Appendix A: Notice of Preparation and Comments

CITY COUNCIL

James P. Spering, Mayor
Pedro "Pete" M. Sanchez, Mayor Pro-Tem
Jane Day
Sam Derting
Michael A. Segala

CITY OF SUISUN CITY

701 Civic Center Blvd.
Suisun City, California 94585

Incorporated October 9, 1868

CITY COUNCIL MEETING

First and Third Tuesday
Every Month

NOTICE OF PREPARATION OF A ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED WALTERS ROAD WEST COMMERCIAL PROJECT

SITE PLAN AND ARCHITECTURAL APPLICATION NO. 06-08, PARCEL MAP 06-02, SIGN APPLICATION NO. 06-04, AND ENCROACHMENT PERMITS TO LOCAL STREETS

As the lead agency, the City of Suisun City will prepare an Environmental Impact Report (EIR) for the above-referenced project and is soliciting your views regarding the scope and content of the environmental information to be addressed in the EIR. This EIR may be used when considering approvals for this project as it relates to information that is germane to an agency's statutory responsibility.

The project is located at the northwest corner of Walters Road and Hwy #12, Suisun City, CA. The project proposed is approximately 230,000 square feet of commercial activities on approximately 20.1 acres. The Notice of Preparation is utilized to seek input as to potential environmental impacts that may occur due to project implementation.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date, but no later than 30 days after receipt of this notice. The public comment period is from July 10, 2006 to August 9, 2006. Comments must be submitted to the City of Suisun City, Community Development Department by 5:00 P.M. August 9, 2006. Please send your response to the contact person at the address listed below:

City of Suisun City
Community Development Department
701 Civic Center Boulevard
Suisun City, CA 94585
Attn: Jake Raper, Jr., AICP Community Development Director
Phone: (707) 421-7318 or 421-7337
Fax: (707) 429-3758
Email: jraper@suisun.com

To encourage public participation, the City of Suisun City Community Development Department with Michael Brandman Associates will host a Public Scoping Meeting on August 7, 2006 at 6:30 P. M. in the Joseph A Nelson Community Center, Room A, located at 611 Village Drive, Suisun City, CA 94585. You may attend the public scoping meeting or send your comments to the above address.

Jake Raper, Jr., AICP
Community Development Director

Notice of Completion & Environmental Document Transmittal

For U.S. Mail: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH#

PROJECT TITLE: Site Plan and Architectural Application No. 06-08, Parcel Map No. 06-02, and Sign Application No. 06-04, and Encroachment Permit.

Lead Agency: *City of Suisun City*
Street Address: 701 Civic Center Blvd
City: Suisun City **Zip:** 94585

Contact Person: Jake Raper Jr., AICP – Community Development Director
Phone: 707-421-7396 Bus, 707-429-3758 Fax, jraper@suisun.com E-Mail
County: Solano

Project Location: Northwest corner of Hwy 12 and Walters Road
County: Solano **City/Nearest Community:** Suisun City/City of Fairfield **Zip Code:** 94585
Cross Streets: Walters Road and Hwy 12
Assessor's Parcel No. 173—280-44 **Section:** 32 **Township: 5N Range 1W Base: M.D.B.**
Within 2 miles: State Hwy # 12 **Waterways:** Suisun Marsh **Airport:** Travis Air Force Base
Schools: Suisun Elementary School, Dan Root Elementary School, and Crescent Elementary School.

Document Type:

CEQA:		NEPA:	Other:
☑ NOP	☐ Draft EIR	☐ NOI	☐ Joint
☐ Early Cons	☐ Supplement to EIR	☐ EA	☐Final Document
☐ Neg Dec	☐ Subsequent EIR	☐Draft EIS	☐Other.;
☐ Mit Neg Dec	☐ Other:	☐ FONSI	

Local Action Type:

☐ General Plan Update	☐ Master Plan	☐ Use Permit	☐ Coastal Permit
☐ General Plan Amendment	☐ Planned Unit Development	☑ Land Division (Subdivision, Etc.)	☑ Sign Application Encroachment
☐ General Plan Element	☑ Site Plan and Architectural		
☐ Community Plan	☐ Rezone	☐ Annexation	
☐ Specific Plan	☐ Prezone	☐ Redevelopment	

Development Type:

Residential: Units	Acres		Water Facilities:	Type	MGD
Office: Sq. ft	Acres	Employees	Transportation:	Type	
Commercial. Sq. ft. 230,000	Acres 20.1	Employees	Mining:	Mineral	
Industrial: Sq. ft.	Acres	Employees	Power:	Type	MW
Educational			Waste Treatment:	Type	MGD
Recreational			Hazardous Waste:	Type	
			Other:		

Project Issues That May Have A Significant Or Potentially Significant Impact:

☑ Aesthetic/Visual	☑ Economic/Jobs	☑ Public Services Facilities	☑ Traffic/Circulation
☐ Agricultural Land	☑ Fiscal	☐ Recreation/Parks	☐ Vegetation
☑ Air Quality	☐ Flood Plain/Flooding	☐ Schools/Universities	☐ Water Quality
☑ Archeological/Historical	☐ Forest Land/Fire Hazard	☐ Sewer Capacity	☑ Water Supply/Groundwater
☑ Biological Resources	☑ Geologic/Seismic	☑ Soil Erosion/ Compaction/Grading	☑ Wetland/Riparian
☐ Coastal Zone	☐ Minerals	☑ Solid Waste	☑ Growth Inducement
☑ Drainage/Absorption	☑ Noise	☑ Toxic/Hazardous	☑ Cumulative Effects
	☐ Population/Housing Balance		☐ Other

Present Land Use/Zoning/General Plan Designation: Site is undeveloped and contains ruderal vegetation. The site is General Planned General Commercial and is Zoned "GC" General Commercial.

NOTICE OF PREPARATION
OF A
ENVIRONMENTAL IMPACT REPORT
FOR THE PROPOSED
WALTERS ROAD WEST COMMERICAL PROJECT
SITE PLAN AND ARCHITECTURAL APPLICATION NO. 06-08, PARCEL MAP 06-02, SIGN APPLICATION NO. 06-04, AND ENCROACHMENT PERMITS TO LOCAL STREETS

Notice is hereby given that, pursuant to the California Environmental Quality Act, the City of Suisun City is preparing an Environmental Impact Report (EIR) for the development of the proposed Walters Road West Commercial project (Project) in the City of Suisun City, California.

I. OVERVIEW OF ENVIRONMENTAL REVIEW PROCESS

The City of Suisun City (City), as the Lead Agency under the California Environmental Quality Act (CEQA), has determined that it will prepare an EIR for the proposed Walters Road West Commercial project described herein. The City will prepare the EIR in accordance with CEQA, implementing guidelines ("Guidelines"), and City procedures.

The EIR for the proposed Project will be prepared and processed in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended. In accordance with the requirements of CEQA, the EIR will include the following:

- A summary of the project
- A project description
- A description of the existing environmental setting, potential environmental impacts, and mitigation measures
- Alternatives to the project as proposed
- Environmental consequences including: any significant unavoidable environmental impacts, any significant irretrievable and/or irreversible commitment of resources, growth inducing impacts, effects found not to be significant, and cumulative impacts.

The purpose of this notice is to advise and solicit comments and suggestions regarding the preparation of the EIR, environmental issues to be addressed in the EIR, and any related issues, from interested parties other than potential Responsible Agencies, including interested or affected members of the public. The City requests that any Responsible or Trustee Agency responding to this notice respond in a manner consistent with CEQA Guidelines Sections 15082(b). In addition, the City requests that your agency review and submit written comments on the scope and content of the environmental information provided in the Notice of Preparation (NOP), as relevant to your agency's statutory responsibilities in connection with the proposed project.

In accordance with CEQA and City procedures, agencies and the general public are requested to provide a written response to this NOP within the 30-day NOP review period between **JULY 10, 2006** and **AUGUST 9, 2006**. The City will incorporate relevant issues and information into the Draft EIR as identified in the NOP and NOP responses throughout the EIR process. Comments must be submitted to the City of Suisun City Community Development Department by 5:00 P. M. August 9, 2006. Please address your response to the following individual:

City of Suisun
Department of Community Development
701 Civic Center Boulevard
Suisun City CA 94585
Attn: Jake Raper Jr., AICP - Community Development Director

Public Scoping Meeting

A public scoping meeting will be held at 6:30 P.M., Monday, August 7, 2006 at the following location:

Joseph A. Nelson Community Center
Room A
611 Village Drive
Suisun City, CA 94585

At this meeting, agencies, organizations, and members of the public will be able to review the proposed project and provide comments on the scope of the environmental review process for the proposed Walters Road West Commercial project. Please contact the Community Development Department at (707) 421-7318 or 707-421-7337 if you have any questions about this meeting.

II. PROJECT LOCATION

The project area includes approximately 20.1 acres located within the City of Suisun City. Suisun City is a small community of roughly 27,000 residents located in central Solano County. Suisun City is situated on the Suisun Channel, which connects with Suisun and Grizzly Bay and links Suisun City to the Sacramento River and the San Francisco Bay (see Exhibit 1).

The project site is located on an undeveloped lot that is surrounded by undeveloped land to the east, the Lawler Ranch subdivision to the west and south, and the Quail Glen subdivision to the north (see Exhibit 2).

The proposed Wal-Mart store is located entirely within the incorporated limits of the City of Suisun City.

III. EXISTING CONDITIONS

The project site is currently undeveloped and contains ruderal vegetation. A 1,025-foot long drainage ditch bisects the site. Seasonal ponds have been identified onsite and may potentially contain wetlands habitat. Surrounding uses include the Quail Glen single-family residential subdivision to the north, grazing land to the east, and the Lawler Ranch single-family residential subdivision to the west and south. The site is designated for General Commercial (GC) by City of Suisun City General Plan and zoned General Commercial (CG) by the Suisun City Zoning Ordinance.

IV. PROJECT DESCRIPTION

Proposed Uses

The project consists of three main elements including: 1) a new Wal-Mart store; 2) a new fuel station with related uses; and 3) a new sit-down restaurant (see Exhibit 3).

Wal-Mart Supercenter

The main project element consists of the construction of an approximately 214,919 square foot (sf) Wal-Mart Supercenter on about 18.34 acres. (Note: The enclosed building floor area is 200,831 square feet without the outdoor portion of the garden center.) The new Wal-Mart will contain a grocery component of about 45,370 square feet, including a 34,475 square foot grocery sales area and a 10,895 square foot grocery support area. The new Wal-Mart will also contain a garden center of approximately 24,653 square feet (including 14,089 square feet of hard-fenced outdoor garden center and a customer pick-up and loading area). Along the front of the Supercenter will be a series of small internal "shops" occupying a total floor area of approximately 7,007 square feet. Some of these spaces will be occupied by Wal-Mart services such as optical and pharmacy, while others will be leased to non-Wal-Mart vendors and service providers (e.g., bank, hair salon, dry cleaners, etc.), although specific vendors have not yet been identified. A total of 928 parking stalls are proposed for the Wal-Mart. The new Supercenter will be open 24 hours per day, seven days per week.

Fuel Station—Parcel A

Parcel A of the subject site is 1.05-acre and will contain a full-service gas station and related uses. Components of the operation include a 4,100 square foot retail building; a minimum six fueling islands; car wash and required parking. Housed within the 4,100 square foot building will be the gas station sales operations and a convenience market. A co-branded quick service restaurant may also be included within the 4,100 square foot building. Located apart from the retail building and the fueling islands is the drive-through car wash facility. A total of 24 parking spaces are proposed for the Parcel A uses.

Sit-Down Restaurant—Parcel B

Parcel B is 1.40 acres and will contain an 8,000 square feet of building intended for a sit-down restaurant use together with required parking. Alternate uses for the building include a single-tenant general retailer with a use complementary to the anchor tenant, or a multi-tenant building with a variety of general retail and casual food service uses also complementary to the anchor tenant. A total of 69 parking spaces are proposed for the Parcel B restaurant use.

Project Access

Vehicular access to the project site will be provided from an entrance on Walters Road. On Peterson Road, there will be an entrance driveway for truck deliveries and for access to the sit-down restaurant. Another smaller entrance will be located on Walters Road (right in, right out) that will provide primary access to the fuel station.

V. POTENTIAL ENVIRONMENTAL EFFECTS

The EIR is being prepared to assess the potential environmental impacts that may arise in connection with future implementation of the proposed project. Based on the environmental characteristics of the project area and a review of existing data, relevant programs, and previous environmental documentation for the project area, implementation of the proposed project is anticipated to have the potential to create environmental impacts in the following areas: aesthetics, air quality, biological resources, cultural resources, geology and soils, hazardous materials, hydrology and water quality, land use and planning, noise, public services, transportation and circulation, utility and service systems, and urban decay.

Due to the location and the character of the project area and project features, it is anticipated that the following issue areas will not result in any potentially significant environmental impacts: agricultural

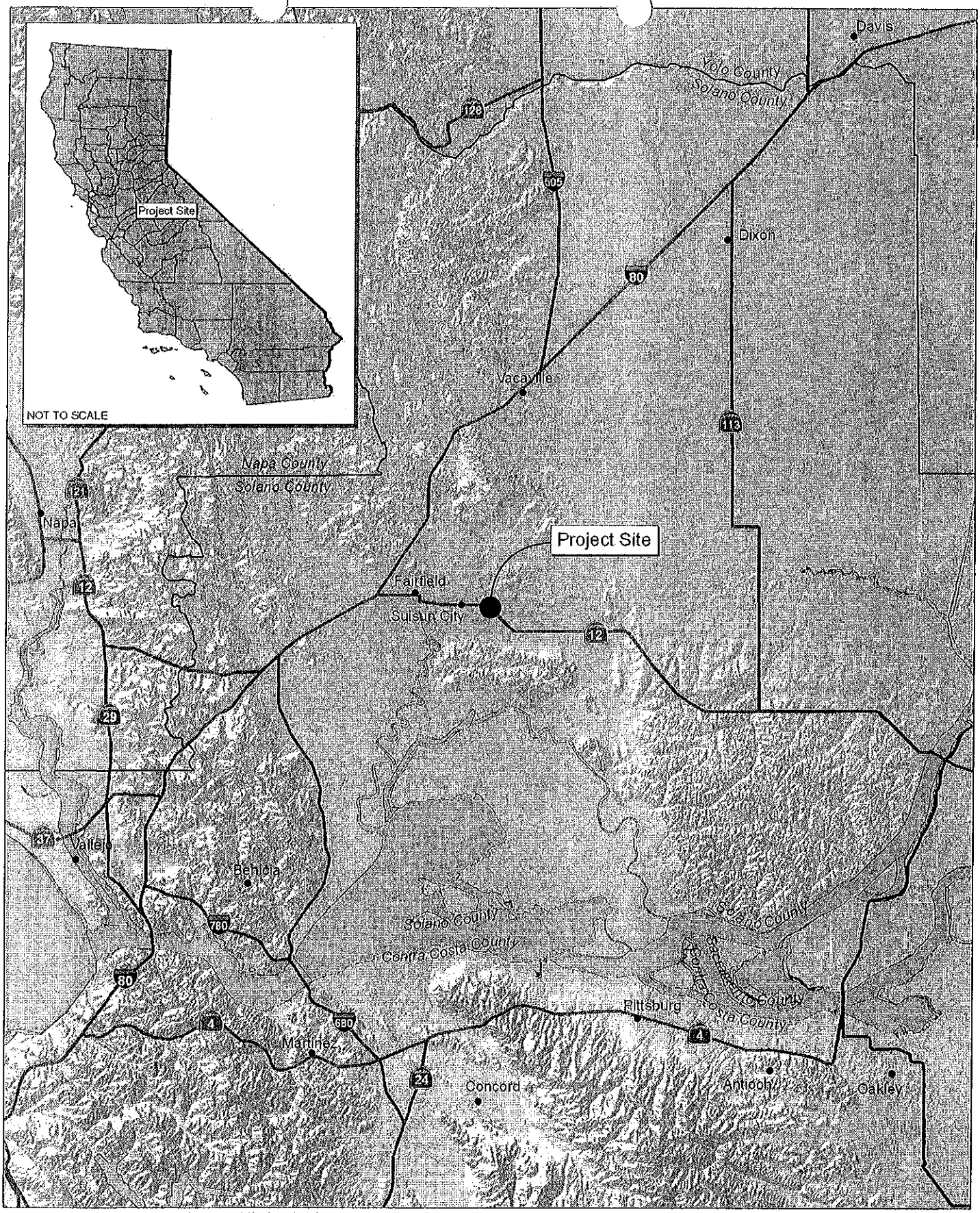
resources, mineral resources, population and housing, and recreation. Therefore, these issues will not be addressed in the EIR.

VI. RELATED PROJECTS

Section 15130 of the CEQA Guidelines requires the consideration of cumulative impacts in an EIR. Cumulative impacts are identified as two or more individual effects, which when considered together are considerable or compound or increase other environmental effects. The individual effects may be changes resulting from a single project or a number of separate projects. The EIR will identify which projects may contribute to cumulative impacts. More specifically, the EIR will include an evaluation of the change in the environment, which will result from the cumulative impacts of the project when considered together with other closely related future projects.

VII. PROJECT APPROVALS

Since the project is consistent with the current General Plan and zoning designations for the site, the main discretionary City action requested for the project is approval of Site Plan and Architectural Review. Other City actions will include a tentative parcel map, encroachment permit, and master sign permit.



Source: Census 2000 Data, The CaSIL, MBA GIS 2006.

Michael Brandman Associates

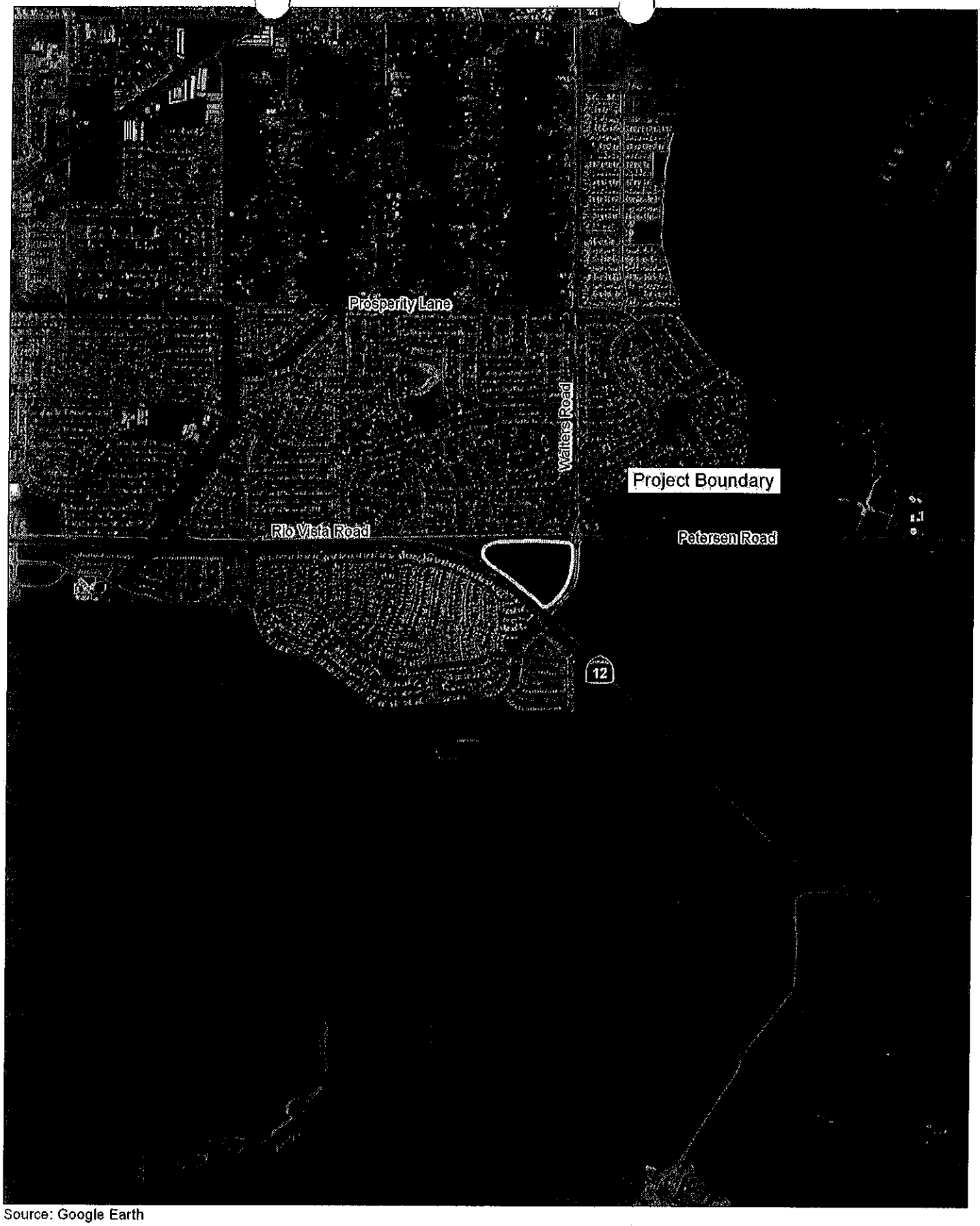
NORTH

5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

30040001 • 06/2006 | 1_regional.mxd

WALTERS ROAD WEST COMMERCIAL PROJECT
NOP



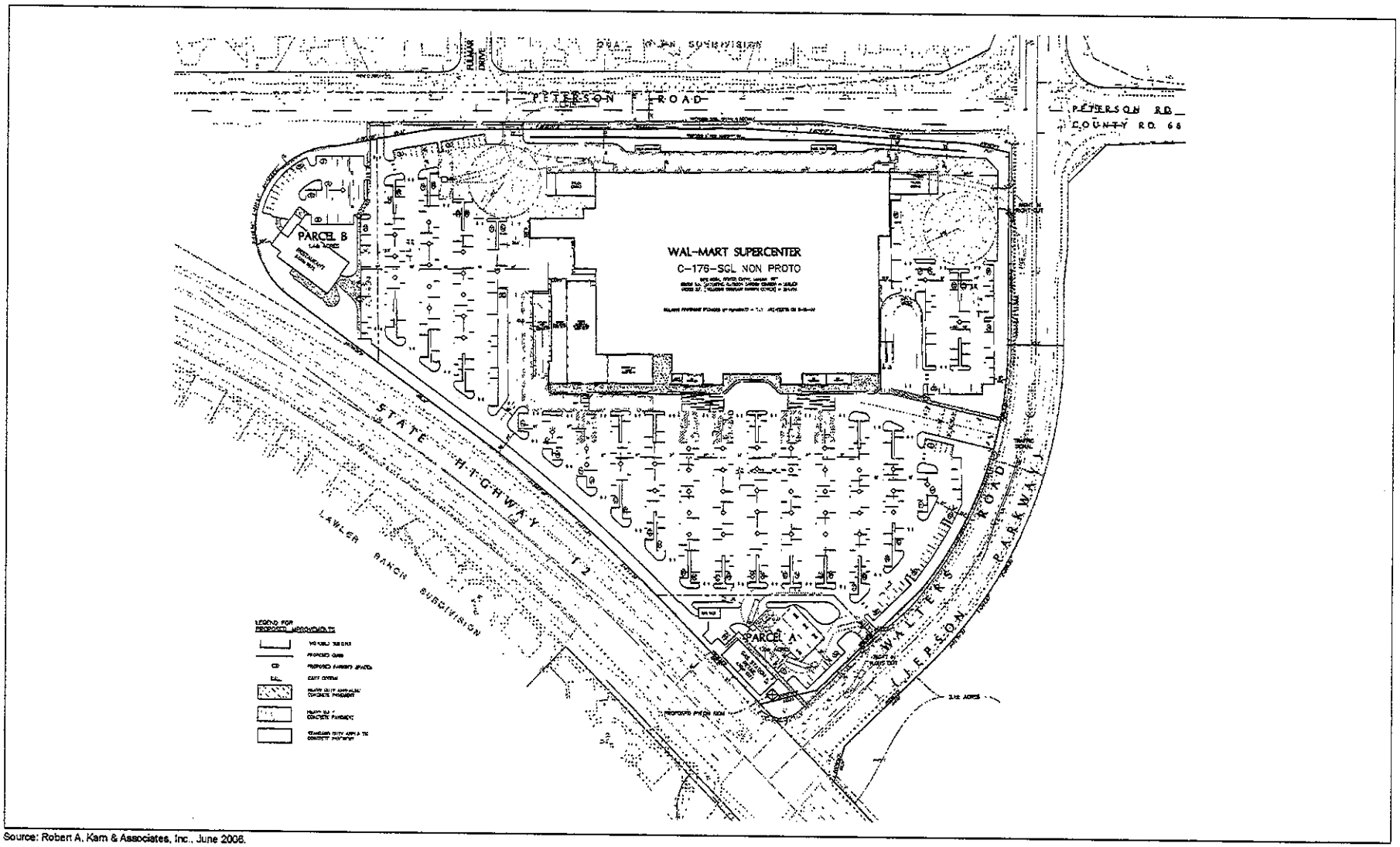
Source: Google Earth

Michael Brandman Associates

NORTH

2,000 1,000 0 2,000 Feet

Exhibit 2
Local Vicinity Aerial Map



Source: Robert A. Kam & Associates, Inc., June 2006.

NORTH

166 83 0 166 Feet

Michael Brandman Associates

30040001 • 06/2006 | 3_site_plan.cdr

Exhibit 3
Site Plan

WALTERS ROAD WEST COMMERCIAL PROJECT
NOP

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below.

✓ Air Resources Board
Boating & Waterways,
✓ Department of California Highway Patrol
✓ Caltrans District # 4
✓ Caltrans Division of Aeronautics
✓ Caltrans Planning
Coachella Valley Mountains Conservancy
Coastal Commission
Colorado River Board Commission
Conservation, Department of Corrections, Department of
Delta Protection Commission Education, Department of
Office of Public School Construction
✓ Energy Commission
✓ Fish & Game Region # 2
Food & Agriculture, Department of
Forestry & Fire Protection
General Services, Department of
Health Services, Department of
Housing & Community Development Integrated Waste Management Board
Native American Heritage Commission
Other:

Office of Emergency Services
✓ Office of Historic Preservation
Parks & Recreation
Pesticide Regulation, Department of Public Utilities Commission
Reclamation Board

San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy
San Joaquin River Conservancy
Santa Monica Mountains Conservancy State Lands Commission
SWRCB: Clean Water Grants
✓ SWRCB: Water Quality
SWRCB: Water Rights
Tahoe Regional Planning Agency
Toxic Substances Control, Department of
Water Resources, Department of

Local Public Review Period (to be filled in by lead Agency)

Starting Date: JULY 10, 2006 **Ending Date:** AUGUST 9, 2006

Lead Agency (Complete if applicable):

Consulting Firm: Michael Brandman Associates
Address: 2633 Camino Ramon, Suite 460, Bishop Ranch 3
City/State/Zip: San Ramon, CA 94583

Contact: Jason M. Brandman, Principal//Regional Manager
Phone: 925-830-2715 Bus, 925-830-2715 Fax

Applicant: Robert A. Karn and Associates, Inc.
Address: 707 Beck Ave.

City/State/Zip: Fairfield, CA 94533

Phone: 707-435-9999 Bus

Signature of Lead Agency Representative: _____
Jake Raper Jr., AICP Community Development Director

Date: July 6, 2006

Authority cited: Sections 21083 and 21087, Public Resources Code. Reference: Section 21161, Public Resources Code.

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Planning Director
Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604-2050

Planning Director
Metropolitan Transportation Commission
Joseph P. Bort Metro Center
101 8th Street
Oakland, CA 94607-4756

Habitat Conservation Manager
Department of Fish & Game
P.O. Box 47
Yountville, CA 94599

Department of the Air Force
60th CES/CECP
191 W Street
Travis AFB, CA 94535

Pacific Gas and Electric
Auburn Land Rights Office
343 Sacramento Street
Auburn, CA 95603

Union Pacific Railroad
Pat Kerr
10031 Foothills Blvd.
Roseville, CA 95747

Send to all
Department
Heads as well.
John

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Bay Area Air Pollution Control Board
939 Ellis Street
San Francisco, CA 94102

Bay Conservation & Development Commission
50 California Street, Ste. 2600
San Francisco, CA 94102

U.S. Army Corps of Engineers
333 Market Street, 8th Floor
San Francisco, CA 94105-2197

CALTRANS
Dottie O'dell
P.O. Box 23660
Oakland, CA 94623-0660

San Francisco Bay Regional Water
Quality Control Board
1515 Clay Street, Ste. 1400
Oakland, CA 94612

Fairfield/Suisun Sewer District
Ron Hipkiss
1010 Chadbourne Road
Fairfield, CA 94585

U.S. Postal Service
Postmaster General
325 Merganser Drive
Suisun City, CA 94585

Solano Irrigation District
508 Elmira Road
Vacaville, CA 95687

Solano County Flood Control District
Board of Supervisors
675 Texas Street, Ste. 5500
Fairfield, CA 94533

Solano County Department of
Resource Management
675 Texas Street, Ste. 5500
Fairfield, CA 94534

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Seam Pritchard
Solano County LAFCO
744 Empire Street, Ste. 106
Fairfield, CA 94533

Solano County Transportation Authority
One Harbor Center, Ste. 130
Suisun City, CA 94585

Solano County Mosquito Abatement District
2950 Industrial Ct.
Fairfield, CA 94533

City of Fairfield
Planning & Development Department
1000 Webster Street
Fairfield, CA 94533

City of Fairfield
Department of Public Works
1000 Webster Street
Fairfield, CA 94533

Mr. Rob Pierce
Fairfield/Suisun Unified School District
1975 Pennsylvania Avenue
Fairfield, CA 94533

Pacific Gas & Electric Company
Frank Rios
158 Peabody Road
Vacaville, CA 95688

Pacific Telephone
40 Executive Court
Napa, CA 94558

COMCAST
2250 Boynton Avenue
Fairfield, CA 94533

City of Vallejo
Public Works Department
P.O. Box 3068
Vallejo, CA 94590
Attn: Erik Nugteren

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Steve Chappell
Suisun Resource Conservation District
2544 Grizzly Island Road
Suisun, CA 94585-9539

Solano Garbage
P.O. Box B
Fairfield, CA 94533

Mike Segala
Suisun-Solano Water Authority
701 Civic Center Blvd.
Suisun City, CA 94585

Ken Sanchez
US Fish and Wildlife Service
2800 Cottage Way, Rm. W-2605
Sacramento, CA 95814

US Army Corps of Engineers
Regulatory Branch
1325 J Street
Sacramento, CA 95814

Dr. Paulette J. Perfumo
Superintendent, President
Solano County College District
4000 Suisun Valley Road
Fairfield, CA 94534-3197

P.G. & E
Jerry Robertson, Gas T&R Supervisor
Sacramento Division
2001 Front Street
Sacramento, CA 95818

David Okita, General Manager
Solanao County Water Agency
508 Elmira Rd.
Vacaville, CA 95687

Solano County Superintendent of
Schools & County Board of Education
5100 Business Center Drive
Fairfield, CA 94534

Ann Cousineau, Director
Solano County Library
1150 Kentucky Street
Fairfield, CA 94533

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Kevin Crison
511 Shrike Ct
Suisun City, CA 94585-2323

0173 253 170
Pablo & Maria Velez
508 Kinglet Ct
Suisun City, CA 94585-2312

0173 253 180
James Evans
510 Kinglet Ct
Suisun City, CA 94585-2312

0173 253 190
Jane Edwards
509 Kinglet Ct
Suisun City, CA 94585-2311

0173 253 200
Dannie & Linda Brown
507 Kinglet Ct
Suisun City, CA 94585-2311

0173 253 270
Steven & Linda Pruitt
506 Fulmar Dr
Suisun City, CA 94585-2308

0173 253 280
Joe Avila
508 Fulmar Dr
Suisun City, CA 94585-2308

0173 253 290
J & My-lien Salagubang
510 Fulmar Dr
Suisun City, CA 94585-2308

0173 255 010
Jorge & Melissa Espinoza
1401 Swift Ct
Suisun City, CA 94585-2325

0173 255 020
Michael Swanson
1403 Swift Ct
Suisun City, CA 94585-2325

0173 255 030
Lauton Wells
1405 Swift Ct
Suisun City, CA 94585-2325

0173 255 040
William Mandril
1407 Swift Ct
Suisun City, CA 94585-2325

0173 255 050
William & Lori Walker
PO Box 581
Suisun City, CA 94585-0581

0173 255 060
Dexter Lott
1408 Swift Ct
Suisun City, CA 94585-2326

0173 255 070
Pablo & Maria Garza Jr.
1864 Salisbury Dr
Fairfield, CA 94534-2999

0173 255 080
Edward Bobrovitsky
1404 Swift Ct
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0173 255 090
Susan Mariucci
1402 Swift Ct
Suisun City, CA 94585-2326

0173 255 100
Vicente & C S Tanciongco
166 Deer5glen Cir
Vacaville, CA 95687

0173 262 180
Quentin Piper
1428 Pelican Way
Suisun City, CA 94585-2337

0173 262 190
Deschaine
1426 Pelican Way
Suisun City, CA 94585-2337

0173 262 200
Leslie & Geri Hubbard
1424 Pelican Way
Suisun City, CA 94585-2337

0173 262 210
Thomas & Jennifer Meissner
1422 Pelican Way
Suisun City, CA 94585-2337

0173 263 070
Joseph & L C Nesbit
1415 Pelican Way
Suisun City, CA 94585-2330

0173 263 080
James & Ann Short
1417 Pelican Way
Suisun City, CA 94585-2330

0173 263 090
Paul & Connie Hames
1419 Pelican Way
Suisun City, CA 94585-2330

0173 263 100
Jose & Elia Valencia
1421 Pelican Way
Suisun City, CA 94585-2330

0173 263 120
Keith Keller
4 Calypso Shrs
Novato, CA 94949-5309

0173 263 130
Bernard & Jeannie Slack Jr.
1427 Pelican Way
Suisun City, CA 94585-2330

0173 263 140
Rogelio & Maria Almanza
Rosa Dominguez
1429 Pelican Way
Suisun City, CA 94585-2330

0173 263 150
Raymond & Nobuko Houtman
1431 Pelican Way
Suisun City, CA 94585-2330

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PO Box 2922
Dublin, CA 94568-0922

0173 280 440
E O Desilva
PO Box 2922
Dublin, CA 94568-0922

0173 683 020
Kim & Kimberly Mckinney
1316 Robbins Ct
Suisun City, CA 94585-4140

0173 683 110
Holly Hammond
1317 Reeves Ct
Suisun City, CA 94585-4141

0173 683 120
Nora Bohannon
1321 Reeves Ct
Suisun City, CA 94585-4141

0173 683 170
Mark Davis
1312 Reeves Ct
Suisun City, CA 94585-4141

0173 683 180
Miles & Olga Perez
1308 Reeves Ct
Suisun City, CA 94585-4141

0173 683 190
Restituto & Teresita Castro
1304 Reeves Ct
Suisun City, CA 94585-4141

0173 683 210
Teresa & Randy Randall
1315 Robbins Ct
Suisun City, CA 94585-4140

0173 683 220
Tim & Ava Goins
1323 Reeves Ct
Suisun City, CA 94585-4141

0173 683 230
Peter Oliver & P M Yap
1324 Reeves Ct
Suisun City, CA 94585-4141

0173 683 240
Juan & Maritess Armijo
1320 Reeves Ct
Suisun City, CA 94585-4141

0173 683 250
Arcellious Archie
1316 Reeves Ct
Suisun City, CA 94585-4141

0173 711 060
Sheelagh & Howard Keith
261 Potrero St
Suisun City, CA 94585-4110

0173 711 070
Elisa Nelson
265 Potrero St
Suisun City, CA 94585-4110

0173 711 080
John & Masomi Mrema
269 Potrero St
Suisun City, CA 94585-4110

0173 711 090
Jeffrey & Gretchen Dennis
273 Potrero St
Suisun City, CA 94585-4110

0173 721 010
Douglas & Tassanya Coffee
277 Potrero St
Suisun City, CA 94585-4110

0173 721 030
John & Chanelle Janet
5030 Gravenstein Hwy N
Sebastopol, CA 95472-2143

0173 721 040
Ronald Sims
380 Stamper Cir
Suisun City, CA 94585-4104

0173 721 050
Dave Mcelory
4727 Potrero Ave
Richmond, CA 94804-4442

0173 721 060
Lee & Agnes Fernandez
372 Stamper Cir
Suisun City, CA 94585-4104

0173 721 070
Rita Emery
368 Stamper Cir
Suisun City, CA 94585-4104

0173 721 080
Luis Rodriguez
364 Stamper Cir
Suisun City, CA 94585-4104

0173 721 090
Manuel & M M Sarmiento
360 Stamper Cir
Suisun City, CA 94585-4104

0173 721 100
Manalaura Leffall
356 Stamper Cir
Suisun City, CA 94585-4104

0173 721 110
Sonya Samaniego
352 Stamper Cir
Suisun City, CA 94585-4104

0173 721 120
George Dizon
348 Stamper Cir
Suisun City, CA 94585-4104

0173 721 130
Hatsuko Brenner & Paul Brenner
344 Stamper Cir
Suisun City, CA 94585-4104

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0173 721 140
Lewis & Frances Anthony
340 Stamper Cir
Suisun City, CA 94585-4104

0173 721 150
Verna Abbott
336 Stamper Cir
Suisun City, CA 94585-4104

0173 721 160
Federico & A R Valdez Jr.
332 Stamper Cir
Suisun City, CA 94585-4104

0173 722 050
Carla Sims-cardwell
343 Stamper Cir
Suisun City, CA 94585-4105

0173 722 060
James & Cristin Scheer
347 Stamper Cir
Suisun City, CA 94585-4105

0173 722 070
James & Suk Fun Ayers
351 Stamper Cir
Suisun City, CA 94585-4105

0173 722 080
Kirk & Sheryl Kolves
355 Stamper Cir
Suisun City, CA 94585-4105

0173 722 090
Noreen Martin
359 Stamper Cir
Suisun City, CA 94585-4105

0173 722 100
Sharon & Daniel Silvia
363 Stamper Cir
Suisun City, CA 94585-4105

0173 801 010
Sergio Reynoso
1301 Redinger Ct
Suisun City, CA 94585-4150

0173 801 020
Marion & Barbara Aiken
1305 Redinger Ct
Suisun City, CA 94585-4150

0173 801 030
Veronica Brown
1309 Redinger Ct
Suisun City, CA 94585-4150

0173 801 040
William & Mi Kittle
1313 Redinger Ct
Suisun City, CA 94585-4150

0173 801 050
Vinh Henry Luu
1310 Redinger Ct
Suisun City, CA 94585-4150

0173 801 060
Randall & M M Baxendale
1101 Potrero Cir
Suisun City, CA 94585-4151

0173 801 070
Adolfo & E S Espiritu
1105 Potrero Cir
Suisun City, CA 94585-4151

0173 801 080
Terrance Thompson
1109 Potrero Cir
Suisun City, CA 94585-4151

0173 801 090
Pablo & Sandra Baker
1113 Potrero Cir
Suisun City, CA 94585-4151

0173 801 100
Stephen & Maxine Saine
1117 Potrero Cir
Suisun City, CA 94585-4151

0173 801 110
Victor Bejar
1121 Potrero Cir
Suisun City, CA 94585-4151

0173 801 120
Michelle Cable
1125 Potrero Cir
Suisun City, CA 94585-4151

0173 801 130
Kenny & Trish Hart Jr.
1129 Potrero Cir
Suisun City, CA 94585-4151

0173 801 140
Marco Antonio Caliz Sr.
1133 Potrero Cir
Suisun City, CA 94585-4151

0173 801 150
Cheryl & Mark Koch
1137 Potrero Cir
Suisun City, CA 94585-4151

0173 805 130
Christopher Dennis
437 Pearce Ct
Suisun City, CA 94585-4149

0174 170 300
Bonfare Markets Inc
25064 Viking St
Hayward, CA 94545-2704

0174 190 140
Marcus Johnson
PO Box 507
Pleasanton, CA 94566-0851

0173 263 110
Juan R & Wiltrud Torres
1423 Pelican Way
Suisun City, CA 94585

0173 721 020
Reginald & T Tanubagijo
281 Potrero St
Suisun City 94585

0173 722 110
Raymond R & Chiyo Tirona
367 Stamper Circle
Suisun City, CA 94585

0174 190 010
hathily P Johnson
PO Box 507
Pleasanton CA 94566

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

July 10, 2006

To: Reviewing Agencies

Re: Site Plan and Architectural Application No. 06-08, Parcel Map No. 06-02, and Sign Application No. 06-04, and Encroachment Permit
SCH# 2006072026

Attached for your review and comment is the Notice of Preparation (NOP) for the Site Plan and Architectural Application No. 06-08, Parcel Map No. 06-02, and Sign Application No. 06-04, and Encroachment Permit draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Jake Raper, Jr.
City of Suisun
701 Civic Center Boulevard
Suisun City, CA 94585

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2006072026
Project Title Site Plan and Architectural Application No. 06-08, Parcel Map No. 06-02, and Sign Application No. 06-04, and Encroachment Permit
Lead Agency Suisun, City of

Type NOP Notice of Preparation

Description The project consists of three main elements including: (1) a new Wal-Mart store; (2) a new fuel station with related uses; and (3) a new sit-down restaurant.

Lead Agency Contact

Name Jake Raper, Jr.
Agency City of Suisun
Phone (707) 421-7396 **Fax** (707) 429-3758
email jraper@suisun.com
Address 701 Civic Center Boulevard
City Suisun City **State** CA **Zip** 94585

Project Location

County Solano
City Suisun City, Fairfield
Region
Cross Streets Walters Road and Hwy. 12
Parcel No. 173-280-44
Township 5N **Range** 1W **Section** 32 **Base** MDB

Proximity to:

Highways SR-12
Airports Travis Air Force Base
Railways
Waterways Suisun Marsh
Schools Suisun ES, Dan Root ES, and Crescent ES
Land Use Site is undeveloped and contains ruderal vegetation. The site is General Planned General Commercial and is Zoned "GC" General Commercial.

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Economics/Jobs; Fiscal Impacts; Geologic/Seismic; Growth Inducing; Noise; Public Services; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Water Supply; Wetland/Riparian

---

Reviewing Agencies Resources Agency; Regional Water Quality Control Board, Region 2; Department of Parks and Recreation; Native American Heritage Commission; Department of Health Services; Office of Historic Preservation; Department of Fish and Game, Region 3; Department of Water Resources; California Highway Patrol; Caltrans, District 4; Caltrans, Division of Aeronautics

---

Date Received 07/10/2006 **Start of Review** 07/10/2006 **End of Review** 08/08/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

NOP Distribution List

County: Solano

SCH# 2006072026

Resources Agency

- ■ **Resources Agency**
  Nadell Gayou
- ☐ **Dept. of Boating & Waterways**
  David Johnson
- ☐ **California Coastal Commission**
  Elizabeth A. Fuchs
- ☐ **Colorado River Board**
  Gerald R. Zimmerman
- ☐ **Dept. of Conservation**
  Roseanne Taylor
- ☐ **California Energy Commission**
  Paul Richins
- ☐ **Dept. of Forestry & Fire Protection**
  Allen Robertson
- ■ **Office of Historic Preservation**
  Wayne Donaldson
- ■ **Dept of Parks & Recreation**
  Environmental Stewardship Section
- ☐ **Reclamation Board**
  DeeDee Jones
- ☐ **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- ■ **Dept. of Water Resources**
  Resources Agency
  Nadell Gayou
- ☐ _____
  Conservancy

Fish and Game

- ☐ **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- ☐ **Fish & Game Region 1**
  Donald Koch
- ☐ **Fish & Game Region 2**
  Banky Curtis
- ■ **Fish & Game Region 3**
  Robert Floerke
- ☐ **Fish & Game Region 4**
  Julie Vance
- ☐ **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- ☐ **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- ☐ **Fish & Game Region 6 I/M**
  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- ☐ **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- ☐ **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- ☐ **Depart. of General Services**
  Public School Construction
- ☐ **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- ■ **Dept. of Health Services**
  Veronica Malloy
  Dept. of Health/Drinking Water

Independent Commissions,Boards

- ☐ **Delta Protection Commission**
  Debby Eddy
- ☐ **Office of Emergency Services**
  Dennis Castrillo
- ☐ **Governor's Office of Planning & Research**
  State Clearinghouse
- ■ **Native American Heritage Comm.**
  Debbie Treadway
- ☐ **Public Utilities Commission**
  Ken Lewis
- ☐ **State Lands Commission**
  Jean Sarino
- ☐ **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- ■ **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- ☐ **Caltrans - Planning**
  Terri Pencovic
- ■ **California Highway Patrol**
  Shirley Kelly
  Office of Special Projects
- ☐ **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- ☐ **Caltrans, District 1**
  Rex Jackman
- ☐ **Caltrans, District 2**
  Marcelino Gonzalez
- ☐ **Caltrans, District 3**
  Jeff Pulverman
- ■ **Caltrans, District 4**
  Tim Sable
- ☐ **Caltrans, District 5**
  David Murray
- ☐ **Caltrans, District 6**
  Marc Birnbaum
- ☐ **Caltrans, District 7**
  Cheryl J. Powell
- ☐ **Caltrans, District 8**
  Dan Kopulsky
- ☐ **Caltrans, District 9**
  Gayle Rosander
- ☐ **Caltrans, District 10**
  Tom Dumas
- ☐ **Caltrans, District 11**
  Mario Orso
- ☐ **Caltrans, District 12**
  Bob Joseph

Cal EPA

Air Resources Board

- ☐ Airport Projects
  Jim Lerner
  - ☐ Transportation Projects
    Ravi Ramalingam
  - ☐ Industrial Projects
    Mike Tollstrup
- ☐ **California Integrated Waste Management Board**
  Sue O'Leary
- ☐ **State Water Resources Control Board**
  Jim Hockenberry
  Division of Financial Assistance
- ☐ **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- ☐ **State Water Resouces Control Board**
  Steven Herrera
  Division of Water Rights
- ☐ **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- ☐ **Department of Pesticide Regulation**

Regional Water Quality Control Board (RWQCB)

- ☐ **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- ■ **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- ☐ **RWQCB 3**
  Central Coast Region (3)
- ☐ **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- ☐ **RWQCB 5S**
  Central Valley Region (5)
  - ☐ **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - ☐ **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
- ☐ **RWQCB 6**
  Lahontan Region (6)
  - ☐ **RWQCB 6V**
    Lahontan Region (6)
    Victorville Branch Office
- ☐ **RWQCB 7**
  Colorado River Basin Region (7)
- ☐ **RWQCB 8**
  Santa Ana Region (8)
- ☐ **RWQCB 9**
  San Diego Region (9)

☐ **Other** _____

Last Updated on 04/28/06

State of California – The Resources Agency
ARNOLD SCHWARZENEGGER, Governor
DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

July 13, 2006

Mr. Jake Raper, Jr.
City of Suisun City
701 Civic Center Boulevard
Suisun City, CA 94585

Dear Mr. Raper:

Walters Road West Commercial Project
06-08, 06-02, 06-04
Suisun City, Solano County

The Department of Fish and Game (DFG) has reviewed the document for the subject project. Please be advised this project may result in changes to fish and wildlife resources as described in the California Code of Regulations, Title 14, Section 753.5(d)(1)(A)-(G). Therefore, if you are preparing an Environmental Impact Report or an Initial Study and Negative Declaration for this project, a de minimis determination is not appropriate, and an environmental filing fee as required under Fish and Game Code Section 711.4(d) should be paid to the Solano County Clerk on or before filing of the Notice of Determination for this project.

Please provide a complete assessment (including but not limited to type, quantity and locations) of the habitats, flora and fauna within and adjacent to the project area, including endangered, threatened, and locally unique species and sensitive habitats. The assessment should include the reasonably foreseeable direct and indirect changes (temporary and permanent) that may occur with implementation of the project. Rare, threatened and endangered species to be addressed should include all those which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380). DFG recommended survey and monitoring protocols and guidelines are available at http://www.dfg.ca.gov/hcpb/species/stds_gdl/survmonitr.shtml.

Please be advised that a California Endangered Species Act (CESA) Permit must be obtained if the project has the potential to result in take of species of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA Permit is subject to CEQA documentation; therefore, the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the project will impact CESA listed species, early consultation is encouraged, as significant modification to the project and mitigation measures may be required in order to obtain a CESA Permit.

For any activity that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream, or use material from a streambed, DFG may require a Streambed Alteration Agreement (SAA), pursuant to Section 1600 et seq. of the Fish and Game Code, with the applicant. Issuance of SAAs is subject to CEQA. DFG, as a responsible agency under CEQA, will consider the CEQA document for the project. The CEQA document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for completion of the agreement. To obtain information about the SAA notification process, please access our website at www.dfg.ca.gov/1600; or to request a notification package, contact the Streambed Alteration Program at (707) 944-5520.

If you have any questions, please contact Mr. Greg Martinelli, Environmental Scientist, at (707) 944-5570; or Mr. Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584.

Sincerely,

Robert W. Floerke
Regional Manager
Central Coast Region

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5505
FAX (510) 286-5559
TTY (800) 735-2929

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July 19, 2006

SOL012220
SOL-12-5.76

Mr. Jake Raper Jr.
City of Suisun City
701 Civic Center Boulevard
Suisun City, CA 94585

Dear Mr. Raper:

Proposed Walters Road West Commercial Project– Notice of Preparation

Thank you for including the California Department of Transportation (Department) in the early environmental review for the proposed project. The comments presented below are based on the Notice of Preparation for the proposed Walters Road West Commercial Project Draft Environmental Impact Report (DEIR). As lead agency, the City of Suisun City is responsible for all project mitigation, including improvements to state highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. Any required roadway improvements should be completed prior to issuance of the project's building permit. While an encroachment permit is only required when the project involves work in the State Right of Way (ROW), the Department will not issue an encroachment permit until our concerns are adequately addressed. Therefore, we strongly recommend that the lead agency ensure resolution of the Department's concerns prior to submittal of an encroachment permit application. Further comments will be provided during the encroachment permit process; see the end of this letter for more information regarding encroachment permits.

Traffic Impact Analysis

The Department is primarily concerned with impacts to the State Highway system. Specifically, a detailed Traffic Impact Analysis (TIA) should identify impacts to State Route 12 with and without the proposed Walters Road West Commercial Project traffic. The TIA should include, but is not limited to the following:

1. Information on the project's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed.

2. Average Daily Traffic (ADT) and AM and PM peak hour volumes on all significantly affected streets and highways, including crossroads and controlling intersections.

3. Schematic illustration of the traffic conditions for: 1) existing, 2) existing plus project, and 3) cumulative for the intersections in the project area.

4. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State Highway facilities being evaluated.

5. Mitigation measures should consider highway and non-highway improvements and services. Special attention should be given to the development of alternate solutions to circulation problems that do not rely on increased highway construction.

6. All mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

We encourage the City of Suisun City to coordinate preparation of the study with our office, and we would appreciate the opportunity to review the scope of work. Please see the Caltrans' *"Guide for the Preparation of Traffic Impact Studies"* at the following website for more information:
http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf

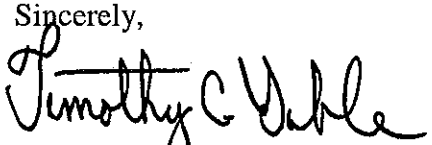
We look forward to reviewing the TIA, including Technical Appendices, and DEIR for this project. Please send two copies to the address at the top of this letterhead, marked ATTN: Christian Bushong, Office of Transit and Community Planning.

Encroachment Permit
Any work or traffic control within the State ROW requires an encroachment permit that is issued by the Department. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process. See the following website link for more information: http://www.dot.ca.gov/hq/traffops/developserv/permits/

To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans (in metric units) which clearly indicate State ROW to the address at the top of this letterhead, marked Office of Permits.

Should you require further information or have any questions regarding this letter, please call Christian Bushong of my staff at (510) 286-5606.

Sincerely,



TIMOTHY C. SABLE
District Branch Chief
IGR/CEQA

Solano County Mosquito Abatement District

2950 Industrial Ct.
Fairfield, CA 94533-6500
Telephone (707) 437-1116
Fax (707) 437-1187

RONALD SCHOCK, President - Trustee-at-Large
CHARLES TONNESEN, Vice President - Fairfield
MIKE WHITE, Secretary - Benicia
JOE ANDERSON, Dixon
MELVIN FROHRIB, Vallejo
JANE GALLAGHER, Vacaville
HOWARD LUTE, Suisun
JOHN RANKINE, Rio Vista

Meetings: Second Monday Every Month
7:30 P.M.

JON A. BLEGEN, Manager
CAROL EVKHANIAN, Biologist
VICTOR BARAGOSA, Supervisor
PAM WRIGHT, Sec./Bkpr.

RECEIVED
AUG 1 4 2006
CITY OF SUISUN CIT

August 9, 2006

Jake Raper, Jr. AICP
Community Development Director
City of Suisun City
Community Development Department
701 Civic Center Boulevard
Suisun City, CA 94585

SUBJECT: NOP FOR EIR-PROPOSED WALTERS ROAD WEST COMMERCIAL PROJECT

Dear Mr. Raper:

The Solano County Mosquito Abatement (SCMAD) appreciates the opportunity to provide input regarding its concerns pertaining to the NOP for an EIR for the above-referenced project.

At this point, the only potential issues of concern may pertain to the areas of Drainage/Absorption and Wetland/Riparian. It is vital that additional potential sources for the primary vectors of West Nile virus not be created due to inadequate design(s) for drainage. When more details become available for this project the appropriate "Mosquito Prevention Criteria" will be enclosed with future comments. The majority of this information is available on the SCMAD's website at solanomosquito.com

To date West Nile virus has been detected in dead birds from Fairfield, Vacaville and Dixon.

Please do not hesitate to contact the District if you have any questions.

Sincerely,

Jon A. Blegen

Jon A. Blegen
Manager

Carol Evkhanian

Carol Evkhanian
Biologist

Solano County Mosquito Abatement District

2950 Industrial Ct.
Fairfield, CA 94533-6500
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Community Development Department
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Sincerely,

Jon A. Blegen

Jon A. Blegen
Manager

Carol Evkhanian

Carol Evkhanian
Biologist

STOP THE DUMP!

Citizens Against the Dump Expansion
1365 Potrero Circle , Suisun City, California 94585 - Telephone: 707-432-0792

RECEIVED
JUL - 5 2006
CITY OF SUISUN CITY

July 2, 2006

Suisun City City Council
701 Civic Center
Suisun City, California 94585

Re: Wal-Mart Proposal to Build in Suisun City

Dear Suisun City Council

As citizens of Suisun City we welcome your review of the proposed Wal-Mart Supercenter in Suisun City. We recognize that any adverse impacts of this project may profoundly effect our community. Thus we believe we are entitled to attend and to participate in any public hearings (or public discussions) of this matter.

We verbally requested to be added to the interested parties list twice with both City Manager Susan Bragdon and Mayor Jim Spering (on June 7, 2006). However, we were not notified, by mail, of the June 20, 2006 discussion of the proposed project before the Suisun City Council.

This letter is our written request to be added to the interested parties list on the Suisun Wal-Mart project.

Please reply in writing to confirm that you have added our group to the interested parties list for any and all future public hearings on the Wal-Mart matter.

Respectfully,

Dwight Acey, Spokesperson
Citizens Against the Dump Expansion
and Suisun Citizens League

http://www.aceconservator.com

cc: **Jake Raper, Community Development Director**
David Paulson, District Attorney
Bill Lockyer, Attorney General

STOP THE DUMP!

Citizens Against the Dump Expansion
1365 Potrero Circle , Suisun City, California 94585 - Telephone: 707-432-0792

RECEIVED
JUL - 5 2006
CITY OF SUISUN CITY

July 2, 2006

Suisun City City Council
701 Civic Center
Suisun City, California 94585

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Respectfully,

Dwight Acey, Spokesperson
Citizens Against the Dump Expansion
and Suisun Citizens League

http://www.aceconservator.com

cc: **Jake Raper, Community Development Director**
David Paulson, District Attorney
Bill Lockyer, Attorney General

Pacific Gas and Electric Company
Land Services Office
343 Sacramento Street
Auburn, CA 95603

Direct: (530) 889-5089
Fax: (530) 889-3392
Email: dlkn@pge.com

RECEIVED
JUL 2 4 2006
CITY OF SUISUN CITY

July 18, 2006

City of Suisun City
Attn: Jake Raper, Jr.
Community Development Department
701 Civic Center Boulevard
Suisun City, CA 94585

RE: WALTERS ROAD WEST COMMERCIAL PROJECT
APPLICATION NO: 06-04

Dear City of Suisun City:

PG&E has reviewed this project and has the following comments:

PG&E owns and operates gas transmission facilities which are located adjacent to the proposed project boundaries within Walters Road to the east of the project site and Scandia Road to the north. To promote the safe and reliable maintenance and operation of utility facilities, the California Public Utilities Commission (CPUC) has mandated specific clearance requirements between utility facilities and surrounding objects or construction activities. To ensure compliance with these standards, project proponents should coordinate with PG&E early in the development of their plans. Any proposed development plans should provide for unrestricted utility access and prevent easement encroachments that might impair the safe and reliable maintenance and operation of PG&E's facilities.

Gas and electric service may be available to this project if desired. The developer should contact PG&E's Service Planning Department at (707) 449-5724 as soon as possible to coordinate construction so as not to delay the project.

If you have any questions I may be contacted at (530) 889-5089 or dlkn@pge.com.

Sincerely,

Donald Kennedy

Donald Kennedy
Land Agent

August 9, 2006. Received Jake Raper Jr., Community Development Director

-----Original Message-----
From: MARK DAVIS [mailto:marjeda@yahoo.com]
Sent: Sunday, August 06, 2006 2:16 PM
To: Jake Raper
Subject: Re: Walters Road West project

Jake Raper jr.

As residents of the Lawler Ranch subdivision, we are against the implementation of the Walters Road West project.

This Project will increase traffic flow through Walters Road and Highway 12, and create even more noise, air pollution and garbage, than we are now experiencing.

Mark and Mark Davis
1312 Reeves Court
Suisun City Ca 94585

Do You Yahoo!?
Tired of spam? Yahoo! Mail has the best spam protection around
http://mail.yahoo.com

August 9, 2006

Email to Jake Raper

I have concerns regarding the commercial project proposed for the NW corner of Walters Road. A project of that size will adversely affect the quality of life in the residential area close by. Your web page states that your office is responsible to "ensure the orderly development of the community and to retain the high quality community enjoyed by all residents." The addition of a Wal Mart at that site will eliminate the 'high quality' for one neighborhood and will actually cause a decline in property values to the city. Please consider the quality of life and the value of property for all residents of Suisun. My family and I have strong ties to the area and hate to see our quality of life diminish. Thank you for your thoughtful consideration of this issue.
Les Hubbard
Suisun City resident (26 years)
Small business owner (Les Hubbard Bookkeeping-26 years)
Accounting Instructor Solana Community College

August 9, 2006. Amy Liebert. The applicant has submitted an application to the City. A Notice of Preparation has been prepared and distributed. The comment period ends August 9, 2006. No specific schedule has been developed at this time. Jake

---

From: Research [mailto:Research@jbainc.com]
Sent: Wednesday, August 09, 2006 2:13 PM
To: Jake Raper
Subject: General inquiry from Suisun.com

Mr. Raper,

I was hoping you could tell me the status of the proposed Wal-Mart in Suisun. What stage of the approval process is the project in right now? Also, is it true that Suisun will have to annex greenbelt land for the store, or is that just a rumor?

Thank,

Amy Liebert

August 9, 2006

After reviewing the handout from last night, we have some additional areas of concern which we would like to have included in the environmental study.

Walters Road: The map indicates that there would be a traffic light on Walters Road, half way between Peterson Road and Highway 12. This is not a good idea. As I mentioned, there are as much as 4-5 trucks traveling on Walters Road at a time. There is not enough room between these lights to accommodate the traffic. The space between the two existing stop lights and the new one, would result in ongoing traffic jams at Peterson Road and the Highway intersection. Walters Road, which has just been renovated, would have to be changed to at least three lanes on each side, two of which would have to be either left hand or right hand turns, depending on which direction the traffic is flowing.

Parcel B, Restaurant: The document indicates that the traffic to this restaurant would be on Peterson Road. Is there going to be a dividing wall between the Walmart Parking Lot and the restaurant property? We hope that is planned, because otherwise the customer traffic for Walmart soon enough would come down Peterson Road to avoid the other traffic lights.

Truck Entrance on Peterson Road: This is most unsettling news. As we mentioned before, currently we already have problems with trucks parking on this road. The truck entrance would be a hundred times worse. Walmart would have to limit the time frame in which trucks could drive on Peterson Road to make the deliveries. There should not be any truck traffic between 12:00AM and 6:00AM. We have to sleep some time. Also, the sound wall should definitely be erected on the north side of Peterson Road as a buffer for the noise invasion.

Traffic in General: I am sure you are aware of the proposed increase in the landfill a couple miles away. The Board of Supervisors has approved this increase which will result in many more hundreds (it could even be a thousand, I am not sure of the number) of garbage trucks rumbling down Highway 12. At this time final approval has not been given by some agencies, but this impact on traffic should be included in the study.

The new church on Walters Road is just about finished, this will add several hundred more cars to the traffic on weekends and some days during the week.

There is one more item you might want to check out regarding traffic. I have read several times in the Daily Republic that either Fairfield or Vacaville, or both cities, are working on some sort of go-around road to take traffic of Peabody Road. If I remember correctly it involves Cement Hill Road and Walters Road. This project could also have a negative impact on the current difficult traffic condition on Walters Road.

Security: I know someone already has pointed out that 24 Hour Walmarts have a very, very high crime rate. Walmart refuses to do any kind of security on their own, instead make the cities where they are located carry the whole burden. Suisun is a small town and it has been difficult to have the proper police coverage. Add to this the possible problems with Walmart, our police department would be stressed to the limits, both in manpower and finances. Is there a way to negotiate with Walmart to provide some of this security on their own?

Parking: After visiting the Super Walmart in Dixon, it seems the parking area for the proposed store is quite inadequate.

Thank you for letting us voice our concerns.

Mr. and Mrs. Juan Torres

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

- Definite "NO" to WalMart on Hwy 12 & Walters Rd. We can't afford to have the business that brings in high crime!

- City should send send all Suisun residents future notices in this regard.

- Concerned about the smell from the new gas station.

Name Yoshiko Acey Telephone: 432 0792

Address 1365 Potrero Cir., Suisun City Suisun Zip 94585

Signature Yoshiko Acey Date 8/7/06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

A Wal-Mart in that area would be a big mistake; traffic is already bad that would make it so much worse. Also I'm concerned about Sunset Center becoming vacant and an eye sore.

Name JEAN CAIN

Telephone: 707-434-0807

Address 1369 POTRERO CIR.

City SUISUN CITY Zip 94585

Signature Jean A. Cain

Date 8-7-06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

Will the taxpayers of Suisun City have to pick up the ~~costs~~ tab for infrastructure / road improvements costs related to the Wal-Mart supercenter construction? Or will the state of California pay for neccesary road expansion and intersection and access road construction?

Name Beth Garber Telephone: 645-7178

Address 177 Gary Circle City Vallejo Zip 94591

Signature Elizabeth A. Garber Date 8/8/06

Please add my name to "interested parties list" - Thanks

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

Travis air Base

need to do a EIR on the impact to the Suisun Marsh. Scenic Highway 12 Traffic on the wildlife. impact of noise litter dust.

Name June Gudott Telephone: 707-4295054

Address 3703 Scally Rd City Suisun Zip 94585

Signature June Gudott Date 8/7/06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

1. I am saddened that Suisun can't find business to come to the city that pay more than ~~min~~ low paid jobs.
2. Need EIR to protect residents and Marsh
3. Police & Fire Dept. impacted by Walmart and residents should NOT Pay.
4. Increased crime from Walmart - Manager Lodi accused of child molestation. Volunteer Fire Dept. might not be adequate with Walmart coming to town.

(over)

Name George Guynn, Jr. Telephone: 429-3395

Address 1109 Pheasant Dr. City Suisun City Zip 94585

Signature George Guynn, Jr. Date 8/7/06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

THE SOUND WALL ON HWY 12; WILL IT BE EXTENDED EAST TO WALTERS ROAD? I ASSUME THE EIR WILL ADDRESS THIS!

Name RICH HANSON Telephone: 707-422-8002

Address 300 McNABE CT City SUISUN Zip 94585

Signature R.A. Hanson Date 8-7-06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

All Walmarts around US are in commercial areas not residencal area. It looks better that way. Every body would be happier that way.

Name Reg Hanson Telephone: 422-8002

Address 700 McNabb Ct. City Suisun City Zip

Signature Reg Hanson Date 8-17-06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

- Suggestion: A mailing list to include all household addresses/residents of Suisun City, not just those that live within 300 ft. or so.
- How will AB 797 affect the area?
- Is there a study on the economic impact on the businesses in Sunset, the marina & nearby mom & pop stores?
- How will this affect the value of our properties in Lawler Ranch?
- How will you handle the traffic on Highway 12?
- How about crime & personal safety of the residents of Lawler Ranch?

Name C. Hughes Telephone:

Address 1488 Whitby Way City Suisun Zip 94585

Signature Date 8/7/06

Comment Card

Please provide your comments below. Use back of card if more space is needed.

Project: Walters Road West Commercial Project

Sound Wall * Economic Value of Real Estate.

Is Peterson going to be reopened to H12

EIR - * Police for high crime - Tax on Road

Name Bernie & Joannie Black Telephone: 428-6554

Address 1421 Patran Way City Suisun Zip 94585

Signature Joannie Black Date 8-7-010

Walters Road West Commercial Project

Date: August 7, 2006 **Event:** Scoping Meeting for Environmental Impact Report

Name	Street Address	City	Zip	Phone Number
JAKE RAPER	701 CIVIC CENTER BOLVD	SUISUN CITY	94585	701-421 7396
Jason Beardran	2633 Camino Ramon Ste 460 San Ramon CA 94583	San Ramon	94583	925 830 2739
Jennifer Renk	One Embarcadero 30th A SF, CA 94105			415 403 3373
Dwight Acey	1365 Potrero Cir	Suisun	94585	
June Quidotte	3703 Scally Rd Suisun Calif	Suisun	94585	4295054
Beth Garber	177 Gary Circle	Vallejo	94591	645-7178
George Guyun, Jr.	1109 Pheasant Dr.	S.S.	94585	429-3395
KATHY MARIANNO	3915 DENVERTON Rd	Suisun	94585	374-2735
Jeannie Slack	1421 Pelican Way	Suisun	94585	428-6554

Walters Road West Commercial Project

Date: August 7, 2006 **Event:** Scoping Meeting for Environmental Impact Report

Name	Street Address	City	Zip	Phone Number
RICHARD HANSON	300 MCNABE COURT	SUISUN	94585	707-422-8002
JOSHIKO Acey	1365 Potrero Cir	"	"	707 432 0792
Jean A. Cain	1369 POTRERO CIR.	"	"	707-434-0807
John Torres	1423 Pelicsin Way	SUISUN	94585	
Catherine Torres	"	"	"	
Ben Hise	4120 Fine Mile Dr.	Stockton	95219	
FRED KOOLER	294 S. 4th ST	RIO VISTA	94571	707 580 6305
C. Hughes	1488 Whitby Way	Suisun City	94585	
JOAN KEARNS	701 CIVIC CENTER BLVD	SUISUN	94585	707 421-7337

Walters Road West Commercial Project

Date: August 7, 2006 **Event:** Scoping Meeting for Environmental Impact Report

Name	Street Address	City	Zip	Phone Number
Bernard Slack	1427 Pelican Way	Suisun	94585	707 428-6554
Mike Powers	419 Waverley St	Palo Alto	94301	650-853-3900

Appendix B: Air Quality Analysis

URBEMIS 2002 For Windows 8.7.0

File Name: E:\...\Walmart 2008 V2.urb
Project Name: Walmart 2008 Ver 2
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	67.78	44.80	56.66	0.00	25.79	1.79	24.00
TOTALS (lbs/day, mitigated)	67.78	35.86	56.64	0.00	3.94	0.36	3.58

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	3.45	2.07	3.80	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	118.55	125.37	1,461.51	0.96	135.84

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	121.99	127.44	1,465.31	0.96	135.85

DETAIL REPORT
(Pounds/Day - Summer)

Construction Start Month and Year: January, 2007
Construction Duration: 12
Total Land Use Area to be Developed: 9.8 acres
Maximum Acreage Disturbed Per Day: 2.4 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 212930

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source *** 2007***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	24.00	-	24.00
Off-Road Diesel	6.78	44.68	55.30	-	1.79	1.79	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.07	0.12	1.36	0.00	0.00	0.00	0.00
Maximum lbs/day	6.85	44.80	56.66	0.00	25.79	1.79	24.00
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.54	11.72	11.37	-	0.52	0.52	0.00
Bldg Const Worker Trips	0.41	0.25	5.33	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	64.16	-	-	-	-	-	-
Arch Coatings Worker Trips	0.41	0.25	5.33	0.00	0.06	0.00	0.06
Asphalt Off-Gas	0.57	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.56	3.32	4.75	-	0.11	0.11	0.00
Asphalt On-Road Diesel	0.12	2.12	0.46	0.00	0.05	0.05	0.00
Asphalt Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	67.78	17.67	27.31	0.00	0.81	0.69	0.12
Max lbs/day all phases	67.78	44.80	56.66	0.00	25.79	1.79	24.00

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jan '07
Phase 2 Duration: 1.3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0
0	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
0	Rubber Tired Loaders	165	0.465	8.0
0	Scrapers	313	0.660	8.0
0	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Feb '07
Phase 3 Duration: 10.7 months
Start Month/Year for SubPhase Building: Feb '07
SubPhase Building Duration: 10.7 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Other Equipment	190	0.620	8.0

Start Month/Year for SubPhase Architectural Coatings: Sep '07
SubPhase Architectural Coatings Duration: 3.5 months
Start Month/Year for SubPhase Asphalt: Oct '07
SubPhase Asphalt Duration: 0.5 months
Acres to be Paved: 2.4
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
0	Pavers	132	0.590	8.0
0	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	3.58	-	3.58
Off-Road Diesel	6.78	35.74	55.30	-	0.36	0.36	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.07	0.12	1.34	0.00	0.00	0.00	0.00
Maximum lbs/day	6.85	35.86	56.64	0.00	3.94	0.36	3.58
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.54	9.38	11.37	-	0.10	0.10	0.00
Bldg Const Worker Trips	0.41	0.25	5.26	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	64.16	-	-	-	-	-	-
Arch Coatings Worker Trips	0.41	0.25	5.26	0.00	0.06	0.00	0.06
Asphalt Off-Gas	0.57	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.56	2.66	4.75	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.12	1.70	0.46	0.00	0.01	0.01	0.00
Asphalt Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Maximum lbs/day	67.78	14.24	27.16	0.00	0.26	0.14	0.12
Max lbs/day all phases	67.78	35.86	56.64	0.00	3.94	0.36	3.58

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)

Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Off-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
Phase 2: Off-Road Diesel Exhaust: Use lean-NOx catalyst
Percent Reduction(ROG 0.0% NOx 20.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 2: On-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
Phase 2: On-Road Diesel Exhaust: Use lean-NOx catalyst
Percent Reduction(ROG 0.0% NOx 20.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Off-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
Phase 3: Off-Road Diesel Exhaust: Use lean-NOx catalyst
Percent Reduction(ROG 0.0% NOx 20.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Off-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
Phase 3: Off-Road Diesel Exhaust: Use lean-NOx catalyst
Percent Reduction(ROG 0.0% NOx 20.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: On-Road Diesel Exhaust: Use diesel particulate filter
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 80.0%)
Phase 3: On-Road Diesel Exhaust: Use lean-NOx catalyst
Percent Reduction(ROG 0.0% NOx 20.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
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Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jan '07
Phase 2 Duration: 1.3 months
On-Road Truck Travel (VMT): 0
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Crawler Tractors	143	0.575	8.0
0	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
0	Rubber Tired Loaders	165	0.465	8.0
0	Scrapers	313	0.660	8.0
0	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Feb '07
Phase 3 Duration: 10.7 months
Start Month/Year for SubPhase Building: Feb '07
SubPhase Building Duration: 10.7 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Other Equipment	190	0.620	8.0

Start Month/Year for SubPhase Architectural Coatings: Oct '07
SubPhase Architectural Coatings Duration: 2.5 months
Start Month/Year for SubPhase Asphalt: Oct '07
SubPhase Asphalt Duration: 0.5 months
Acres to be Paved: 2.4
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
0	Pavers	132	0.590	8.0
0	Rollers	114	0.430	8.0

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.15	2.06	1.73	0	0.00
Hearth - No summer emissions					
Landscaping	0.31	0.01	2.07	0.00	0.01
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	2.98	-	-	-	-
TOTALS(lbs/day,unmitigated)	3.45	2.07	3.80	0.00	0.01

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.12	1.65	1.38	0	0.00
Hearth - No summer emissions					
Landscaping	0.31	0.01	2.07	0.00	0.01
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	2.98	-	-	-	-
TOTALS (lbs/day, mitigated)	3.42	1.66	3.46	0.00	0.01

Area Source Mitigation Measures

Commercial Increase Efficiency Beyond Title 24
Percent Reduction: 20

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
High turnover (sit-down)	7.17	6.77	78.97	0.05	7.03
Free-standing discount su	99.52	108.48	1,265.39	0.84	118.78
Convenience market with g	11.86	10.12	117.16	0.07	10.03
TOTAL EMISSIONS (lbs/day)	118.55	125.37	1,461.51	0.96	135.84

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2008 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
High turnover (sit-down)		108.75 trips/1000 sq. ft.	8.00	870.00
Free-standing discount su		50.59 trips/1000 sq. ft.	200.83	10,159.99
Convenience market with g		390.24 trips/1000 sq. ft.	4.10	1,599.98
		Sum of Total Trips		12,629.97
		Total Vehicle Miles Traveled		88,896.45

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.00	1.60	98.00	0.40
Light Truck < 3,750 lbs	15.00	2.70	95.30	2.00
Light Truck 3,751- 5,750	16.20	1.20	97.50	1.30
Med Truck 5,751- 8,500	7.20	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.70	76.50	23.50	0.00

School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	9.2	9.2	9.2	9.2	9.2	9.2
Rural Trip Length (miles)	9.2	9.2	9.2	9.2	9.2	9.2
Trip Speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

High turnover (sit-down) rest.	5.0	2.5	92.5
Free-standing discount superstore	2.0	1.0	97.0
Convenience market with gas pumps	2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

The Primary Trip % for High turnover restaurant changed from 30 to 57
The Diverted Trip % for High turnover restaurant changed from 40 to 0
The Pass-By Trip % for High turnover restaurant changed from 30 to 43
The Primary Trip % for Discount superstore changed from 55 to 83
The Diverted Trip % for Discount superstore changed from 40 to 0
The Pass-By Trip % for Discount superstore changed from 5 to 17
The Primary Trip % for Convenience market w/gas changed from 25 to 44
The Diverted Trip % for Convenience market w/gas changed from 30 to 0
The Pass-By Trip % for Convenience market w/gas changed from 45 to 56

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Architectural Coatings: # ROG/ft2 (residential) changed from 0.0185 to .00602
Architectural Coatings: # ROG/ft2 (non-res) changed from 0.0185 to .0116
Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use lean-NOx catalyst
has been changed from off to on.
Phase 2 mitigation measure On-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 2 mitigation measure On-Road Diesel Exhaust: Use lean-NOx catalyst
has been changed from off to on.
Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Use lean-NOx catalyst
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Use lean-NOx catalyst
has been changed from off to on.
Phase 3 mitigation measure On-Road Diesel Exhaust: Use diesel particulate filter
has been changed from off to on.
Phase 3 mitigation measure On-Road Diesel Exhaust: Use lean-NOx catalyst
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.

Changes made to the default values for Area

The area souce mitigation measure option switch changed from off to on.
The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 0.
The no hearth options percentage changed from 0 to 100.
The landscape year changed from 2005 to 2008.
Mitigation measure Commercial Increase Efficiency Beyond Title 24 has been changed from off to on.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2008.
The operational winter selection item changed from 2 to 1.
The operational summer temperature changed from 85 to 90.
The home based work selection item changed from 7 to 6.
The home based work urban trip length changed from 11.8 to 9.2.
The home based work rural trip length changed from 15 to 9.2.
The home based shopping selection item changed from 7 to 6.
The home based shopping urban trip length changed from 4.6 to 9.2.
The home based shopping rural trip length changed from 10 to 9.2.
The home based other selection item changed from 7 to 6.
The home based other urban trip length changed from 6.1 to 9.2.
The home based other rural trip length changed from 10 to 9.2.
The commercial based commute selection item changed from 7 to 6.
The commercial based commute urban trip length changed from 11.8 to 9.2.
The commercial based commute rural trip length changed from 15 to 9.2.
The commercial based non-work selection item changed from 7 to 6.
The commercial based non-work urban trip length changed from 5.0 to 9.2.
The commercial based non-work rural trip length changed from 10 to 9.2.
The commercial based customer selection item changed from 7 to 6.
The commercial based customer urban trip length changed from 5.0 to 9.2.
The commercial based customer rural trip length changed from 10 to 9.2.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\Lois Clarke\My Documents\Lois\Miller Envt Inc\Walmart\Analysis\Walmart
Project Name: Walmart 2030
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	3.40	2.09	3.62	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	25.16	20.81	279.32	0.85	120.36

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	28.56	22.90	282.94	0.85	120.37

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\Lois Clarke\My Documents\Lois\Miller Envt Inc\Walmart\Analysis\Walmart
Project Name: Walmart 2030
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	3.13	2.06	1.73	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	27.86	32.36	269.28	0.69	120.36

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	31.00	34.42	271.01	0.69	120.37

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\Lois Clarke\My Documents\Lois\Miller Envt Inc\Walmart\Analysis\Walmart
Project Name: Walmart 2030
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	0.45	0.38	0.49	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	4.76	4.50	50.37	0.15	21.97

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (tpy, unmitigated)	5.20	4.88	50.85	0.15	21.97

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\Lois Clarke\My Documents\Lois\Miller Envt Inc\Walmart\Analysis\Walmart
Project Name: Walmart 2030
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.15	2.06	1.73	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	2.98	-	-	-	-
TOTALS(lbs/day,unmitigated)	3.13	2.06	1.73	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
High turnover (sit-down)	1.77	1.76	15.29	0.04	6.23
Free-standing discount su	23.02	27.95	230.07	0.60	105.24
Convenience market with g	3.07	2.65	23.92	0.05	8.89
TOTAL EMISSIONS (lbs/day)	27.86	32.36	269.28	0.69	120.36

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
High turnover (sit-down)		108.75 trips/1000 sq. ft.	8.00	870.00
Free-standing discount su		50.59 trips/1000 sq. ft.	200.83	10,159.99
Convenience market with g		390.24 trips/1000 sq. ft.	4.10	1,599.98
		Sum of Total Trips		12,629.97
		Total Vehicle Miles Traveled		79,233.79

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750 lbs	15.90	0.00	100.00	0.00
Light Truck 3,751- 5,750	16.70	0.00	100.00	0.00
Med Truck 5,751- 8,500	7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.2	8.2	8.2	8.2	8.2	8.2
Rural Trip Length (miles)	8.2	8.2	8.2	8.2	8.2	8.2
Trip Speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

High turnover (sit-down) rest.	5.0	2.5	92.5
Free-standing discount superstore	2.0	1.0	97.0
Convenience market with gas pumps	2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

The Primary Trip % for High turnover resturant changed from 30 to 57
The Diverted Trip % for High turnover resturant changed from 40 to 0
The Pass-By Trip % for High turnover resturant changed from 30 to 43
The Primary Trip % for Discount superstore changed from 55 to 83
The Diverted Trip % for Discount superstore changed from 40 to 0
The Pass-By Trip % for Discount superstore changed from 5 to 17
The Primary Trip % for Convenience market w/gas changed from 25 to 44
The Diverted Trip % for Convenience market w/gas changed from 30 to 0
The Pass-By Trip % for Convenience market w/gas changed from 45 to 56

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 0.
The no hearth options percentage changed from 0 to 100.
The landscape year changed from 2005 to 2020.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.
The operational winter selection item changed from 2 to 1.
The operational summer temperature changed from 85 to 90.
The home based work selection item changed from 7 to 6.
The home based work urban trip length changed from 11.8 to 8.2.
The home based work rural trip length changed from 15 to 8.2.
The home based shopping selection item changed from 7 to 6.
The home based shopping urban trip length changed from 4.6 to 8.2.
The home based shopping rural trip length changed from 10 to 8.2.
The home based other selection item changed from 7 to 6.
The home based other urban trip length changed from 6.1 to 8.2.
The home based other rural trip length changed from 10 to 8.2.
The commercial based commute selection item changed from 7 to 6.
The commercial based commute urban trip length changed from 11.8 to 8.2.
The commercial based commute rural trip length changed from 15 to 8.2.
The commercial based non-work selection item changed from 7 to 6.
The commercial based non-work urban trip length changed from 5.0 to 8.2.
The commercial based non-work rural trip length changed from 10 to 8.2.
The commercial based customer selection item changed from 7 to 6.
The commercial based customer urban trip length changed from 5.0 to 8.2.
The commercial based customer rural trip length changed from 10 to 8.2.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\Lois Clarke\My Documents\Lois\Miller Envt Inc\Walmart\Analysis\Walmart
Project Name: Walmart 2030
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.15	2.06	1.73	0	0.00
Hearth - No summer emissions					
Landscaping	0.27	0.03	1.89	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	2.98	-	-	-	-
TOTALS(lbs/day,unmitigated)	3.40	2.09	3.62	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
High turnover (sit-down)	1.55	1.14	15.20	0.04	6.23
Free-standing discount su	21.00	17.93	241.44	0.74	105.24
Convenience market with g	2.61	1.74	22.68	0.06	8.89
TOTAL EMISSIONS (lbs/day)	25.16	20.81	279.32	0.85	120.36

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
High turnover (sit-down)	108.75	trips/1000 sq. ft.	8.00	870.00
Free-standing discount su	50.59	trips/1000 sq. ft.	200.83	10,159.99
Convenience market with g	390.24	trips/1000 sq. ft.	4.10	1,599.98
		Sum of Total Trips		12,629.97
		Total Vehicle Miles Traveled		79,233.79

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750 lbs	15.90	0.00	100.00	0.00
Light Truck 3,751- 5,750	16.70	0.00	100.00	0.00
Med Truck 5,751- 8,500	7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.2	8.2	8.2	8.2	8.2	8.2
Rural Trip Length (miles)	8.2	8.2	8.2	8.2	8.2	8.2
Trip Speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

High turnover (sit-down) rest.	5.0	2.5	92.5
Free-standing discount superstore	2.0	1.0	97.0
Convenience market with gas pumps	2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

The Primary Trip % for High turnover resturant changed from 30 to 57
The Diverted Trip % for High turnover resturant changed from 40 to 0
The Pass-By Trip % for High turnover resturant changed from 30 to 43
The Primary Trip % for Discount superstore changed from 55 to 83
The Diverted Trip % for Discount superstore changed from 40 to 0
The Pass-By Trip % for Discount superstore changed from 5 to 17
The Primary Trip % for Convenience market w/gas changed from 25 to 44
The Diverted Trip % for Convenience market w/gas changed from 30 to 0
The Pass-By Trip % for Convenience market w/gas changed from 45 to 56

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 0.
The no hearth options percentage changed from 0 to 100.
The landscape year changed from 2005 to 2020.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.
The operational winter selection item changed from 2 to 1.
The operational summer temperature changed from 85 to 90.
The home based work selection item changed from 7 to 6.
The home based work urban trip length changed from 11.8 to 8.2.
The home based work rural trip length changed from 15 to 8.2.
The home based shopping selection item changed from 7 to 6.
The home based shopping urban trip length changed from 4.6 to 8.2.
The home based shopping rural trip length changed from 10 to 8.2.
The home based other selection item changed from 7 to 6.
The home based other urban trip length changed from 6.1 to 8.2.
The home based other rural trip length changed from 10 to 8.2.
The commercial based commute selection item changed from 7 to 6.
The commercial based commute urban trip length changed from 11.8 to 8.2.
The commercial based commute rural trip length changed from 15 to 8.2.
The commercial based non-work selection item changed from 7 to 6.
The commercial based non-work urban trip length changed from 5.0 to 8.2.
The commercial based non-work rural trip length changed from 10 to 8.2.
The commercial based customer selection item changed from 7 to 6.
The commercial based customer urban trip length changed from 5.0 to 8.2.
The commercial based customer rural trip length changed from 10 to 8.2.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\Lois Clarke\My Documents\Lois\Miller Envt Inc\Walmart\Analysis\Walmart
Project Name: Walmart 2030
Project Location: San Francisco Bay Area
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.03	0.38	0.32	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.02	0.00	0.17	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.39	-	-	-	-
TOTALS (tpy, unmitigated)	0.45	0.38	0.49	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
High turnover (sit-down)	0.30	0.25	2.78	0.01	1.14
Free-standing discount su	3.96	3.88	43.37	0.13	19.21
Convenience market with g	0.50	0.37	4.21	0.01	1.62
TOTAL EMISSIONS (tons/yr)	4.76	4.50	50.37	0.15	21.97

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
High turnover (sit-down)	108.75	trips/1000 sq. ft.	8.00	870.00
Free-standing discount su	50.59	trips/1000 sq. ft.	200.83	10,159.99
Convenience market with g	390.24	trips/1000 sq. ft.	4.10	1,599.98
		Sum of Total Trips		12,629.97
		Total Vehicle Miles Traveled		79,233.79

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750 lbs	15.90	0.00	100.00	0.00
Light Truck 3,751- 5,750	16.70	0.00	100.00	0.00
Med Truck 5,751- 8,500	7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	8.2	8.2	8.2	8.2	8.2	8.2
Rural Trip Length (miles)	8.2	8.2	8.2	8.2	8.2	8.2
Trip Speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

High turnover (sit-down) rest.	5.0	2.5	92.5
Free-standing discount superstore	2.0	1.0	97.0
Convenience market with gas pumps	2.0	1.0	97.0

Changes made to the default values for Land Use Trip Percentages

The Primary Trip % for High turnover resturant changed from 30 to 57
The Diverted Trip % for High turnover resturant changed from 40 to 0
The Pass-By Trip % for High turnover resturant changed from 30 to 43
The Primary Trip % for Discount superstore changed from 55 to 83
The Diverted Trip % for Discount superstore changed from 40 to 0
The Pass-By Trip % for Discount superstore changed from 5 to 17
The Primary Trip % for Convenience market w/gas changed from 25 to 44
The Diverted Trip % for Convenience market w/gas changed from 30 to 0
The Pass-By Trip % for Convenience market w/gas changed from 45 to 56

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 0.
The natural gas fireplace percentage changed from 55 to 0.
The no hearth options percentage changed from 0 to 100.
The landscape year changed from 2005 to 2020.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.
The operational winter selection item changed from 2 to 1.
The operational summer temperature changed from 85 to 90.
The home based work selection item changed from 7 to 6.
The home based work urban trip length changed from 11.8 to 8.2.
The home based work rural trip length changed from 15 to 8.2.
The home based shopping selection item changed from 7 to 6.
The home based shopping urban trip length changed from 4.6 to 8.2.
The home based shopping rural trip length changed from 10 to 8.2.
The home based other selection item changed from 7 to 6.
The home based other urban trip length changed from 6.1 to 8.2.
The home based other rural trip length changed from 10 to 8.2.
The commercial based commute selection item changed from 7 to 6.
The commercial based commute urban trip length changed from 11.8 to 8.2.
The commercial based commute rural trip length changed from 15 to 8.2.
The commercial based non-work selection item changed from 7 to 6.
The commercial based non-work urban trip length changed from 5.0 to 8.2.
The commercial based non-work rural trip length changed from 10 to 8.2.
The commercial based customer selection item changed from 7 to 6.
The commercial based customer urban trip length changed from 5.0 to 8.2.
The commercial based customer rural trip length changed from 10 to 8.2.

```
        CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                 JUNE 1989 VERSION
                 PAGE   1

            JOB: Walmart - 2006 v2
            RUN: Hour 1          (WORST CASE ANGLE)
      POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=   1.0 M/S            Z0=  50. CM           ALT=     0. (M)
     BRG= WORST CASE            VD=   .0 CM/S
    CLAS=     7 (G)             VS=   .0 CM/S
    MIXH= 1000. M               AMB=  3.7 PPM
   SIGTH=   10. DEGREES         TEMP=  9.4 DEGREE (C)

  II.  LINK VARIABLES

     LINK      *  LINK COORDINATES (M)   *            EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)

----------------*-------------------------*-------------------
-----------
 A. 13          *   170   945   170   658 *  AG   1272   5.5     .0  24.4
 B. 14          *   170   658   170   183 *  AG   1238   5.5     .0  25.8
 C. 15          *   170   183   170    34 *  AG   1327   5.5     .0  25.3
 D. 16          *   170    34   170     0 *  AG   1389   5.5     .0  23.6

 III.  RECEPTOR LOCATIONS

          *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
 ------------*---------------------
 1. Recpt 1  *    158    945   1.8
 2. Recpt 2  *    183    658   1.8
 3. Recpt 3  *    158    183   1.8
 4. Recpt 4  *    182     34   1.8
 5. Recpt 5  *    109      0   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )
```

```
          *       * PRED  *      CONC/LINK
          *  BRG  * CONC  *        (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D
-------------*-------*-------*--------------------
 1. Recpt 1  *  174. *   4.3 *   .5   .0   .0   .0
 2. Recpt 2  *  186. *   4.3 *   .0   .6   .0   .0
 3. Recpt 3  *    6. *   4.3 *   .0   .6   .0   .0
 4. Recpt 4  *  355. *   4.4 *   .0   .2   .5   .0
 5. Recpt 5  *   11. *   3.9 *   .0   .1   .0   .0
```

```
        CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                 JUNE 1989 VERSION
                 PAGE   1

            JOB: Walmart - 2030 np
            RUN: Hour 1          (WORST CASE ANGLE)
      POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=   1.0 M/S            Z0=  50. CM           ALT=     0. (M)
     BRG= WORST CASE            VD=   .0 CM/S
    CLAS=     7 (G)             VS=   .0 CM/S
    MIXH= 1000. M               AMB=  3.5 PPM
   SIGTH=   10. DEGREES         TEMP=  9.4 DEGREE (C)

  II.  LINK VARIABLES

     LINK      *  LINK COORDINATES (M)   *            EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)

----------------*-------------------------*-------------------
-----------
 A. 13          *  170   945   170   658 *  AG   2552    .8     .0  24.4
 B. 14          *  170   658   170   183 *  AG   2452    .8     .0  25.8
 C. 15          *  170   183   170    34 *  AG   2479    .8     .0  25.3
 D. 16          *  170    34   170     0 *  AG   2522    .8     .0  23.6

  III.  RECEPTOR LOCATIONS

          *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
 ------------*---------------------
 1. Recpt 1  *    158    945   1.8
 2. Recpt 2  *    183    658   1.8
 3. Recpt 3  *    158    183   1.8
 4. Recpt 4  *    182     34   1.8
 5. Recpt 5  *    109      0   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )
```

```
          *       * PRED  *      CONC/LINK
          *  BRG  * CONC  *        (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D
-------------*-------*-------*--------------------
 1. Recpt 1  *  174. *   3.7 *   .1   .0   .0   .0
 2. Recpt 2  *  186. *   3.7 *   .0   .1   .0   .0
 3. Recpt 3  *    6. *   3.7 *   .0   .2   .0   .0
 4. Recpt 4  *  355. *   3.7 *   .0   .0   .1   .0
 5. Recpt 5  *   11. *   3.5 *   .0   .0   .0   .0
```

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        CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                 JUNE 1989 VERSION
                 PAGE   1

            JOB: Walmart - 2030 p
            RUN: Hour 1          (WORST CASE ANGLE)
      POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=   1.0 M/S            Z0=  50. CM           ALT=     0. (M)
     BRG= WORST CASE            VD=   .0 CM/S
    CLAS=     7 (G)             VS=   .0 CM/S
    MIXH= 1000. M               AMB=  3.5 PPM
   SIGTH=   10. DEGREES         TEMP=  9.4 DEGREE (C)

  II.  LINK VARIABLES

     LINK      *  LINK COORDINATES (M)   *            EF     H     W
   DESCRIPTION  *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)  (M)   (M)

----------------*-------------------------*-------------------
-----------
 A. 13          *  170   945   170   658 *  AG   3171    .8     .0  24.4
 B. 14          *  170   658   170   183 *  AG   3251    .8     .0  25.8
 C. 15          *  170   183   170    34 *  AG   3232    .8     .0  25.3
 D. 16          *  170    34   170     0 *  AG   3616    .8     .0  23.6

  III.  RECEPTOR LOCATIONS

          *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
 1. Recpt 1  *    158    945   1.8
 2. Recpt 2  *    183    658   1.8
 3. Recpt 3  *    158    183   1.8
 4. Recpt 4  *    182     34   1.8
 5. Recpt 5  *    109      0   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )
```

```
          *       * PRED  *      CONC/LINK
          *  BRG  * CONC  *        (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D
-------------*-------*-------*--------------------
 1. Recpt 1  *  174. *   3.7 *   .2   .0   .0   .0
 2. Recpt 2  *  187. *   3.7 *   .0   .2   .0   .0
 3. Recpt 3  *    6. *   3.7 *   .0   .2   .0   .0
 4. Recpt 4  *  354. *   3.7 *   .0   .0   .2   .0
 5. Recpt 5  *   12. *   3.6 *   .0   .0   .0   .0
```

VOC Emissions from Underground Gasoline Tanks

Tank Number	Tank Capacity (gal)	Throughput (gal/hr)	Throughput (gal/yr)	Emission Rate [1] ($lb/10^3$ gal gas)	Emission Rate [2] ($lb/10^3$ gal gas)	VOC Emissions (lb/hr)	VOC Emissions (lb/yr)	VOC Emissions (ton/yr)
T12	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028
T34	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028
T56	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028
Total	30,000	320	1,534,752	0.084		0.027	128.9	0.064
Total	30,000	320	1,534,752		0.025	0.008	38.4	0.019

[1] Includes emissions from tank breathing and emptying as well as vapor loss between the tank and the gas pump
[2] Emissions from balanced submerged filling underground tank

	Breathing
3.39E-03	Hourly (g/s)
1.85E-03	Annual (g/s)
	Working
1.01E-03	Hourly (g/s)
5.52E-04	Annual (g/s)
Point Source	

Hourly		Annual	
6	pumps	6	pumps
33	vehicles per AM Hour	33	vehicles per AM Hour
40	vehicles per PM Hour	40	vehicles per PM Hour
876	worst case vehicles per day	526	typical vehicles per day
8	gallons per trip	8	gallons per trip
320	gallons per hour	1,534,752	gallons per year

Throughput (gal/hr)	Throughput (gal/yr)	Emission Factor (lb VOC 10^3/gal)		VOC Emissions (lb/hr)	VOC Emissions (ton/yr)
320	1,534,752	0.74	Refueling	0.237	0.568
320	1,534,752	0.42	Spillage	0.134	0.322
			Total	0.371	0.890

	Refueling
2.98E-02	Hourly (g/s)
1.63E-02	Annual (g/s)
	Spillage
1.69E-02	Hourly (g/s)
9.27E-03	Annual (g/s)

Noncancer Effect	Acetaldehyde	Acrolein	Benzene	1,3-butadiene	Ethylbenzene	Formaldehyde	Methyl alcohol	Naphthale	Toluene	Styrene	o-Xylene	m-,p-Xylene	Xylene (Total)
Acute (ug/m3)		1.90E-01	1.30E+03			9.40E+01	2.80E+04		3.70E+04	2.10E+04	2.20E+04	2.20E+04	2.20E+04
Chronic (ug/m3)	9.00E+00	6.00E-02	6.00E+01	2.00E+01	2.00E+03	3.00E+00	4.00E+03	9.00E+00	3.00E+02	9.00E+02	7.00E+02	7.00E+02	7.00E+02
			6-hour										
Cancer Risk													
Inhalation Unit Risk (ug/m3)	2.70E-06		2.90E-05	1.70E-04		6.00E-06		3.40E-05					
Cancer Potency Factor (mg/kg-d)	1.00E-02		1.00E-01	6.00E-01		2.10E-02		1.20E-01					

ORGPROF	SAROAD	ORGFRAC	ORGPROFN
882	43502	0.0172	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43301	0.0041	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45201	0.0267	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43503	0.0025	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43552	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98046	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45204	0.0128	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98043	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45203	0.0109	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45220	0.0012	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43218	0.0055	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43505	0.0014	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45205	0.0369	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45202	0.0595	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43231	0.016	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43504	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43276	0.0174	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43378	0.0196	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43302	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43551	0.0017	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43201	0.1775	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43202	0.0107	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43203	0.0657	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43206	0.0337	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43204	0.0006	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43209	0.0024	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43214	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43291	0.0064	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98132	0.0685	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43243	0.0014	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43506	0.0009	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98001	0.0106	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45208	0.01	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91103	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43230	0.0221	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43262	0.0279	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45256	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45501	0.0016	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45209	0.0023	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45114	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43212	0.0079	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43213	0.0043	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43229	0.0376	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43271	0.0044	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45207	0.004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43261	0.0062	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43220	0.028	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43224	0.0014	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43248	0.0062	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43273	0.0009	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000

882	43233	0.0039	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43235	0.0018	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43255	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43205	0.0316	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43215	0.0338	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43510	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43238	0.0016	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45113	0.0003	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43292	0.002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43232	0.0051	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43242	0.0037	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43208	0.0015	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43160	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91109	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98044	0.0009	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43228	0.0042	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45225	0.0018	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91104	0.0003	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91096	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98153	0.0003	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45255	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	90040	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43223	0.0024	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43225	0.0029	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43234	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43274	0.0145	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43279	0.0061	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98139	0.0025	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43295	0.0077	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43277	0.0027	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43297	0.0016	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43298	0.006	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43217	0.0018	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43221	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98138	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98056	0.0003	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43278	0.0034	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98140	0.0035	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43245	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	99915	0.0028	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43300	0.0026	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	99912	0.0082	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45502	0.0022	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	99914	0.0035	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43216	0.0024	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98004	0.0008	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	90062	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43227	0.0012	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98180	0.0008	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43226	0.0021	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43293	0.0006	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000

882	98134	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98135	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91006	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43211	0.0011	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98040	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91107	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91108	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	90047	0.0009	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91106	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45251	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91069	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98144	0.0014	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45254	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45257	0.0011	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45252	0.0011	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98141	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98157	0.0018	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98178	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98152	0.0015	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43241	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43272	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98057	0.0015	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45250	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91019	0.0027	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98061	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98177	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91055	0.0003	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98059	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98181	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98142	0.0007	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98172	0.0031	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98173	0.0023	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91018	0.0024	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91044	0.001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	90080	0.0006	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43400	0.0013	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98146	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98033	0.0033	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98149	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98034	0.0013	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98184	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98156	0.0003	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	92001	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91028	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98183	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98035	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	90029	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98136	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91026	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98006	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98174	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000

882	98175	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98176	0.0004	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	91038	0.0005	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45222	0.0008	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45237	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	45243	0.0001	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	43252	0.0006	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000
882	98095	0.0002	Gasoline - catalyst -stabilized exhaust-from 96IUS summer 2000

CAS	CHEM_NAME
50000	formaldehyde
67561	methyl alcohol
71432	benzene
75070	acetaldehyde
78933	methyl ethyl ketone (mek) (2-butanone)
91203	naphthalene
95476	o-xylene
98828	isopropylbenzene (cumene)
100414	ethylbenzene
100425	styrene
106990	1,3-butadiene
107028	acrolein (2-propenal)
108383	m-xylene
108883	toluene
110543	n-hexane
123386	propionaldehyde
540841	2,2,4-trimethylpentane
1634044	methyl t-butyl ether (mtbe)
64175	ethanol
67641	acetone
74828	methane
74840	ethane
74851	ethylene
74862	acetylene
74986	propane
74997	1-propyne
75285	isobutane
75832	2,2-dimethylbutane
78784	isopentane
78795	isoprene
78853	2-methyl-2-propenal
79298	2,3-dimethylbutane
95636	1,2,4-trimethylbenzene
95932	1,2,4,5-tetramethylbenzene
96140	3-methylpentane
96377	methylcyclopentane
98191	1-(1,1-dimethylethyl)-3,5-dimethylbenzene
100527	benzaldehyde
103651	n-propylbenzene
105055	1,4-diethylbenzene (para)
106978	n-butane
106989	1-butene
107835	2-methylpentane
108087	2,4-dimethylpentane
108678	1,3,5-trimethylbenzene
108872	methylcyclohexane
109660	n-pentane
109671	1-pentene
110827	cyclohexane
110838	cyclohexene

111659	n-octane
111842	n-nonane
112403	n-dodecane
115071	propylene
115117	isobutylene
123728	butyraldehyde
124185	n-decane
141935	1,3-diethylbenzene (meta)
142290	cyclopentene
142825	n-heptane
287923	cyclopentane
463490	1,2-propadiene
464062	2,2,3-trimethylbutane
488233	1,2,3,4-tetramethylbenzene
496117	indan
513359	2-methyl-2-butene
526738	1,2,3-trimethylbenzene
527537	1,2,3,5-tetramethylbenzene
527844	1-methyl-2-isopropylbenzene
535773	1-methyl-3-isopropylbenzene
538681	n-pentylbenzene
562492	3,3-dimethylpentane
563451	3-methyl-1-butene
563462	2-methyl-1-butene
563780	2,3-dimethyl-1-butene
565593	2,3-dimethylpentane
565753	2,3,4-trimethylpentane
584941	2,3-dimethylhexane
589344	3-methylhexane
589435	2,4-dimethylhexane
589537	4-methylheptane
589811	3-methylheptane
590181	cis-2-butene
590192	1,2-butadiene {methylallene}
590738	2,2-dimethylhexane
590863	isovaleraldehyde
592132	2,5-dimethylhexane
592278	2-methylheptane
592416	1-hexene
611143	1-methyl-2-ethylbenzene
617787	3-ethylpentane
620144	1-methyl-3-ethylbenzene
620235	tolualdehyde
622968	1-methyl-4-ethylbenzene
624646	trans-2-butene
625274	2-methyl-2-pentene
625650	2,4-dimethyl-2-pentene
627203	cis-2-pentene
638040	cis-1,3-dimethylcyclohexane
646048	trans-2-pentene
674760	4-methyl-trans-2-pentene

689974	vinylacetylene
691372	4-methyl-1-pentene
692240	2-methyl-trans-3-hexene
760203	3-methyl-1-pentene
763291	2-methyl-1-pentene
824226	4-methylindan
824635	2-methylindan
871830	2-methylnonane
874351	5-methylindan
874419	1,3-dimethyl-4-ethylbenzene
922281	3,4-dimethylheptane
926829	3,5-dimethylheptane
933982	1,2-dimethyl-3-ethylbenzene
934747	1,3-dimethyl-5-ethylbenzene
934805	1,2-dimethyl-4-ethylbenzene
1069530	2,3,5-trimethylhexane
1072055	2,6-dimethylheptane
1074175	1-methyl-2n-propylbenzene
1074437	1-methyl-3n-propylbenzene
1120214	n-undecane
1120623	3-methylcyclopentene
1640897	ethylcyclopentane
1758889	1,4-dimethyl-2-ethylbenzene
1759586	trans-1,3-dimethylcyclopentane
1839630	1,3,5-trimethylcyclohexane
2051301	2,6-dimethyloctane
2207014	cis-1,2-dimethylcyclohexane
2207036	trans-1,3-dimethylcyclohexane
2207047	trans-1,4-dimethylcyclohexane
2213232	2,4-dimethylheptane
2216333	3-methyloctane
2216344	4-methyloctane
2532583	cis-1,3-dimethylcyclopentane
2613652	trans-1-methyl-3-ethylcyclopentane
2613663	cis-1-methyl-3-ethylcyclopentane
2815589	1,2,4-trimethylcyclopentene
3221612	2-methyloctane
3522949	2,2,5-trimethylhexane
4032944	2,4-dimethyloctane
4050457	trans-2-hexene
4110445	3,3-dimethyloctane
4170303	crotonaldehyde
6236880	1-methyl-4-ethylcyclohexane
6443921	cis-2-heptene
7146603	2,3-dimethyloctane
7688213	cis-2-hexene
10574364	3-methyl-cis-2-hexene
13269528	trans-3-hexene
14686136	trans-2-heptene
14686147	trans-3-heptene
14720742	2,2,4-trimethylheptane

15869871	2,2-dimethyloctane
15869893	2,5-dimethyloctane
15890401	cis-1,trans-2,3-trimethylcyclopentane
16747265	2,2,4-trimethylhexane
17171721	1,3-dipropylbenzene
	1-methyl-2-n-butylbenzene
	2,2,5-triethylheptane
	c6 aldehydes

Gas Station Summary

ROG Emissions from Underground Gasoline Tanks

Tank Number	Tank Capacity (gal)	Throughput (gal/hr)	Throughput (gal/yr)	Emission Rate [1] ($lb/10^3$ gal gas)	Emission Rate [2] ($lb/10^3$ gal gas)	ROG Emissions (lb/hr)	ROG Emissions (lb/yr)	ROG Emissions (ton/yr)	ROG Emissions (lbs/d)
T12	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028	0.15
T34	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028	0.15
T56	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028	0.15
Total	**30,000**	**320**	**1,534,752**	0.084		**0.027**	**128.9**	**0.064**	**0.35**
Total	**30,000**	**320**	**1,534,752**		0.025	**0.008**	**38.4**	**0.019**	**0.11**
					TOTAL	***0.035***	***167.3***	***0.084***	***0.46***

[1] Includes emissions from tank breathing and emptying as well as vapor loss between the tank and the gas pump

[2] Emissions from balanced submerged filling underground tank

ROG Emissions from Fuel Dispensing & Spillage

Throughput (gal/hr)	Throughput (gal/yr)	Emission Factor (lb ROG 103/gal)		ROG Emissions (lb/hr)	ROG Emissions (ton/yr)	ROG Emissions (lbs/d)
320	1,534,752	0.74	Refueling	0.237	0.568	3.11
320	1,534,752	0.42	Spillage	0.134	0.322	1.77
			TOTAL	***0.371***	***0.890***	***4.88***

Assumptions - Annual

6 islands
33 vehicles per AM Hour
40 vehicles per PM Hour
526 typical vehicles per day
8 gallons per trip
1,534,752 gallons per year
4,205 Avg gal/day

Prepared by Joe O'Bannon 8/24/2007

Appendix
Human Health Risk Assessment

This document was prepared to identify the Human Health Risk Assessment (HHRA) impacts that may result from implementation of the Suisun City Wal-Mart project. In accordance with CEQA, the results of this HHRA were used to compare the potential changes in health impacts between existing and future-year conditions, with the planned improvements. For this reason, it is termed an "incremental" HHRA. In addition, the HHRA was conducted in accordance with technical guidelines developed by the U.S. and California agencies (i.e., U.S. EPA, CalEPA-OEHHA) and the BAAQMD.

Generally, a HHRA involves four steps; hazards identification, exposure assessment, toxicity assessment, and risk characterization. The following provides the methodologies, assumptions, and data for each of these steps.

Hazards Identification

Emissions of DPM and other TACs would occur from the following project activities:

- Truck traffic on local streets and arterials in transit to or from the loading dock,
- Truck idling and movement on-site at the loading dock,
- Operation of transportation refrigeration units (TRU) at the loading dock; and
- Operation of the gasoline service station.

The loading docks are the primary location DPM emissions would occur. At the loading docks, diesel trucks sometimes idle for periods of time (studies have shown trucks idle to maintain temperature in the driver cabin area) and food trucks also have diesel engines that run constantly to power the TRUs that cool the trailer and keep foods from spoiling.

Secondly, the applicant is proposing to include a six pump vehicle fueling facility. Fuel (gasoline) dispensing operations would result in volatile organic compounds (VOCs) emissions which include TACs such as benzene, 1,3-butadiene, and formaldehyde. These VOC emissions would result from four activities; loading, breathing (both related to the underground storage tanks), refueling, and spillage (both related to the fuel pumps). The following are additional details concerning these emission points:

- Loading – Loading emissions occur when a cargo tank truck unloads gasoline to the storage tanks at the gasoline station. Storage tank vapors are emitted from the vent pipe during the initial fuel transfer period. These emissions are significantly reduced when the vent pipe includes a pressure/vacuum valve.
- Breathing – Gasoline vapors are emitted from the storage tank vent pipe due to temperature and pressure changes within the storage tank vapor space.
- Refueling – During the refueling process, gasoline vapors are emitted at the vehicle/nozzle interface.
- Spillage - Spillage emissions occur from the spills during vehicle fueling.

Non-criteria air pollutants or TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

DPM is the most complex of diesel emissions. Diesel particulates, as defined by most emission standards, are sampled from diluted and cooled exhaust gases. This definition includes both solids and liquid material that condenses during the dilution process. The basic fractions of DPM are elemental carbon, heavy hydrocarbons derived from the fuel and lubricating oil and hydrated sulfuric acid derived from the fuel sulfur. DPM contains a large portion of the polycyclic aromatic hydrocarbons (PAH) found in diesel exhaust. Diesel particulates include small nuclei mode particles of diameters below 0.04 μm and their agglomerates of diameters up to 1μm. Ambient exposures to diesel particulates in California are significant fractions of total TAC levels in the State.

The following presents a description, characteristics, and effects of the TACs which are of particular importance to the HHRA for this proposed project.

Diesel Particulate Matter

Diesel exhaust is a complex mixture of thousands of individual gaseous and particulate compounds emitted from diesel-fueled combustion engines. DPM is formed primarily through the incomplete combustion of diesel fuel. Particulate matter in diesel exhaust can be emitted from on- and off-road vehicles, stationary area sources, and stationary point sources. DPM is removed from the atmosphere through physical processes including atmospheric fall-out and washout by rain. Humans can be exposed to airborne DPM or via deposition on water, soil, and vegetation. Acute inhalation exposure to elevated DPM has shown increased symptoms of irritation, cough, phlegm, chronic bronchitis, and inhibited pulmonary function. The U.S EPA has concluded that diesel particulate matter is likely to be carcinogenic to humans by inhalation.

In August 1998, the California Air Resource Board (CARB) identified diesel PM as a HAP. The CARB developed *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines* and approved these documents on September 28, 2000. The documents represent proposals to reduce DPM emissions, with the goal of reducing emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed DPM filters and ultra-low-sulfur diesel fuel.

In December 2000, the EPA promulgated regulations requiring that the sulfur content in motor vehicle diesel fuel be reduced to less than 15 ppm by June 1, 2006. Control of DPM emissions focuses on two strategies, reducing the amount of sulfur in diesel fuel and developing filters for operating diesel engines to reduce the amount of particulate matter that is emitted. The EPA has also finalized a comprehensive national emissions control program, the 2007 Highway Diesel (HD 2007) program, which regulates highway heavy-duty vehicles and diesel fuel as a single system. Under the HD 2007 program, the EPA established new emission standards that would significantly reduce PM and NOx from highway heavy-duty vehicles.

In 2001, CARB assessed the state-wide health risks from exposure to diesel exhaust and to other toxic air contaminants. It is difficult to distinguish the health risks of diesel emissions from those of other air toxics, since diesel exhaust contains about 40 different TACs. The CARB study detected diesel exhaust by using ambient air carbon soot measurements as a surrogate for diesel emissions. The study reported that in 2000, the state-wide cancer risk from exposure to diesel exhaust was about 540 per million population as compared to a total risk for exposure to all ambient air toxics of 760 per million. This estimate, which accounts for about 70 percent of the total risk from TACs, included both urban and rural areas in the state. It can be considered as an average worst-case for the state, since it assumes constant exposure to outdoor concentrations of diesel exhaust and does not account for expected lower concentrations indoors, where most of time is spent.

Benzene

Benzene is a volatile, colorless, flammable liquid that has a sweet odor. It is a chemical intermediate in the synthesis of compounds such as plastics, resins, nylon, synthetic fibers, synthetic rubbers, lubricants, dyes, detergents, drugs, and pesticides. Major sources of atmospheric releases include vehicle exhaust emissions, evaporative gasoline fumes, emissions from vehicle service stations and industrial emissions. Other potential sources of atmospheric benzene include cigarette smoke and landfill emissions. High levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, etc. Again, none of these conditions are typically found in the outdoor environment. The U.S. EPA has classified benzene as a "known" human carcinogen.

1,3-butadiene

1,3-butadiene is a colorless gas. At room temperature, the gas has a gasoline-like odor. This pollutant is a byproduct of petroleum processing and is used in the production of synthetic rubber and plastics. It is also found in gasoline vapor, automobile exhaust, other fossil fuel combustion products and cigarette smoke. Inhalation is the primary pathway for humans. Breathing very high levels of 1,3-butadiene for a short time may cause central nervous system damage, blurred vision, nausea, fatigue, headache, decreased blood pressure and pulse rate, and unconsciousness. Breathing lower levels of this pollutant may cause irritation of the eyes, nose, and throat. However, neither of these conditions are typically found in the outdoor environment. The U.S. EPA has classified 1,3-butadiene as a "known" human carcinogen.

Formaldehyde

At room temperature, formaldehyde is a colorless, flammable gas that has a distinct, pungent smell. Formaldehyde is a product of incomplete combustion and is emitted into the air by burning wood, coal, kerosene, and natural gas, by automobiles and by cigarettes; it is also a naturally occurring substance. Formaldehyde can be released to soil, water, and air by industrial sources and can off-gas from materials made with it. Humans can be exposed to formaldehyde through inhalation of contaminated air and smog. Low levels of formaldehyde can cause irritation of the eyes, nose, throat, and skin. Some epidemiological studies found an increased incidence of nose and throat cancer in exposed individuals, whereas other studies could not confirm this finding. The U.S. EPA has classified formaldehyde as a "probable" human carcinogen.

Emissions Estimates

Vehicular emissions were computed using the CARB's emission factor model, EMFAC2007[1], to estimate on-road emissions of DPM. Ambient conditions assumed a temperature of 60ºF (although DPM emissions are not effected by ambient temperature), a humidity of 75 percent, and a vehicle speed of 10 and 25 mph along roadways and access areas and idling at the loading dock. DPM emission factors were assumed to be equal to PM2.5 emission factors produced by EMFAC2007.

Table 1
Vehicle Emission Factors

Year	Vehicle Type	Running (g/mile)	Running (g/mile)	Idling (g/hour)
2008	Light Duty Diesel Truck	0.099	0.0545	0.862
	Medium Duty Diesel Truck	0.556	0.307	0.935
	Heavy Duty Diesel Truck	1.85	0.710	2.06
2020	Light Duty Diesel Truck	0.060	0.033	0.753
	Medium Duty Diesel Truck	0.301	0.166	0.781

[1] California Air Resource Board, EMFAC2007, Version 2.3, November 1, 2006.

	Heavy Duty Diesel Truck	0.292	0.143	0.531
2030	Light Duty Diesel Truck	0.043	0.024	0.737
	Medium Duty Diesel Truck	0.237	0.131	0.744
	Heavy Duty Diesel Truck	0.089	0.066	0.177
2040	Light Duty Diesel Truck	0.036	0.020	0.735
	Medium Duty Diesel Truck	0.224	0.124	0.736
	Heavy Duty Diesel Truck	0.073	0.114	0.114

Source: CARB EMFAC2007.

Additionally, operation of TRU results in DPM emissions. Based on current emission factors of 0.76 grams per hp-hr, a typical engine size of 50 hp and a load factor of 0.28, the DPM emission for TRU was estimated at 10.6 grams per hour. CARB has recently adopted regulations for TRU, which would reduce DPM emissions from TRU in future years. For engines less than 25 hp, the regulated DPM emissions beginning in 2008 would be limited to 0.3 grams per hp-hr. For engines greater than 25 hp, the regulated DPM emissions would be 0.22 grams per hp-hr (3.08 grams per hour) in 2008 and the regulated DPM emissions would be 0.02 grams per hp-hr (0.28 grams per hour) in 2012.

Based on truck surveys performed at existing Wal-Mart stores[2] [3], typically the loading docks receive approximately 40 daily deliveries with a majority of the deliveries during two separate periods: between 3 a.m. and 6 a.m. and between 10 a.m. and 1 p.m. These delivery trucks ranged from 18-wheeled tractor trailers to 4-wheeled delivery trucks. Delivery hours were assumed to be unrestricted. Trucks were categorized using the Federal Highway Administration (FHWA) vehicle classification system for trucks. Approximately 50 percent of the deliveries were heavy-duty trucks, 40 percent were medium-duty trucks, and 10 percent were light-duty trucks. Approximately 15 percent of the trucks included TRU, mostly associated with medium and heavy duty trucks.

Scenario 6B of the California Air Pollution Control Officers Association (CAPCOA) *Air Toxics "Hot Spots" Program Gasoline Service Station Industry-wide Risk Assessment Guidelines* (November 1997) was used to estimate TACs emissions that would result from the proposed gasoline station. The calculations are based on maximum hourly gasoline throughout and a typical annual gasoline throughput based on maximum vehicle volume and number of fuel pumps with underground storage tanks and phase 2 vapor recovery systems, 90 percent overall control efficiency.

Speciation profiles for gasoline was developed from the CARB *Speciation Profiles and Size Fractions* (#882, dated December, 2000.). Speciation profiles are the fraction of specific TACs within VOC emissions. For example, benzene is estimated to be 2.67 percent of VOC emissions from gasoline fuel dispensing operations.

Exposure Assessment

Dispersion is the process by which atmospheric pollutants disseminate due to wind and vertical stability. The health risk increments from the proposed project were estimated based on the toxic potency factor for DPM and other TACs and the dispersion modeling results.

Dispersion modeling impacts were predicted to document the contribution of DPM and TACs at the nearby receptors. The contribution of project trucks to DPM was estimated using the U.S. EPA dispersion model Industrial Source Complex-3 (ISC3). The ISC3 dispersion model (Version 02035) was used for the modeling analysis. ISC3 is the U.S. EPA referred dispersion model for

[2] City of Stockton Community Development Department, Weston Ranch Towne Center Project, December 2006.

[3] LSA, Fairfield Wal Mart Supercenter EIR, March 2006.

general industrial purposes. The ISC3 model is the appropriate model for this analysis based on the coverage of simple, intermediate, and complex terrain. It also predicts both short-term and long-term (annual) average concentrations. The model was executed using the regulatory default options (stack-tip downwash, buoyancy-induced dispersion, final plume rise), default wind speed profile categories, default potential temperature gradients, and no pollutant decay.

Dispersion modeling uses hourly averaged meteorological data, terrain elevation data, and emissions and source release data to compute downwind pollutant concentrations over averaging periods ranging from one hour to one year. The modeling methodology is consistent with procedures documented in the U.S. EPA *Guideline on Air Quality Models* and BAAQMD's *Assessing the Air Quality Impact of Projects and Plans (December 1999).*

Based on CAPCOA's *Air Toxics "Hot Spots" Program Gasoline Service Station Industry-wide Risk Assessment Guidelines* (November 1997) the loading and breathing emissions were treated as volume source and refueling and spillage emissions were treated as a point source (modeling release parameters contained in Appendix D of CAPCOA's guidelines).

Meteorological Data

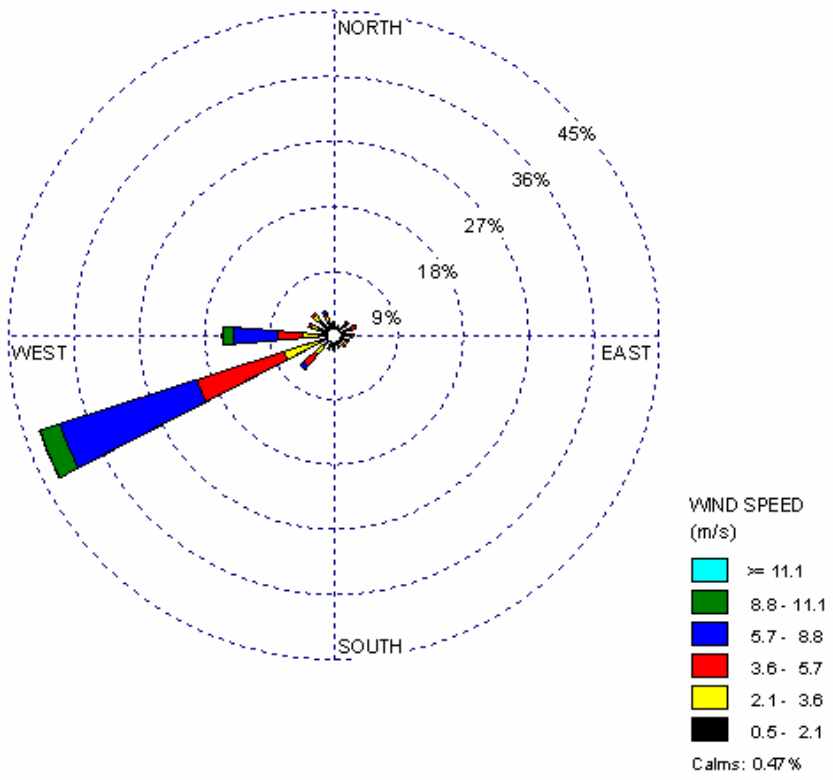
In general, the transport and concentration of pollutants from emissions sources are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability, which accounts for the effects of dispersion or mixing in the atmosphere.

Surface meteorological data from Suisun City, California, were used for the modeling analysis (http://ws1.baaqmd.gov/metdata/). Meteorological data were obtained from BAAQMD and used for modeling impacts for 1999 through 2003. The windrose (Figure 1) shows winds predominantly from the west-southwest with less than one percent calm winds. Secondly, the distribution of atmospheric stability includes approximately 62.1 percent of neutral stability ("D") and 8.6 percent of moderately stable ("F") conditions.

Exposure Assumptions

The exposure assumptions used to calculate health impacts include exposure frequency, exposure time, exposure duration and averaging time. Each land use classification considered in the HHRA has its own unique exposure assumptions. For example, the HHRA assumes a 70-year, 24-hour/day, 350 days/year exposure duration to calculate carcinogenic effects for residents. This exposure duration is equivalent to residents being present in their home seven days a week for 50 weeks/year (or about 96 percent of the time) with approximately 15 days spent away from home. Potential health impacts to an offsite worker will vary depending on the worker's schedule and the operating hours of the facility. Offsite workers are assumed to work a regular eight hours/day, five days/week, 49 weeks/year, over a 40-year schedule. School children exposure assumptions were based on eight hours/day, five days/week, 180 days/year over 14 years.[4]

[4] BAAQMD *Air Toxics NSR Program Health Risk Screening Analysis Guidelines*, June 2005.



Toxicity Assessment

Toxicity values used in this analysis were based on CalEPA Office of Environmental Health Hazard Assessment (OEHHA) guidance.[5] These toxicity values are for carcinogenic effects and chronic and acute health impacts.[6] Notably, the primary pathway for exposures was assumed to be inhalation and carcinogenic and non-carcinogenic emissions were evaluated separately (some TACs produce both carcinogenic and non-carcinogenic effects). The toxicity values used in this evaluation are based on chronic (long-term) effects and acute (short-term) toxicity.

Of important note, currently, CARB does not have certified emission factors or an analytical test method for acrolein. Therefore, since the appropriate tools needed to implement and enforce acrolein emission limits are not available, the BAAQMD will not conduct a HRA for emissions of acrolein. In addition, due to the significant uncertainty in the derivation, OEHHA is currently re-evaluating the acute effects for acrolein. When the necessary tools are developed, the BAAQMD will re-evaluate this specific evaluation procedure and the HRA guidelines will be revised.

Risk Characterization

The BAAQMD has a significance threshold for health risk exposure to diesel emissions of 10 cancers per million populations for 70-year exposure. Accordingly, CEQA Guidelines indicate the primary concern from diesel engine exhaust emissions is a potential long-term health risk to

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[5] *Air Toxics Hot Spots Program Risk Assessment Guidelines*, Parts I-IV and Appendices, California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, 1997 - 2003.

[6] CalEPA Office of Environmental Health Hazard Assessment (OEHHA), Toxicity Criteria Database, http://www.oehha.ca.gov/risk/ChemicalDB/.

sensitive receptors; some TACs associated with the fuel dispensing operations have acute (short-term) as well as chronic effects.

The cancer risk is the probability of an individual developing cancer as a result of exposure to DPM and other TACs. The cancer risks are assumed to occur exclusively through the inhalation pathway. The cancer risk based on a one-year exposure can be estimated by utilizing the cancer potency factor (mg/kg-day), the annual average concentration ($\mu g/m^3$), and the lifetime exposure adjustment.

Based on diesel truck engine and truck TRU activity at an existing Wal-Mart Supercenter, the annual DPM concentrations would be greatest (0.0107 $\mu g/m^3$) to the north of the proposed Wal-Mart Supercenter, along the site boundary, south of Peterson Road within the Quail Glen Subdivision. These DPM concentrations equate to health risks that are less than 10 cancers per million at locations of existing or potential residences near the project site (the maximum cancer risk was estimated at 4.4 cancers per million).

Based on expected fuel dispensing operations at the proposed Wal-Mart Supercenter, the TAC concentrations would be greatest to the southwest of the proposed Wal-Mart Supercenter, along the site boundary, west of Highway 12 within the Lawler Ranch Subdivision. These TAC concentrations equate to health risks that are less than 10 cancers per million at locations of existing or potential residences near the project site (the maximum cancer risk was estimated at 3.0 cancers per million). TAC emissions of benzene and 1,3-butadiene represent the majority of the cancer risk contribution. Given the typical wind pattern and the layout of the proposed project, the impacts of DPM from the loading docks and TAC from the service station do not largely overlap. The maximum total incremental cancer risk from the loading docks and the service station would be 4.6 cancers per million.

The maximum incremental cancer risk of 4.6 cancers per million is relatively small compared with the overall cancer incidence of 200,000 to 250,000 per million in the United States. This would be a less than significant impact.

The Hazard Index is an expression used for the potential for non-cancer health effects. The relationship for the non-cancer health effects is given by the annual concentration ($\mu g/m^3$) and the Reference Exposure Level ($\mu g/m^3$).

The Hazard Index is an expression used for the potential for non-cancer health effects. The BAAQMD has established a significance threshold for non-cancer health risk based on concentrations of TACs that would result in a Hazard Index greater than 1.0. Based on the modeling analysis of diesel truck engine and truck TRU activity and service station, the non-cancer health risks are well below the Hazard Index of 1.0 at all receptors. This would be a less-than significant impact.

Gas Station Summary

ROG Emissions from Underground Gasoline Tanks

Tank Number	Tank Capacity (gal)	Throughput (gal/hr)	Throughput (gal/yr)	Emission Rate [1] ($lb/10^3$ gal gas)	Emission Rate [2] ($lb/10^3$ gal gas)	ROG Emissions (lb/hr)	ROG Emissions (lb/yr)	ROG Emissions (ton/yr)	ROG Emissions (lbs/d)
T12	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028	0.15
T34	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028	0.15
T56	10,000	107	511,584	0.084	0.025	0.012	55.8	0.028	0.15
Total	**30,000**	**320**	**1,534,752**	0.084		**0.027**	**128.9**	**0.064**	**0.35**
Total	**30,000**	**320**	**1,534,752**		0.025	**0.008**	**38.4**	**0.019**	**0.11**
					TOTAL	***0.035***	***167.3***	***0.084***	***0.46***

[1] Includes emissions from tank breathing and emptying as well as vapor loss between the tank and the gas pump

[2] Emissions from balanced submerged filling underground tank

ROG Emissions from Fuel Dispensing & Spillage

Throughput (gal/hr)	Throughput (gal/yr)	Emission Factor (lb ROG 103/gal)		ROG Emissions (lb/hr)	ROG Emissions (ton/yr)	ROG Emissions (lbs/d)
320	1,534,752	0.74	Refueling	0.237	0.568	3.11
320	1,534,752	0.42	Spillage	0.134	0.322	1.77
			TOTAL	***0.371***	***0.890***	***4.88***

Assumptions - Annual

6 islands
33 vehicles per AM Hour
40 vehicles per PM Hour
526 typical vehicles per day
8 gallons per trip
1,534,752 gallons per year
4,205 Avg gal/day

Prepared by Joe O'Bannon 8/24/2007

Global Climate Change Analysis
Walters Road West Project
Suisun City, Solano County, California

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ABBREVIATIONS

Abbreviation	Meaning
AB-32	Assembly Bill 32 - California Global Warming Solutions Act of 2006
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CAT	Climate Action Team
CCAR	California Climate Action Registry
CCC	California Commerce Center
CEC	California Energy Commission
EPA	Environmental Protection Agency
GHG	Greenhouse Gases
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
NIOSH	National Institute for Occupational Safety and Health
OHSA	Office of Health and Safety Administration
Tg CO_2 Eq	Teragrams of Carbon Dioxide Equivalents
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	Emissions model for land use development projects
WH	White House

SECTION 1:
INTRODUCTION

1.1 - Purpose

The purpose of this document is to characterize and quantify the global climate change resulting from the construction and operation of the proposed Walters Road West Project to be located in the City of Suisun City, California. The operation of the proposed project will result in a long-term increase in the number of vehicles in the area, particularly diesel-fueled vehicles and increased use of natural gas for combustion. Using the methods and data described below, the global climate change impacts were estimated for the project and then compared to strategies proposed by the California Environmental Protection Agency Climate Action Team that will reduce California's emissions to the levels proposed in Executive Order S-3-05.

1.2 - Methods of Analysis

This report was prepared using the most current available scientific standards and factors from State, federal, and international sources. An individual project cannot generate enough greenhouse gas emissions to influence global climate change. This analysis assumes that the individual project contributes to global climate change through incremental contribution of greenhouse gases combined with the cumulative increase of all other sources of greenhouse gases, which when taken together form global climate change impacts. This analysis reviews the project's potential generation of greenhouse gases and its incremental contribution to the cumulative effect of the greenhouse gases. A two-tiered approach is used: (1) project inventory of greenhouse gas emissions and (2) project compliance with the emission reduction strategies contained in the California Climate Action Team's Report to the Governor.

1.3 - Executive Summary

1.3.1 - Findings

The primary greenhouse gas generated by the project would be carbon dioxide. At buildout, total unmitigated greenhouse gas generated by the project would be 0.0185 teragrams of carbon dioxide equivalents (Tg CO_2 Eq) per year. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess greenhouse gas emissions because it gives weight to the global warming potential (GWP) of each greenhouse gas emitted. A detailed explanation of the GWP for each greenhouse gas and how greenhouse gases are evaluated can be found in Section 2. Details of how project-generated emissions were determined are shown in Section 4.

The analysis found that with mitigation incorporated into the project, the project's incremental contribution to Global Climate Change Impacts are less than significant because the project will be

consistent with California's greenhouse gas emission reduction strategies. Details of the significance determination are shown in Section 5.

Site design features and mitigation measures were incorporated into the project that will reduce greenhouse gases and/or increase the energy efficiency of the project and are relevant to this analysis. Section 1.3.2 summarizes some of the relevant design and mitigation required of this project.

1.3.2 - Project Mitigation

A number of emission mitigation measures have been identified for the project and will be implemented according to the draft EIR for the project to ensure that project impacts are minimized to the extent possible and are below applicable standards.

The following measures have been identified for this project regarding air quality impacts:

AIR 3 The City shall require the construction contractor to use construction equipment operated on alternative fuels or electrical equipment, and/or retrofit engines in construction equipment to minimize exhaust emissions, to the extent that equipment is available and cost-effective.

AIR 4 The project shall implement the following measures from the BAAQMD CEQA Guidelines:

- Rideshare Measures
  - Implement carpool/vanpool program such as carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles
- Transit Measures
  - Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters
  - Design and locate buildings to facilitate transit access, such as locating building entrances near transit stops and eliminating building setbacks
- Service Measures
  - Provide onsite shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, and convenience market
  - Provide onsite childcare, or contribute to offsite childcare within walking distance
  - Provide shuttle service to transit stations/multimodal centers
- Parking Measures

- Provide preferential parking (e.g., near building entrance and sheltered area) for carpool and vanpool vehicles

- Bicycle and Pedestrian Measures
  - Provide secure, weather-protected bicycle parking for employees
  - Provide safe, direct access for bicyclists to adjacent bicycle routes
  - Provide showers and lockers for employees bicycling or walking to work
  - Provide secure short-term bicycle parking for retail customers and other non-commute trips
  - Provide direct, safe, and attractive pedestrian access from project to transit stops and adjacent development

TRANS 8 Prior to the issuance of occupancy permits, the applicant shall install a bus stop suitable for use by Fairfield-Suisun Transit buses within the project or along the project frontage. The bus stop shall include a shelter, trash receptacles, lighting, and landscaping and designed in accordance with FST standards.

GW 1 All dock and delivery areas shall be posted with signs informing truck drivers of the California Air Resources Board (CARB) regulations, including the following:

A. Truck drivers shall turn off engines when not in use.
B. All diesel delivery trucks servicing the project shall not idle more than 5 minutes per truck trip per day.
C. Restrict idling emissions by using auxiliary power units and electrification in the docking areas if provided by the operator.

GW 2 Wal-Mart shall join the California Climate Action Registry (www.climateregistry.org) to report a minimum of one year of greenhouse gas emissions. This measure shall be fulfilled prior to one year after project approval.

1.3.3 - Significance after Mitigation

Project-Specific

- An individual project cannot generate enough greenhouse gas emissions to significantly influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases, which when taken together form global climate change impacts. – Less Than Significant Impact

Cumulative

- The project is consistent with the strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05. – Less Than Significant Impact

SECTION 2:
SETTING

2.1 - Project Location and Surrounding Land Use

The proposed Walters Road West Project is located in Suisun City, Solano County (Exhibit 3-1). The project area consists of an approximately 20.8-acre triangular-shaped lot located north of the intersection of State Route 12 (SR-12) and Walters Road (Assessors Parcel Number 0173-280-440). The sited is bounded by Petersen Road (north), Walters Road (east), SR-12 (south).

The project site is an undeveloped parcel containing non-native grassland and a drainage ditch. The site is designated for General by City of Suisun City General Plan and zoned General Commercial (GC) by the Suisun City Zoning Ordinance. The project site is within Zone C of the Travis Air Force Base Land Use Compatibility Plan. Surrounding uses include the Quail Glen single-family residential subdivision (north), a gas station and convenience store (northeast), grazing land (east), and the Lawler Ranch single-family residential subdivision (south). The project is located approximately 0.75 mile southwest of Travis Air Force Base.

2.2 - Project Description

The project includes approximately 227,019 square-feet of commercial uses on the project site. The plan includes the construction of a new commercial retail shopping center with associated utilities, parking, and landscaping. The three project components include a Wal-Mart Supercenter, a sit-down restaurant, and a gas station with a convenience store and car wash.

2.3 - Regulatory Setting

Global climate change alleged to be caused by greenhouse gases (GHG) is currently one of the most important and widely debated scientific, economic, and political issues in the United States. Climate change is a shift in the "average weather" that a given region experiences. This is measured by changes in temperature, wind patterns, precipitation, and storms. Global climate change means change in the climate of the earth as a whole. It can occur naturally, as in the case of an ice age. Some data show that the climate change occurring today differs from previous climate changes in both rate and magnitude, and that man-made GHG emissions are creating current changes in the global climate.

Gases that trap heat in the atmosphere are often called greenhouse gases. The Earth's surface temperature would be about 61° F colder than it is now if it were not for the natural heat trapping effect of greenhouse gases. The increased accumulation of these gases in the earth's atmosphere over the last 200 years is considered the cause of the observed increase in the earth's temperature (global warming). Greenhouse gases consist of water vapor, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Some greenhouse gases such as carbon dioxide are emitted to the atmosphere through natural processes and as well as human activities. Other greenhouse gases (e.g., fluorinated gases) are created and emitted solely through human activities.

2.3.1 - Regulation

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling greenhouse gas emissions. 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 (2005 for methyl chloroform).

California Code of Regulations Title 24 Part 6, enacted in 1978, established Energy Efficiency Standards for residential and nonresidential buildings in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest amendments were made in October 2005. According to the California Energy Commission (CEC), since the

energy efficiency standards went into effect in 1978, it is estimated that Californian residential and nonresidential consumers have reduced their utility bills by at least $15.8 billion. The CEC further estimates that by 2011, residential and nonresidential consumers will save an additional $43 billon in energy savings. (CEC 2007)

In 2005, the CEC adopted new energy efficiency standards. All projects that apply for a building permit on or after October 2005 must adhere to the new 2005 standards (CEC 2005). A copy of the 2005 Energy Efficiency Standards is not included in the appendices to this DEIR but may be reviewed online at www.energy.ca.gov/title24/2005standards/index/html. The 2005 Energy Efficiency Standards may also be reviewed at the Energy Efficiency Division, California Energy Commission, 1516 Ninth Street, MS-29, Sacramento, CA 95814-5512. According to the CEC, reducing energy use has been a benefit to all. Building owners save money, Californians have a more secure and healthy economy, the environment is less negatively impacted, and our electrical system can operate in a more stable state. The 2005 Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 478 gigawatt-hours per year (GWh/y) and reduce the 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 and 0.5 million therms. Additional savings result from the application of the Standards on building alterations. In particular, requirements for cool roofs, lighting, and air distribution ducts are expected to save about 175 GWh/y of electricity. These savings are cumulative, doubling in two years, tripling in three, etc. These energy efficiency measures reduce the amount of electricity and heating supplies needed to service the project.

California Assembly Bill 1493 (Pavley), enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB will apply to 2009 and later model-year vehicles. CARB estimates that the regulation will reduce climate change emissions from light duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030 (CARB 2004).

The science of global climate change is evolving and remains subject to extensive debate and uncertainties. During the past five years, the United States government has allocated over $29 billion for scientific research into global climate change and for climate change-related programs (WH 2007). Currently, because of perceived scientific debate and uncertainties, and because of articulated regulatory impediments, the U. S. Environmental Protection Agency (EPA) does not regulate so-called greenhouse gas pollutants resulting from motor vehicle emissions, those pollutants that are alleged to contribute significantly to global warming. However, in Massachusetts v. EPA, the Supreme Court held that the Clean Air Act did give the EPA the authority to regulate greenhouse gas emissions from vehicles.

Notwithstanding the wide-scale lack of EPA regulation of greenhouse gas emissions, in 2006, the California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve greenhouse gas emissions equivalent to statewide levels in 1990 by 2020. On or before June 30, 2007, CARB is required to publish a list of discrete greenhouse gas emission reduction measures that can be implemented. Emission reductions shall include carbon sequestration projects and best management practices that are technologically feasible and cost-effective.

In 2005, the BAAQMD has created a Climate Protection Program, which is intended to integrate climate protection activities into existing District programs. In addition, the District's climate protection program emphasizes collaboration with ongoing climate protection efforts at the local and State level, public education and outreach, and technical assistance to cities and counties. The core BAAQMD initiatives include:

- Integrating climate protection into current District functions
- Evaluating and implementing measures to reduce electricity and fuel consumption and, therefore, greenhouse gas emissions associated with District activities
- A Climate Protection Grant Program for climate protection activities in the Bay Area
- A region-wide study identifying and evaluating potential greenhouse gas emission control options for application at stationary sources in the Bay Area region in California
- A District-wide Source Inventory of Bay Area Greenhouse Gas Emissions
- Promotion of energy efficiency including Stationary Source Measure 15
- Developing a K-12 climate protection curriculum

While neither the California Appendix G Guidelines, nor any judicial decision, CEQA regulation, or statute require an evaluation of a project's impact on greenhouse gases, consistent with the public policy rationale underlying AB 32, this report does, in fact, fully analyze the project's impacts on greenhouse gas emissions. As defined under AB 32, greenhouse gas emissions include the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

2.3.2 - Global Warming Potential

Greenhouse gases have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas…" (EPA 2006d). One teragram of carbon dioxide equivalent (Tg CO_2 Eq) is essentially the emissions of the gas multiplied by the GWP. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess emissions because it gives weight to the GWP of the gas.

A summary of the atmospheric lifetime and GWP of selected gases is summarized in Table 2-1. As shown in the table, GWP ranges from 1 to 23,900.

Table 2-1: Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12 ± 3	21
Nitrous Oxide (N_2O)	120	310
HFC-23	264	11,700
HFC-134a	14.6	1300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF_4)	50,000	6,500
PFC: Hexafluoroethane (C_2F_6)	10,000	9,200
Sulfur Hexafluoride (SF_6)	3,200	23,900
Source: EPA 2006k		

2.3.3 - Inventories

An analysis of data, compiled by the United Nations Framework Convention on Climate Change (UNFCCC), indicates that in 2004, total GHG emissions were 20,135 Tg CO_2 Eq, excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). In 2004, the U.S. contributed the most GHG emissions (35 percent of global emissions). In 2004, in the U.S., total GHG emissions were 7074.4 Tg CO_2 Eq, which is an increase of 15.8 percent from 1990 emissions (EPA 2006d). In 2005, total U.S. GHG emissions were 7,260.4 Tg CO2 Eq (EPA 2007). Overall, total U.S. emissions have risen by 16.3 percent from 1990 to 2005, while the U.S. gross domestic product has increased by 55 percent over the same period (EPA 2007). Emissions rose from 2004 to 2005, increasing by 0.8 percent (56.7 Tg CO2 Eq). The main causes of the increase are (1) strong economic growth in 2005, leading to increased demand for electricity and (2) an increase in the demand for electricity, due to warmer summer conditions (EPA 2007). However, a decrease in demand for fuels that is due to warmer winter conditions and higher fuel prices moderated the increase in emissions (EPA 2007).

California is a substantial contributor of global greenhouse gases, as it is the second largest contributor in the U.S. and the sixteenth largest in the world (CEC 2006). During 1990 to 2003, California's gross state product grew 83 percent, while GHG emissions grew 12 percent. While California has a high amount of GHG emissions, it has low emissions per capita. In 2004, California produced 492 Tg CO_2 Eq (CEC 2006), which is approximately 7 percent of U.S. emissions. The major source of GHG in California is transportation, contributing 41 percent of the State's total GHG

emissions (CEC 2006). Electricity generation is the second largest generator, contributing 22 percent of the State's GHG emissions.

Emissions from fuel use in the commercial and residential sectors in California decreased 9.7 percent over the 1990 to 2004 period (CEC 2006). According to the CEC, the decrease in greenhouse gases demonstrates the efficacy of energy conservation in buildings (Title 24 requirements) and appliances. The new 2005 Title 24 Standards will further reduce greenhouse gas emissions. The decrease in greenhouse gases attributed to these sources is even more substantial when the population increase in California is considered.

The project is in the San Francisco Bay Area Air Basin (Air Basin). The air district responsible for the Air Basin is the Bay Area Air Quality Management District (BAAQMD), which published an inventory that reports direct greenhouse gas emissions from sources within the San Francisco Bay Area Air Basin for the year 2002 (BAAQMD 2006). The report does not include indirect emissions, for example, a source using electricity has no direct emissions because emissions are emitted at the power plant. Table 2-2 shows the 2002 Tg CO_2 Eq in the Bay Area.

Table 2-2: 2002 CO_2-Equivalent Emissions by Pollutant in the Bay Area

Pollutant	Percentage	Tg CO_2 Eq
Carbon Dioxide (CO_2)	89.9	76.79
Methane (CH_4)	4.5	3.83
Nitrous Oxide (N_2O)	5.0	4.26
HFC, PFC, SF_6	0.6	0.51
Total	**100.0**	**85.40**
Source: BAAQMD, 2006		

2.3.4 - Health Effects

The potential health effects from global climate change may be from temperature increases, climate-sensitive diseases, extreme events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and fewer extreme cold spells. Those living in warmer climates are likely to experience more stress- and heat-related problems. Heat-related problems include heat rash and heat stroke. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Those diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture, which would have negative human health consequences, including the spreading of disease and death. Global warming may also contribute to air quality problems from increased frequency of smog and particulate air pollution (EPA 2006a).

Water Vapor

Description and Physical Properties: Water vapor (H_2O) is the most abundant, important, and variable greenhouse gas in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization (EPA 2006). The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to hold more water when it is warmer), leading to more water vapor in the atmosphere. As a greenhouse gas, the higher concentration of water vapor is able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor, and so on. This is referred to as a positive feedback loop. The extent to which this positive feedback loop will continue is unknown, as there are dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation, thus allowing less energy to reach the Earth's surface and heat it up.

Adverse Health Effects: There are no direct adverse health effects from water vapor. However, when some pollutants come in contact with water vapor, they can dissolve, and then the water vapor can be a transport mechanism to enter the human body.

Sources: The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.

Carbon Dioxide

Description and Physical Properties: Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas.

Adverse Health Effects: Outdoor levels of carbon dioxide are not high enough to result in negative health effects. Current concentrations of carbon dioxide in the ambient air are about 370 parts per million (ppm). The National Institute for Occupational Safety and Health (NIOSH) reference exposure level is 5,000 ppm, averaged over 10 hours in a 40-hour workweek. The short-term reference exposure level is 30,000 ppm, averaged over 15 minutes. At those levels, potential health problems are headache, dizziness, restlessness, paresthesia; dyspnea (breathing difficulty); sweating, malaise (vague feeling of discomfort); increased heart rate, cardiac output, blood pressure; coma; asphyxia; and/or convulsions (NIOSH 2005).

Sources: Carbon dioxide is emitted from natural and anthropocentric (human) sources. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. In 1999, the concentration of carbon dioxide in the atmosphere was 367 ppm, which is an increase from the concentration during the Industrial Era (1750) of 280 ± 10 ppm (IPCC 2001). The concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (IPCC 2001). Some predict that this will result in an average global temperature rise of at least 2° Celsius (IPCC 2001).

Sinks: Sinks are mechanisms by which a gas or aerosol is taken out of the atmosphere. Carbon dioxide is removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.

Methane

Description and Physical Properties: Methane (CH_4) is an extremely effective absorber of radiation, though its atmospheric concentration is less than carbon dioxide and its lifetime in the atmosphere is brief (10–12 years), compared twith other greenhouse gases.

Adverse Health Effects: Methane is not toxic. The immediate health hazard is that it may cause burns if it ignites. It is highly flammable and may form explosive mixtures with air. Methane is violently reactive with oxidizers, halogens, and some halogen-containing compounds. Methane is also an asphyxiant and may displace oxygen in an enclosed space (OHSA 2003).

Sources: Methane has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen (anaerobic) environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane (EPA 2006). Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide

Description and Physical Properties: Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas.

Adverse Health Effects: Nitrous oxide can cause dizziness, euphoria, and—sometimes—slight hallucinations. In small doses, it is harmless. In some cases, heavy and extended use can cause Olney's Lesions (brain damage).

Sources: Concentrations of nitrous oxide began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 ppb. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric

acid production, and vehicle emissions) also contribute to its atmospheric load (EPA 2006). It is used as an aerosol spray propellant, e.g., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars.

Sinks: Nitrous oxide can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction.

Chlorofluorocarbons

Description and Physical Properties: Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface).

Adverse Health Effects: CFCs are no longer being used; therefore, it is not likely that health effects would be experienced. Nonetheless, in confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation (NIOSH 1989).

Sources: CFCs have no natural source, but they were first synthesized in 1928. They were used for refrigerants, aerosol propellants, and cleaning solvents. Because of the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steadys or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years (NOAA 2005).

Hydrofluorocarbons

Description and Physical Properties: Hydrofluorocarbons (HFCs) are synthetic man-made chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2) (EPA 2006b). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing, due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a are now about 10 parts per trillion (ppt) each (EPA 2006b). Concentrations of HFC-152a are about 1 ppt.

Adverse Health Effects: Most HFCs do not have health effects associated with them. For example, 1,1-difluoroethane (HCFC-152A), does not have any adverse health effects (EPA 1994). However, HFC-134a has a chronic inhalation exposure of 80 milligrams per cubic meter (mg/m^3); the critical effect is Leydig cell hyperplasia (EPA 1995).

Sources: HFCs are man-made for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons

Description and Physical Properties: Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt (EPA 2006b).

Adverse Health Effects: High concentrations of CF_4 can cause confusion, dizziness, or headache and may cause effects on cardiovascular system, resulting in cardiac disorders (NIOSH 1997).

Sources: The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

Sulfur Hexafluoride

Description and Physical Properties: Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated: 23,900. Concentrations in the 1990s were about 4 ppt (EPA 2006b).

Adverse Health Effects: In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.

Sources: Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols

Description and Physical Properties: Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols.

Adverse Health Effects: Refer to health effects of particulate matter presented in the South Portion of Phase 4 - California Commerce Center Draft Supplemental Environmental Impact Report.

Sources: Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning/incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

SECTION 3:
SIGNIFICANCE THRESHOLDS

3.1 - Global Climate Change Threshold of Significance

Would the project contribute to global climate change? There are currently no adopted thresholds or guidance to assess the significance of this impact. Global climate change is an international phenomenon; the regulatory background and scientific data are changing rapidly.

The California Environmental Protection Agency (CalEPA) Climate Action Team (CAT) developed a report that "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006) needed to reduce activities that contribute to global climate change . There are no adopted thresholds to assess the significance of project impacts. The report indicates that the strategies will reduce California's emissions to the levels proposed in Executive Order S-3-05.

The California State Legislature adopted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires CARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that by 2020 would achieve a reduction in greenhouse gas emissions equivalent to the statewide inventory levels of 1990. On or before June 30, 2007, CARB is required to publish a list of discrete greenhouse gas emission reduction measures that can be implemented. On April 20, 2007, CARB published their proposed early actions (CARB 2007), which include discrete early action measures, additional greenhouse gas reduction strategies, and criteria and toxic control measures.

The basis for these greenhouse gas reduction goals that California has adopted into law is provided in the IPCC climate models that predict the climate stabilizing at approximately 2 degrees Celsius rise in average temperatures long-term

Given this information, it can be argued that the AB 32, Executive Order S-3-05, and the CAT report constitute substantial evidence as defined in CEQA that development projects need to reduce greenhouse gas emissions to the target levels by adopting the reduction measures in order to find that the project's incremental contribution to global climate change impacts are not significant.

If the project is not consistent with those strategies that the Lead Agency deems feasible, then a project could potentially be deemed to have a significant impact on global climate change.

SECTION 4:
GLOBAL CLIMATE CHANGE IMPACT ANALYSIS

Parts of the Earth's atmosphere act as an insulating blanket of just the right thickness, trapping sufficient solar energy to keep the global average temperature in a suitable range. The blanket is a collection of atmospheric gases called greenhouse gases (GHG), based on the idea that the gases also trap heat like the glass walls of a greenhouse. These gases—water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone, chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)—all act as effective global insulators, reflecting back to earth visible light and infrared radiation. (For a discussion on each of the greenhouse gases and the regulatory environment surrounding them, please refer to Section 2 – Setting.) Human activities such as producing electricity and driving vehicles have elevated the concentration of these gases in the atmosphere. Many scientists believe that this, in turn, is causing the Earth's temperature to rise, although other scientists disagree. A warmer Earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

4.1 - Project-Specific

An individual project cannot generate enough greenhouse gas emissions to significantly influence global climate change. The project participates in this potential impact by its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases, which when taken together form global climate change impacts.

4.2 - Cumulative

The following discussion reviews the project's potential generation of greenhouse gases and its incremental contribution to the cumulative effect of the greenhouse gases. A two-tiered approach is used, as follows: (1) project inventory of greenhouse gas emissions and (2) project compliance with the emission reduction strategies contained in the California Climate Action Team's Report to the Governor.

It should be noted that this is one of the first EIRs in the State of California to include an analysis of greenhouse gas emissions. This is likely due to the inherent global and international nature of greenhouse gas emissions and because vehicle emissions and other point sources are regulated primarily at the federal level.

4.2.1 - Greenhouse Gas Inventory

The emissions are estimated in tons per year, which are converted to teragrams of carbon dioxide equivalents (Tg CO_2 Eq) using the formula: Tg CO_2 Eq = (tons of gas) ÷ 1.12 (metric tons per ton) ×

(GWP) × (1,000,000). One Tg is equal to one million metric tons, and one metric ton is equal to 2.24 tons. The global warming potential (GWP) for the gases assessed is located in Table 2-1.

Note that emissions models such as EMFAC and URBEMIS evaluate aggregate emissions and do not demonstrate, with respect to a global impact, how much of these emissions are "new" emissions specifically attributable to the proposed project. For most projects, the main contribution of greenhouse gas emissions is from motor vehicles, but how much of those emissions are new is uncertain. New projects do not create new drivers. Some mixed use and transportation-oriented projects can actually reduce the number of vehicle miles traveled that a person drives; this reduction is not typically discussed in CEQA documents. Therefore, it is anticipated that the project will not substantially add to the global inventory of greenhouse gas emissions. Nevertheless, greenhouse gas emissions are estimated using procedures similar to those for criteria pollutants.

Carbon Dioxide: The project will generate emissions of carbon dioxide primarily in the form of vehicle exhaust and in the consumption of natural gas for heating from onsite combustion. Carbon dioxide emissions from vehicles were calculated using URBEMIS2002 assumptions and EMFAC2007 emission factors. Carbon dioxide emissions from natural gas combustion were generated from guidance as presented in the Climate Leaders Greenhouse Inventory Protocol (EPA 2004a). The carbon dioxide emissions are shown in Table 4-1. As shown in Table 4-1, at buildout, the project will emit 0.0177 Tg CO_2 Eq

Table 4-1: Carbon Dioxide Emissions

Emission Source	Carbon Dioxide Emissions
	2008
Vehicles (lbs/day)	107,165
Natural Gas Combustion (lbs/day)	2.4
Total (tons per year)	19,558
Total (Tg CO_2 Eq)	0.0177
Source: MBA 2007	

Methane: The project will generate some methane gas from vehicle emissions and natural gas combustion. Methane emissions from natural gas combustion were generated using guidance as presented in the Climate Leaders Greenhouse Inventory Protocol (EPA 2004a). Methane emissions from vehicles were estimated using EPA emission factors for on-highway vehicles (EPA 2004) and the same assumptions used to estimate criteria pollutants in URBEMIS2002. The emissions are shown in Table 4-2. As shown in the table, in 2008, emissions would be 9.10E-05 Tg CO_2 Eq

Table 4-2: Methane Emissions

Emission Source	Methane Emissions
	2008
Vehicles (lbs/day)	26.17
Natural Gas Combustion (lbs/day)	0.000216
Total (tons/year)	4.776
Total (Tg CO_2 Eq)	0.000091
Source: MBA 2007	

Nitrous Oxide: The project generates small amounts of nitrous oxide from vehicle emissions. Emissions from natural gas combustion were generated using guidance as presented in the Climate Leaders Greenhouse Inventory Protocol (EPA 2004a). Nitrous oxide from vehicles was estimated using EPA emission factors for on-highway vehicles (EPA 2004) and the same assumptions that were used to estimate criteria pollutants. The emissions are presented inTable 4-3. As shown in the table, in 2008 emissions would be 6.90E-04 Tg CO_2 Eq

Table 4-3: Nitrous Oxide Emissions

Emission Source	Nitrous Oxide Emissions
	2008
Vehicles (lbs/day)	13.44
Natural Gas Combustion (lbs/day)	0.00000433
Total (tons/year)	2.452
Total (Tg CO_2 Eq)	0.00069
Source: MBA 2007	

Water Vapor: The project does not contribute to this greenhouse gas because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks and not emissions from industrial and commercial activities.

Ozone: a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. According to CARB, it is difficult to make an accurate determination of the contribution of ozone precursors (NO_x and VOC) to global warming (CARB 2004a). Therefore, project emissions of ozone precursors would not significantly contribute to global climate change.

Chlorofluorocarbons: As mentioned previously, there is a ban on chlorofluorocarbons; therefore, the project will not generate emissions of these greenhouse gases and is not considered any further in this analysis.

Hydrofluorocarbons: The project may emit a small amount of HFC emissions from leakage and service of refrigeration and air conditioning equipment and from disposal at the end of the life of the equipment (EPA 2004b). However, the details regarding the refrigerant used and the capacity are unknown at this time.

Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit any of these greenhouse gases.

Inventory Summary: The primary greenhouse gas generated by the project would be carbon dioxide. At buildout, total unmitigated carbon dioxide equivalents would be 0.0185 Tg CO_2 Eq, which is 0.00376 percent of California's 2004 emissions (492 Tg CO_2 Eq) and 0.0218 percent of the Bay Area's 2002 emissions

SECTION 5:
MITIGATION MEASURES

Mitigation of global warming impacts is based on the project's consistency with the strategies proposed in California Environmental Protection Agency Climate Action Team's report (CAT 2006). If the project is consistent with those strategies that the Lead Agency deems are feasible, then a project could be deemed to have a less than significant impact on global climate change.

5.1 - Compliance with Strategies

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, GHG emission reduction targets as follows:

- By 2010, reduce GHG emissions to 2000 levels
- By 2020, reduce GHG emissions to 1990 levels
- By 2050, reduce GHG emissions to 80 percent below 1990 levels (CA 2005).

Some literature equates these reductions to 11 percent of the current GHG emissions by 2010 and 25 percent of the current GHG emissions by 2020.

AB-32 requires that by January 1, 2008, CARB shall determine what the statewide greenhouse gas emissions level was in 1990 and approve a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not been approved on this date, other publications indicate that levels varied from 425 to 468 Tg CO_2 Eq (CEC 2006). In 2004, the emissions were estimated at 492 Tg CO_2 Eq (CEC 2006).

The California Environmental Protection Agency prepared a Climate Action Team Report to Governor Schwarzenegger and the Legislature that "proposes a path to achieve the Governor's targets that will build on voluntary actions of California businesses, local government and community actions, and State incentive and regulatory programs" (CAT 2006). The report introduces strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05. This is the best information available at this time; it is unknown when and what will be published in the future.

Table 5-1 contains the CAT strategies that apply to the project. As shown in the table, the project complies with all feasible and applicable measures to bring California to the emission reduction targets. A summary of the mitigation and design features that comply with the voluntary emission reduction strategies follows.

Air Quality

MM AIR-3 encourages the use of alternative fuels or the use of particulate traps and low sulfur diesel.

MM AIR-4 requires the project to implement the following measures from the BAAQMD CEQA Guidelines:

- Rideshare Measures:
  - Implement carpool/vanpool program e.g., carpool ride matching for employees, assistance with vanpool formation, provision of vanpool vehicles, etc.
- Transit Measures:
  - Construct transit facilities such as bus turnouts/bus bulbs, benches, shelters, etc.
  - Design and locate buildings to facilitate transit access, e.g., locate building entrances near transit stops, eliminate building setbacks, etc.
- Service Measures:
  - Provide on-site shops and services for employees, such as cafeteria, bank/ATM, dry cleaners, convenience market, etc.
  - Provide on-site childcare, or contribute to off-site childcare within walking distance.
  - Provide shuttle service to transit stations/multimodal centers.
- Parking Measures
  - Provide preferential parking (e.g., near building entrance, sheltered area, etc.) for carpool and vanpool vehicles.
- Bicycle and Pedestrian Measures:
  - Provide secure, weather-protected bicycle parking for employees.
  - Provide safe, direct access for bicyclists to adjacent bicycle routes.
  - Provide showers and lockers for employees bicycling or walking to work.
  - Provide secure short-term bicycle parking for retail customers and other non-commute trips.
  - Provide direct, safe, attractive pedestrian access from project to transit stops and adjacent development.

The project will required to comply with the following rules, which would be required during operations:

- All diesel truck operators shall strictly abide by the applicable state law requirements for idling, as described in the airborne toxic control measure (CCR, Title 13, section 2485), which limits vehicles with gross vehicular weight ratings of more than 10,000 pounds to no more than five minutes of idling of the primary engine or the diesel-fueled auxiliary power system at any location. Secondly, TRU

operation shall be limited to no more than 120 minutes within the loading dock area or anywhere else on the project site. These limits shall be posted onsite. To support these requirements, proponent should consider installing overhead panels over the loading bays to provide shade for docked trucks in order to keep the truck cabin and trailer cooler and to decrease the need for truck idling to power air conditioning units. The panels shall be of sufficient size and oriented to shade the cabin during the summer season.

- All gasoline dispensing facilities shall meet the requirements of BAAQMD's Regulation 8, Rule 7 to limit emissions of organic compounds from gasoline dispensing facilities, including but not limited to using CARB-certified vapor recovery systems and spill boxes, and periodic testing of the equipment.

Public Transportation

MM TRANS 8 requires that, prior to the issuance of occupancy permits, the applicant shall install a bus stop suitable for use by Fairfield Suisun Transit buses within the project or along the project frontage. The bus stop shall include a shelter, trash receptacles, lighting, and landscaping and shall be designed in accordance with FST standards.

Recycling

Wal-Mart Stores, Inc.'s corporate policy requires that recycling facilities be provided at each store. The recycling facilities provided at the Wal-Mart Supercenter would exceed the County's solid waste requirements and would serve to divert waste that would otherwise be disposed of in the waste stream. The Wal-Mart Supercenter would be designed and equipped to recycle the following materials:

- Aluminum
- Plastic (including bottles, bags, garment bags, shrink wrap, and bubble pack)
- Glass
- Cardboard
- Motor oil
- Tires
- Auto batteries
- Vegetable oil
- Single-use cameras
- Electronic waste
- Silver (from photo processing)

Energy

The Wal-Mart Supercenter would contain a number of energy efficiency measures that are above and beyond 2005 Title 24 standards. When implemented in a Supercenter prototype, these additional energy efficiency features have been found to exceed the 2005 Title 24 standards by 9 percent. These include:

- T-8 fluorescent lamps and electronic ballasts, which are the most energy-efficient lighting systems available
- LED lighting in all internally illuminated building signage. LED technology is more than 70 percent more energy-efficient than fluorescent illumination.
- LED lighting will be installed in the frozen food cases and other refrigerated cases with doors. This lighting is motion-activated and turns itself off whenever it is not needed. This lighting is utilizes less than 50 percent of the energy used by traditional lighting, last 3 to 4 times longer, and contains no mercury.
- Daylighting systems that automatically and continuously dim all of the lights as the daylight contribution increases
- Nighttime lighting dimming, in which illumination is reduced to 65 percent during the late-night hours
- Super-high-efficiency packaged HVAC units that have an Energy Efficiency Ratio of 10.8 to 13.2. For the purposes of comparison, the industry standard is 9.0.
- An energy management system that is monitored and controlled from corporate headquarters in Bentonville, Arkansas. These systems allow the energy performance of each store to be continuously monitored and compared with other stores.
- Refrigeration waste-heat recapture systems that are used to heat water in the kitchen preparation areas.
- A white membrane roof with a high solar reflectivity that lowers the cooling load by approximately 10 percent.
- Occupancy sensors will be installed in non-sales areas in our new stores. These sensors detect activity in a room and automatically turn off the lights when the space is unoccupied.
- The restroom sinks will use sensor-activated, low-flow faucets. The low-flow faucets, because they regulate flow, reduce water usage by 84 percent, while the sensors, which regulate the amount of time the faucets flow, save approximately 20 percent in water usage over similar, manually operated systems.

The CAT Report indicates that reporting of emissions is critical to ensure that decision-making is based on real emissions and emission reductions. Currently, the method for reporting GHG emissions is served by the California Climate Action Registry (CCAR), which “is a non-profit public/private partnership that serves as a voluntary GHG registry to protect, encourage, and promote early actions to reduce GHG emissions” (CCAR 2006). Participants in the Registry calculate direct and indirect emissions of GHG. Direct emissions are associated with onsite combustion, manufacturing processes, and company-owned transportation fleets. Indirect emissions are associated with electricity and steam consumption.

Mitigation suggests that Wal-Mart be encouraged to join the Climate Action Team Registry. This would require that Wal-Mart compile GHG emissions inventories for all their own operations within the State of California. The emissions inventories may be one method that CARB uses to track GHG emissions as required by AB-32. The GHG emission inventory may also provide information to policy makers to ensure that decision-making is based on real data for the State of California.

The inventory as required by participants of the Registry differs from the inventory contained in this EIR. For example, companies would estimate emissions from its transportation fleet, electricity consumption, and natural gas combustion for facilities within the entire State of California. This EIR estimates emissions from motor vehicles accessing the project site and onsite natural gas combustion. The assumptions used in the emissions estimates are from URBEMIS and EPA methodologies. The Registry methods for calculating GHG emissions would differ from those in the EIR.

The project's increase in energy efficiency, programs designed to promote fuel conservation, and measures to reduce vehicle trips will reduce its contribution to greenhouse gases and global climate change.

In summary, with mitigation, the project's cumulative incremental contribution to greenhouse is less than significant.

5.1.1 - Mitigation Measures

Project-Specific

No mitigation measures are required.

Cumulative

Mitigation measures AIR 3, AIR 4, and TRANS 8 are required.

GW 1 All dock and delivery areas shall be posted with signs informing truck drivers of the California Air Resources Board (CARB) regulations including the following:

A. Truck drivers shall turn off engines when not in use.
B. All diesel delivery trucks servicing the project shall not idle more than five minutes per truck trip per day.
C. Restrict idling emissions by using auxiliary power units and electrification in the docking areas if provided by the operator.

GW 2 Wal-Mart shall join the California Climate Action Registry (www.climateregistry.org) to report a minimum of one year of greenhouse gas emissions. This measure shall be fulfilled prior to one year after project approval.

5.1.2 - Level of Significance after Mitigation

Project-Specific

Less than significant. Project emissions alone do not significantly impact global climate change.

Cumulative

Less than significant. The project is consistent with the strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05. Therefore, the project's incremental contribution to climate change impacts is less than significant.

Table 5-1: Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy and Description	Project Compliance
California Air Resources Board	
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 the ARB in September 2004.	Compliant. The vehicles that access the project will be in compliance with any vehicle standards that CARB proposes
Other Light Duty Vehicle Technology New standards would be adopted to phase in beginning in the 2017 model year	Not Applicable. The project does not manufacture or purchase light duty vehicles. However, future employee vehicles that access the project will be in compliance with any vehicle standards that CARB proposes
Diesel Anti-Idling In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	Compliant. Mitigation GW 1 ensures that diesel trucks accessing the project site will limit idling.
Hydrofluorocarbon Reduction (1) Ban retail sale of HFC in small cans. (2) Require that only low GWP refrigerants be used in new vehicular systems. (3) Adopt specifications for new commercial refrigeration. (4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs. (5) Enforce federal ban on releasing HFCs.	Compliant. This measure applies to consumer products. When CARB adopts regulations for these reduction measures, any products that the regulations apply to will comply with the measures.
Transportation Refrigeration Units (TRUs), Off-Road Electrification, Port Electrification Strategies to reduce emissions from TRUs, increase off-road electrification, and increase use of shore-side/port electrification.	Compliant. The project may have TRUs visiting the project site. Mitigation GW 1 represents an available and feasible strategy to reduce emissions from TRUs.
Manure Management Strategies to reduce volatile organic compounds from confined animal facilities.	Not Applicable

Strategy and Description	Project Compliance
Alternative Fuels: Biodiesel Blends CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.	Not Applicable. The use of alternative fuels would be applicable to some industrial and agricultural projects.
Alternative Fuels: Ethanol Increased use of ethanol fuel.	Not Applicable. The use of alternative fuels would be applicable to some industrial and agricultural projects.
Heavy-Duty Vehicle Emission Reduction Measures Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	Compliant. These are CARB-enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Reduced Venting and Leaks in Oil and Gas Systems Rule considered for adoption by the Air Pollution Control Districts for improved management practices.	Not Applicable.
Hydrogen Highway The California Hydrogen Highway Network (CA H_2 Net) is a State initiative to promote the use of hydrogen as a means of diversifying the sources of transportation energy.	Not Applicable.
Achieve 50 Percent Statewide Recycling Goal Achieving the State's 50 percent waste diversion mandate as established by the Integrated Waste Management Act of 1989, (AB 939, Sher, Chapter 1095, Statutes of 1989), will reduce climate change emissions associated with energy-intensive material extraction and production as well as methane emission from landfills. A diversion rate of 48 percent has been achieved on a statewide basis. Therefore, a 2 percent additional reduction is needed.	Compliant. Recycling facilities provided at the Wal-Mart Supercenter would exceed the County's solid waste requirements and would serve to divert waste that would otherwise be disposed of in the waste stream.
Landfill Methane Capture Install direct gas use or electricity projects at landfills to capture and use emitted methane.	Not Applicable. Methane capture would be applicable to projects involving landfills.

Strategy and Description	Project Compliance
Department of Forestry	
Urban Forestry A new statewide goal of planting 5 million trees in urban areas by 2020 would be achieved through the expansion of local urban forestry programs.	Compliant. The Conceptual Landscaping Plan includes drought-tolerant large trees, shrubs, and groundcover.
Reforestation Projects Reforestation projects focus on restoring native tree cover on lands that were previously forested and are now covered with other vegetative types.	Not Applicable
Department of Water Resources	
Water Use Efficiency Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce greenhouse gas emissions.	Compliant. The project requires restroom sinks to use sensor-activated, low-flow faucets. The low-flow faucets, because they regulate flow, reduce water usage by 84 percent, while the sensors, which regulate the amount of time the faucets flow, save approximately 20 percent in water usage over similar, manually operated systems. The Conceptual Landscaping Plan includes drought-tolerant large trees, shrubs, and groundcover.
Energy Commission (CEC)	

Strategy and Description	Project Compliance
Building Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the CEC to adopt and periodically update its building energy efficiency standards (that apply to newly constructed buildings and additions to and alterations to existing buildings).	Compliant. The proposed project will exceed the 2005 Title 24 standards for building construction including exterior lighting requirements. Some of the additional energy efficiency features to be designed into the buildings include T-8 fluorescent lamps and electronic ballasts; LED lighting in all internally illuminated building signage; LED lighting in the frozen food cases and other refrigerated cases with doors; daylighting systems that automatically and continuously dim all of the lights as the daylight contribution increases; nighttime lighting dimming, in which illumination is reduced to 65 percent during the late-night hours; super-high-efficiency packaged HVAC units that have an Energy Efficiency Ratio of 10.8 to 13.2; an energy management system that is monitored and controlled from corporate headquarters in Bentonville, Arkansas; refrigeration waste-heat recapture systems that are used to heat water in the kitchen preparation areas; a white membrane roof with a high solar reflectivity; and occupancy sensors in non-sales areas.
Appliance Energy Efficiency Standards in Place and in Progress Public Resources Code 25402 authorizes the Energy Commission to adopt and periodically update its appliance energy efficiency standards (that apply to devices and equipment using energy that are sold or offered for sale in California).	Compliant. Appliances that are purchased for the project will be consistent with existing energy efficiency standards.
Cement Manufacturing Cost-effective reductions to reduce energy consumption and to lower carbon dioxide emissions in the cement industry.	Not Applicable. Features to reduce emissions would be applicable to projects involving cement manufacturing.
Municipal Utility Strategies Includes energy efficiency programs, renewable portfolio standard, combined heat and power, and transitioning away from carbon-intensive generation.	Not Applicable.

Strategy and Description	Project Compliance
Alternative Fuels: Non-Petroleum Fuels Increasing the use of non-petroleum fuels in California's transportation sector, as recommended in the CEC's 2003 and 2005 Integrated Energy Policy Reports.	Not Applicable.
Business Transportation and Housing	
Smart Land Use and Intelligent Transportation Systems (ITS) Smart land use strategies encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. ITS is the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods, and services. Governor Schwarzenegger is finalizing a comprehensive 10-year strategic growth plan with the intent of developing ways to promote, through State investments, incentives and technical assistance, land use, and technology strategies that provide for a prosperous economy, social equity, and a quality environment. Smart land use, demand management, ITS, and value pricing are critical elements in this plan for improving mobility and transportation efficiency. Specific strategies include promoting jobs/housing proximity and transit-oriented development; encouraging high-density residential/commercial development along transit/rail corridor; valuing and congestion pricing; implementing intelligent transportation systems, traveler information/traffic control, and incident management; accelerating the development of broadband infrastructure; and comprehensive, integrated, multimodal/intermodal transportation planning.	Compliant. The proposed project locates retail next to residential land uses, which is considered smart land use. Because the project is locating retail next to residential, the project is potentially reducing the number of vehicle miles traveled. In addition, the project is located on a transit route, which has the potential to reduce trips as well. The proposed project provides goods to those located near the project site, thereby improving the efficiency of goods movement.
Measures to Improve Transportation Energy Efficiency Builds on current efforts to provide a framework for expanded and new initiatives, including incentives, tools, and information that advance cleaner transportation and reduce climate change emissions.	Compliant. The proposed project promotes fuel conservation through design features, which promote pedestrian traffic, and programs that encourage employee carpooling and public transportation use.

Strategy and Description	Project Compliance
Department of Food and Agriculture	
Enteric Fermentation Cattle emit methane from digestion processes. Changes in diet could result in a reduction in emissions.	Not Applicable.
State and Consumer Services Agency	
Green Buildings Initiative Green Building Executive Order, S-20-04 (CA 2004), sets a goal of reducing energy use in public and private buildings by 20 percent by the year 2015, as compared with 2003 levels. The Executive Order and related action plan spell out specific actions State agencies are to take with State-owned and -leased buildings. The order and plan also discuss various strategies and incentives to encourage private building owners and operators to achieve the 20 percent target.	Compliant. As discussed above, the project is initiating energy efficiency insulation measures that will exceed the 2005 Title 24 standards for building construction, including exterior lighting requirements.
Public Utilities Commission (PUC)	
Accelerated Renewable Portfolio Standard The Governor has set a goal of achieving 33 percent renewables in the State's resource mix by 2020. The joint PUC/Energy Commission September 2005 Energy Action Plan II (EAP II) adopts the 33 percent goal.	Not Applicable.
Investor-Owned Utility This strategy includes energy efficiency programs, combined heat and power initiative, and electricity sector carbon policy for investor owned utility.	Not Applicable.
Source: Summarized from CAT 2006.	

SECTION 6:
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