.12	0.01
Queue Length 95th (ft)	1	0	0
Control Delay (s)	9.5	0.0	0.4
Lane LOS	A		A
Approach Delay (s)	9.5	0.0	0.4
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	2	29	310	1	12	312
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	32	337	1	13	339
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		2				
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	703	338			338	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	703	338			338	
tC, single (s)	6.4	6.2			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.3	
p0 queue free %	99	96			99	
cM capacity (veh/h)	400	705			1199	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	34	338	352
Volume Left	2	0	13
Volume Right	32	1	0
cSH	753	1700	1199
Volume to Capacity	0.04	0.20	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	10.6	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	10.6	0.0	0.4
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	6	7	1	1	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	7	8	1	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9				19	8
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				19	8
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1611				997	1074

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	9	9	3
Volume Left	2	0	1
Volume Right	0	1	2
cSH	1611	1700	1047
Volume to Capacity	0.00	0.01	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	1.8	0.0	8.4
Lane LOS	A		A
Approach Delay (s)	1.8	0.0	8.4
Approach LOS			A

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	11	30	1	1	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	12	33	1	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	34				49	33
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34				49	33
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1578				958	1040

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	14	34	3
Volume Left	2	0	1
Volume Right	0	1	2
cSH	1578	1700	1012
Volume to Capacity	0.00	0.02	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	1.1	0.0	8.6
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX I

2030 PROJECT CONDITIONS

PEAK HOUR SIGNAL WARRANT ANALYSES

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Olson Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- ☒ RURAL (R)

or

In built up area of isolated community of < 10,000 pop. -------- ☐

☐ URBAN (U)

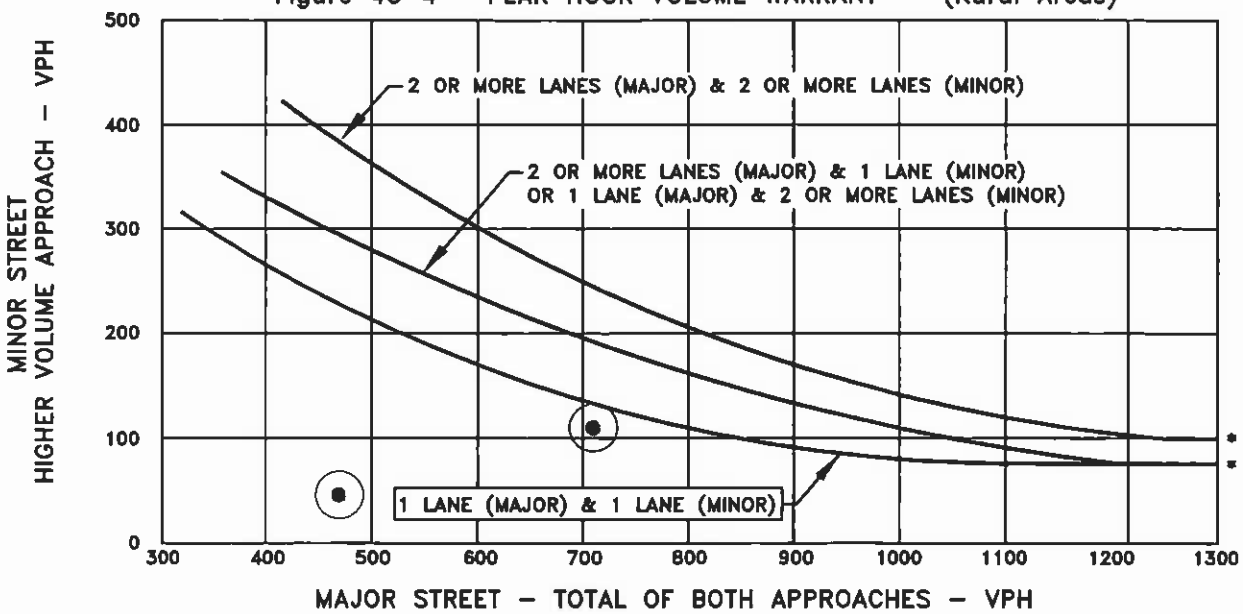
CONDITION: 2030 PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES ☐ NO ☒

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		470	710				
Highest Approaches – Minor Street	✓		46	110				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting

TRAFFIC SIGNAL WARRANTS

CALC CS DATE 7-30-09 CHK _____ DATE _____

MAJOR STREET: Buttonwillow Avenue Critical Approach Speed 45 mph

MINOR STREET: Huntsman Avenue Critical Approach Speed NPS mph

Critical speed of major street traffic > 40 mph ---------- [X] or RURAL (R)

In built up area of isolated community of < 10,000 pop. -------- [ ] URBAN (U)

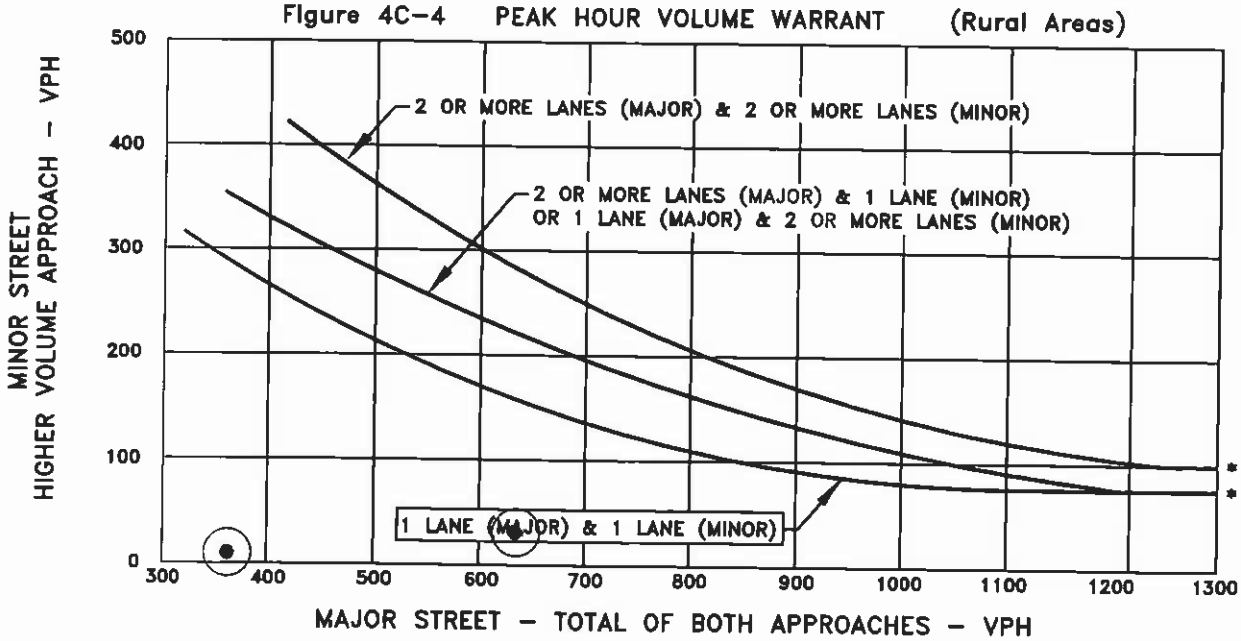
CONDITION: 2030 PROJECT

WARRANT 3 – Peak Hour Volume SATISFIED* YES [ ] NO [X]

Approach Lanes	One	2 or more	AM PEAK	PM PEAK				Hour
Both Approaches – Major Street	✓		363	635				
Highest Approaches – Minor Street	✓		10	31				

* Refer to Fig. 4C-3 (URBAN AREAS) or Fig. 4C-4 (RURAL AREAS) to determine if this warrant is satisfied.

Figure 4C-4 PEAK HOUR VOLUME WARRANT (Rural Areas)



* NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

The satisfaction of a warrant is not necessarily justification for a signal. Delay, congestion, confusion or other evidence of the need for right of way assignment must be shown.

TPG Consulting