Air Quality Modeling Output
Northwest Airport Way Master Plan
City of Manteca, California

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July 28, 2010

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Mitigated Emissions (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Construction Phase 1.urb924

Project Name: NW Airport MP Construction Phase 1

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2012	3.31	31.32	37.87	0.05	2.58	1.23	3.81	0.57	1.12	1.69	7,339.36
Demolition 01/02/2012-01/12/2012	0.03	0.23	0.13	0.00	0.06	0.01	0.07	0.01	0.01	0.02	26.72
Fugitive Dust	0.00	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.02	0.19	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	18.60
Demo On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.55
Demo Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58
Fine Grading 01/13/2012-04/13/2012	0.36	2.98	1.60	0.00	2.29	0.14	2.44	0.48	0.13	0.61	322.52
Fine Grading Dust	0.00	0.00	0.00	0.00	2.29	0.00	2.29	0.48	0.00	0.48	0.00
Fine Grading Off Road Diesel	0.36	2.98	1.52	0.00	0.00	0.14	0.14	0.00	0.13	0.13	313.23
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.29
Building 04/16/2012-05/31/2013	2.92	28.11	36.14	0.05	0.23	1.08	1.31	0.08	0.98	1.06	6,990.12
Building Off Road Diesel	1.02	11.16	4.04	0.00	0.00	0.40	0.40	0.00	0.37	0.37	1,410.84
Building Vendor Trips	1.29	15.91	12.43	0.03	0.12	0.62	0.74	0.04	0.56	0.60	3,425.32
Building Worker Trips	0.62	1.04	19.67	0.02	0.11	0.06	0.17	0.04	0.05	0.09	2,153.96

2013	30.54	15.45	20.11	0.03	0.14	0.61	0.75	0.05	0.56	0.61	4,199.61
Building 04/16/2012-05/31/2013	1.57	14.88	19.50	0.03	0.13	0.58	0.71	0.05	0.53	0.57	4,097.17
Building Off Road Diesel	0.55	6.04	2.28	0.00	0.00	0.22	0.22	0.00	0.20	0.20	826.78
Building Vendor Trips	0.69	8.30	6.71	0.02	0.07	0.32	0.39	0.02	0.29	0.32	2,007.58
Building Worker Trips	0.33	0.55	10.51	0.01	0.06	0.04	0.10	0.02	0.03	0.05	1,262.81
Coating 01/01/2013-05/31/2013	28.86	0.01	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.48
Architectural Coating	28.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34.48
Asphalt 05/01/2013-05/31/2013	0.08	0.29	0.16	0.00	0.00	0.02	0.02	0.00	0.02	0.02	36.24
Paving Off-Gas	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.03	0.19	0.12	0.00	0.00	0.02	0.02	0.00	0.02	0.02	16.32
Paving On Road Diesel	0.01	0.10	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.45
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.47
Trenching 06/03/2013-06/28/2013	0.03	0.27	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	31.71
Trenching Off Road Diesel	0.03	0.27	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01	30.18
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.54

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/13/2012 - 4/13/2012 - Grading

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Phase Assumptions

Phase: Demolition 1/2/2012 - 1/12/2012 - Demolition of existing residential units

Building Volume Total (cubic feet): 90000

Building Volume Daily (cubic feet): 30000
On Road Truck Travel (VMT): 416.67
Off-Road Equipment:
3 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

Phase: Fine Grading 1/13/2012 - 4/13/2012 - Grading
Total Acres Disturbed: 124
Maximum Daily Acreage Disturbed: 31
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
2 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
3 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/3/2013 - 6/28/2013 - Trenching for offsite utilities
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
2 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
1 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

Phase: Paving 5/1/2013 - 5/31/2013 - Paving
Acres to be Paved: 30.92
Off-Road Equipment:
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 4/16/2012 - 5/31/2013 - Construct buildings

Off-Road Equipment:

4 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

5 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

5 Generator Sets (400 hp) operating at a 0.74 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 1/1/2013 - 5/31/2013 - Painting

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Mitigated Emissions (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Construction Phase 2.urb924

Project Name: NW Airport MP Construction Phase 2

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2

2018	14.72	8.10	12.50	0.03	1.62	0.34	1.95	0.35	0.31	0.66	3,788.87
Demolition 01/02/2018-01/15/2018	0.02	0.18	0.12	0.00	0.13	0.01	0.13	0.03	0.01	0.03	38.08
Fugitive Dust	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.02	0.13	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	20.66
Demo On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.78
Demo Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64
Fine Grading 01/02/2018-02/28/2018	0.12	0.91	0.63	0.00	1.37	0.04	1.41	0.29	0.04	0.32	168.72
Fine Grading Dust	0.00	0.00	0.00	0.00	1.37	0.00	1.37	0.29	0.00	0.29	0.00
Fine Grading Off Road Diesel	0.12	0.87	0.59	0.00	0.00	0.04	0.04	0.00	0.03	0.03	148.97
Fine Grading On Road Diesel	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.91
Fine Grading Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.84
Building 03/01/2018-12/14/2018	0.89	6.94	11.61	0.03	0.12	0.29	0.41	0.04	0.26	0.30	3,550.81
Building Off Road Diesel	0.32	2.69	1.59	0.00	0.00	0.10	0.10	0.00	0.09	0.09	607.37
Building Vendor Trips	0.39	3.95	4.02	0.02	0.07	0.16	0.22	0.02	0.14	0.17	1,806.41
Building Worker Trips	0.17	0.29	6.00	0.01	0.06	0.03	0.09	0.02	0.02	0.04	1,137.02
Coating 10/15/2018-12/14/2018	13.67	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.35
Architectural Coating	13.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.35
Asphalt 12/03/2018-12/14/2018	0.03	0.08	0.06	0.00	0.00	0.01	0.01	0.00	0.00	0.00	14.91
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.36
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.91
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/2/2018 - 2/28/2018 - Grading

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%
For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:
PM10: 69% PM25: 69%
For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:
PM10: 55% PM25: 55%

Phase Assumptions

Phase: Demolition 1/2/2018 - 1/15/2018 - Demolition of cheese factory and ponds
Building Volume Total (cubic feet): 600000
Building Volume Daily (cubic feet): 60000
On Road Truck Travel (VMT): 833.33
Off-Road Equipment:
3 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

Phase: Fine Grading 1/2/2018 - 2/28/2018 - Grading
Total Acres Disturbed: 114
Maximum Daily Acreage Disturbed: 29
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 176.36
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 12/3/2018 - 12/14/2018 - Paving
Acres to be Paved: 13.25
Off-Road Equipment:
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 3/1/2018 - 12/14/2018 - Construct 1275620 sf buildings

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day

2 Generator Sets (400 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 10/15/2018 - 12/14/2018 - Painting

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Mitigated Emissions (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Construction Phase 3.urb924

Project Name: NW Airport MP Construction Phase 3

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
2023	7.61	1.46	2.33	0.01	0.42	0.07	0.49	0.09	0.06	0.15	929.51
Fine Grading 01/02/2023-01/31/2023	0.03	0.20	0.21	0.00	0.39	0.01	0.40	0.08	0.01	0.09	44.23
Fine Grading Dust	0.00	0.00	0.00	0.00	0.39	0.00	0.39	0.08	0.00	0.08	0.00
Fine Grading Off Road Diesel	0.03	0.20	0.20	0.00	0.00	0.01	0.01	0.00	0.01	0.01	42.25
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97
Building 02/01/2023-06/30/2023	0.17	1.20	2.05	0.01	0.03	0.06	0.08	0.01	0.05	0.06	865.03
Building Off Road Diesel	0.10	0.73	0.58	0.00	0.00	0.03	0.03	0.00	0.03	0.03	191.58
Building Vendor Trips	0.05	0.43	0.56	0.00	0.01	0.02	0.03	0.00	0.02	0.02	375.51
Building Worker Trips	0.02	0.04	0.91	0.00	0.01	0.01	0.02	0.01	0.01	0.01	297.94
Coating 06/01/2023-06/30/2023	7.39	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.84
Architectural Coating	7.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.84
Asphalt 06/19/2023-06/30/2023	0.02	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.41
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.66
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.73
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/2/2023 - 1/31/2023 - Grading

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

Phase Assumptions

Phase: Fine Grading 1/2/2023 - 1/31/2023 - Grading

Total Acres Disturbed: 63

Maximum Daily Acreage Disturbed: 16

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 6/19/2023 - 6/30/2023 - Paving

Acres to be Paved: 7.92

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 2/1/2023 - 6/30/2023 - Construct buildings

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (400 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 6/1/2023 - 6/30/2023 - Painting

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 130

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 1 2014.urb924

Project Name: NW Airport Master Plan - CenterPoint Operation 2014

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	2.88						
TOTALS (tons/year, unmitigated)	2.90	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Warehouse	26.72	308.63	265.00	0.86	55.54	17.51	92,156.21
TOTALS (tons/year, unmitigated)	26.72	308.63	265.00	0.86	55.54	17.51	92,156.21

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2014 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.12	1000 sq ft	2,693.48	3,016.70	301,669.76
					3,016.70	301,669.76

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	22.8	0.5	99.3	0.2
Light Truck < 3750 lbs	6.5	1.7	93.3	5.0
Light Truck 3751-5750 lbs	11.3	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	11.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	11.0	0.0	44.4	55.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	15.4	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	51.3	48.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	100.0	100.0	100.0	100.0	100.0	100.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Warehouse				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 1 2018.urb924

Project Name: NW Airport Master Plan - Operation CenterPoint 2018

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	2.88						
TOTALS (tons/year, unmitigated)	2.90	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Warehouse	20.03	191.21	196.81	0.86	52.57	14.77	92,136.47
TOTALS (tons/year, unmitigated)	20.03	191.21	196.81	0.86	52.57	14.77	92,136.47

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2018 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.12	1000 sq ft	2,693.48	3,016.70	301,669.76
					3,016.70	301,669.76

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	22.8	0.5	99.3	0.2
Light Truck < 3750 lbs	6.5	1.7	93.3	5.0
Light Truck 3751-5750 lbs	11.3	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	11.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	11.0	0.0	44.4	55.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	15.4	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	51.3	48.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	100.0	100.0	100.0	100.0	100.0	100.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Warehouse				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 1 2019.urb924

Project Name: NW Airport Master Plan - Operation CenterPoint 2019

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	2.88						
TOTALS (tons/year, unmitigated)	2.90	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Warehouse	18.30	170.26	180.88	0.86	52.03	14.28	92,133.85
TOTALS (tons/year, unmitigated)	18.30	170.26	180.88	0.86	52.03	14.28	92,133.85

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2019 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.12	1000 sq ft	2,693.48	3,016.70	301,669.76
					3,016.70	301,669.76

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	22.8	0.5	99.3	0.2
Light Truck < 3750 lbs	6.5	1.7	93.3	5.0
Light Truck 3751-5750 lbs	11.3	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	11.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	11.0	0.0	44.4	55.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	15.4	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	51.3	48.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	100.0	100.0	100.0	100.0	100.0	100.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Warehouse				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 1 2025.urb924

Project Name: NW Airport Master Plan - Operation CenterPoint 2025

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	2.88						
TOTALS (tons/year, unmitigated)	2.90	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Warehouse	11.81	98.27	113.07	0.86	50.35	12.73	91,970.24
TOTALS (tons/year, unmitigated)	11.81	98.27	113.07	0.86	50.35	12.73	91,970.24

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2025 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.12	1000 sq ft	2,693.48	3,016.70	301,669.76
					3,016.70	301,669.76

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	22.8	0.5	99.3	0.2
Light Truck < 3750 lbs	6.5	1.7	93.3	5.0
Light Truck 3751-5750 lbs	11.3	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	11.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	11.0	0.0	44.4	55.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	15.4	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	51.3	48.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	100.0	100.0	100.0	100.0	100.0	100.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Warehouse				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 2 2019.urb924

Project Name: NW Airport Way MP Operation Other 2019

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.03	0.37	0.31	0.00	0.00	0.00	445.90
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.03	0.01	0.42	0.00	0.00	0.00	0.76
Consumer Products	0.00						
Architectural Coatings	1.36						
TOTALS (tons/year, unmitigated)	1.42	0.38	0.73	0.00	0.00	0.00	446.66

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Warehouse	2.76	20.01	25.73	0.11	7.44	1.94	11,889.65
General light industry	2.15	18.09	23.80	0.10	6.72	1.76	10,760.01
Auto/Truck Parts/Service	1.69	14.86	19.10	0.08	5.52	1.44	8,826.94
TOTALS (tons/year, unmitigated)	6.60	52.96	68.63	0.29	19.68	5.14	31,476.60

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2019 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.44	1000 sq ft	1,020.50	1,469.52	44,085.60
General light industry		6.94	1000 sq ft	191.30	1,327.62	39,828.66
Auto/Truck Parts/Service		17.10	1000 sq ft	63.80	1,090.98	32,729.40
					3,888.12	116,643.66

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	30.0	0.0	100.0	0.0
Light Truck < 3750 lbs	8.5	0.0	96.7	3.3

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	14.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	8.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	8.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	7.5	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	7.0	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	41.0	59.0	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	30.0	30.0	30.0	30.0	30.0	30.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Warehouse				2.0	1.0	97.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General light industry				50.0	25.0	25.0
Auto/Truck Parts/Service				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 2 2025.urb924

Project Name: NW Airport Way MP Operation Other 2025

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.03	0.37	0.31	0.00	0.00	0.00	445.90
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.03	0.01	0.42	0.00	0.00	0.00	0.76
Consumer Products	0.00						
Architectural Coatings	1.36						
TOTALS (tons/year, unmitigated)	1.42	0.38	0.73	0.00	0.00	0.00	446.66

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Warehouse	1.97	11.73	17.93	0.11	7.23	1.75	11,886.97
General light industry	1.52	10.61	16.59	0.10	6.53	1.58	10,757.51
Auto/Truck Parts/Service	1.19	8.71	13.31	0.08	5.37	1.30	8,824.95
TOTALS (tons/year, unmitigated)	4.68	31.05	47.83	0.29	19.13	4.63	31,469.43

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2025 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.44	1000 sq ft	1,020.50	1,469.52	44,085.60
General light industry		6.94	1000 sq ft	191.30	1,327.62	39,828.66
Auto/Truck Parts/Service		17.10	1000 sq ft	63.80	1,090.98	32,729.40
					3,888.12	116,643.66

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	30.0	0.0	100.0	0.0
Light Truck < 3750 lbs	8.5	0.0	96.7	3.3

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	14.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	8.4	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	8.4	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	7.5	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	7.0	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.3	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	41.0	59.0	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	30.0	30.0	30.0	30.0	30.0	30.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Warehouse				2.0	1.0	97.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
General light industry				50.0	25.0	25.0
Auto/Truck Parts/Service				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 3 Industrial 2025.urb924

Project Name: NW Airport MP - Operation Phase 3 Industrial 2025

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.52						
TOTALS (tons/year, unmitigated)	0.54	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

7/28/2010 11:00:04 AM

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General light industry	2.13	17.66	20.48	0.15	9.04	2.29	16,525.46
TOTALS (tons/year, unmitigated)	2.13	17.66	20.48	0.15	9.04	2.29	16,525.46

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2025 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
General light industry		1.12	1000 sq ft	483.77	541.82	54,182.24
					541.82	54,182.24

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	22.8	0.5	99.3	0.2
Light Truck < 3750 lbs	6.5	1.7	93.3	5.0
Light Truck 3751-5750 lbs	11.3	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	11.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	11.0	0.0	44.4	55.6

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	15.4	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	51.3	48.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	100.0	100.0	100.0	100.0	100.0	100.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
General light industry				50.0	25.0	25.0

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 3 Retail 2025.urb924

Project Name: NW Airport Way MP - Operation - Retail

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.03	0.36	0.31	0.00	0.00	0.00	435.72
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.22						
TOTALS (tons/year, unmitigated)	0.26	0.36	0.45	0.00	0.00	0.00	435.97

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Regnl shop. center	2.77	2.51	28.63	0.07	6.71	1.44	7,600.03
TOTALS (tons/year, unmitigated)	2.77	2.51	28.63	0.07	6.71	1.44	7,600.03

Operational Settings:

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2025 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Regnl shop. center		52.75	1000 sq ft	205.82	10,857.01	43,303.42
					10,857.01	43,303.42

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	47.5	0.0	100.0	0.0
Light Truck < 3750 lbs	13.5	0.0	98.3	1.7
Light Truck 3751-5750 lbs	23.6	0.0	100.0	0.0
Med Truck 5751-8500 lbs	13.3	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.8	0.0	79.2	20.8
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	55.6	44.4

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	0.4	0.0	23.1	76.9
Heavy-Heavy Truck 33,001-60,000 lbs	0.2	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.1	35.9	64.1	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

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Urbemis 2007 Version 9.2.4

Detail Report for Annual Operational Unmitigated Emissions (Tons/Year)

File Name: C:\MBA\Client\24820003 Northwest Airport Way Master Plan\Modeling\NWAirport Operation Phase 1 and Phase 3 Industrial 2025 Business as Usual.urb924

Project Name: NW Airport - 2025 Phase 1 and 3 Business as Usual

Project Location: San Joaquin Valley APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

Source	CO2
Warehouse	134,642.37
TOTALS (tons/year, unmitigated)	134,642.37

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2025 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Warehouse		1.39	1000 sq ft	3,177.25	4,416.38	441,637.75
					4,416.38	441,637.75

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	22.8	0.5	99.3	0.2

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	6.5	1.7	93.3	5.0
Light Truck 3751-5750 lbs	11.3	0.5	99.5	0.0
Med Truck 5751-8500 lbs	6.4	0.8	99.2	0.0
Lite-Heavy Truck 8501-10,000 lbs	11.0	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	11.0	0.0	44.4	55.6
Med-Heavy Truck 14,001-33,000 lbs	15.4	0.0	15.4	84.6
Heavy-Heavy Truck 33,001-60,000 lbs	15.6	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	100.0
Urban Bus	0.0	0.0	0.0	0.0
Motorcycle	0.0	51.3	48.7	0.0
School Bus	0.0	0.0	0.0	100.0
Motor Home	0.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	100.0	100.0	100.0	100.0	100.0	100.0
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	45.0	45.0	45.0	45.0	45.0	45.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Warehouse				2.0	1.0	97.0

Operational Changes to Defaults

Home-based work average speed changed from 35 mph to 45 mph

Home-based work urban trip length changed from 10.8 miles to 100 miles

Home-based shop average speed changed from 35 mph to 45 mph

Home-based shop urban trip length changed from 7.3 miles to 100 miles

Home-based other average speed changed from 35 mph to 45 mph

Home-based other urban trip length changed from 7.5 miles to 100 miles

Commercial-based commute average speed changed from 35 mph to 45 mph

Commercial-based commute urban trip length changed from 9.5 miles to 100 miles

Commercial-based non-work average speed changed from 35 mph to 45 mph

Commercial-based non-work urban trip length changed from 7.35 miles to 100 miles

Commercial-based customer average speed changed from 35 mph to 45 mph

Commercial-based customer urban trip length changed from 7.35 miles to 100 miles

Rail Assumptions

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 21-Jul-10

Estimation of Emission Factors

Source: Port of Long Beach Air Emission Inventory 2007 - Starcrest 2009

Total Off-port Line haul Operations: 93 million horsepower-hours/year

Off-port Line Haul Annual Emissions

	PM10	PM2.5	NOx	CO	SOx	VOC
Tons/yr	28.7	25.3	739.3	124.2	29.1	41.8
grams/yr	26059600	22972400	671284400	112773600	26422800	3.8E+07

Emission Factors

	PM10	PM2.5	NOx	CO	SOx	VOC	CO2	N2O	CH4
g/hp-hr	0.280	0.247	7.218	1.213	0.284	0.408	487	0.013	0.04

Line Haul Operational Data

Notch	Power In Notch (hp)	Fuel Use (#/hr)	Line Haul Weighting	Line Haul Weighted Power (hp)
Brake	84	170	0.125	1110
Idle	16	32	0.38	
1	200	78	0.065	
2	456	172	0.065	
3	940	384	0.052	
4	1372	526	0.044	
5	1924	756	0.038	
6	2572	967	0.039	
7	3464	1180	0.03	
8	4100	1415	0.162	

Offsite Rail Emissions

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 21-Jul-10
Year of analysis: 2024 (Buildout)

Assumptions		
Trains per week	2	
Mileage per train	100	miles
Speed of train	18	miles/hour
Hours in operation	5.6	hours/train
Trips per year	104	trips
Locomotive units/train	4	
Duty cycle weighted power	1110	hp/locomotive unit

Pollutant	Fleet Average Emission Factor (g/hp-hr)	Emissions (g/trip)	Total Emissions (lbs/day)	Emissions (tons/year)	Emissions (MTCO2e/year)
Carbon Dioxide	487	12012667	26460	1379	1251
Methane	0.04	987	2	0.11	2
Nitrous Oxide	0.013	321	1	0.04	10
ROG	0.41	10067	22	1.16	
NOx	7.2	178047	392	20.43	
PM10	0.28	6912	15	0.79	
PM2.5	0.25	6093	13	0.70	
CO	1.21	29911	66	3.43	
SOx	0.28	7008	15	0.80	

Onsite Rail Emissions

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 21-Jul-10
Year of analysis: 2024 (Buildout)

Rail Emissions associated with CIC Portion

Locomotive Class:	Switcher	
Number of Locomotives:	1	
Locomotive Schedule:	2	days per week
	3	hours per day
	6	hours per week
	312	hours per year
Notch setting:	2	
Horsepower while at notch setting 2:	249	hp

Pollutant	Fleet Average Emission Factor (g/hp-hr)	Grams per hour	Tons per year	MTCO2e/ year
Carbon Dioxide	487	121263	41.67	37.8
Methane	0.04	10	0.003	0.1
Nitrous Oxide	0.013	3	0.001	0.3
ROG	0.41	102	0.03	
NOx	7.2	1797	0.62	
PM10	0.280	70	0.02	
PM2.5	0.247	62	0.02	
CO	1.213	302	0.10	
SOx	0.284	71	0.02	

References: USEPA, 2009. Emission Factors for Locomotives. EPA-420-F-09-025
Starcrest 2009. Port of Long Beach 2007 Air Emission Inventory

Summary of Operational Greenhouse Gases
Business as Usual

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 21-Jul-10
Year of analysis: 2024 (Buildout)

	Emissions (tons per year)				
Source	**Carbon Dioxide**	**Nitrous Oxide**	**Methane**	**Other**	**Metric Tons CO2e**
Motor vehicles - CIC	134,642	*	*	*	128,255
Motor vehicles - other	31,469	*	*	*	29,976
Motor vehicles - retail	7,600	*	*	*	7,239
Onsite rail	42	0.001	0.003	0	38
Natural gas	1,058	0.04	1.90	0	1,007
Indirect electricity	26,483	0.30	1.10	0.0	24,130
Water transport	430	0.00	0.02	0.0	392
Waste					1,496
Refrigerants				8.73	12,068
Total	201,724	0.34	3.02	8.73	204,600
Total	183,004	0.31	2.74	7.92	metric tons per year
GWP	1	310	21	varies	
Total	183,004	96	58	12,068	MTCO2E per year
Total	0.1830	0.0001	0.0001	0.0121	MMTCO2E per year

Total - all gases 204,600 MTCO2e per year
0.2046 MMTCO2e per year

Last updated 4/14/10

Notes:

Emissions converted from tons per year to metric tons of carbon dioxide equivalents (MTCO2e) per year by using the formula: (tons of gas) x (global warming potential) x (0.9072 metric tons)

Emissions converted to million metric tons of carbon dioxide equivalents (MMTCO2E) using the formula: MMTCO2e = (metric tons of gas) / (1,000,000).

* Motor vehicle carbon dioxide and natural gas carbon dioxide values are from the URBEMIS2007 output. MTCO2e for motor vehicles is estimated by adding 5% of emissions, to be consistent with the Bay Area Air Quality Management District's Greenhouse Gas Model (BGM) to account for methane, nitrous oxide, and hydrofluorocarbons.

Waste is generated by the US EPA WARM model; the model output is included herein.

Electricity - Indirect Emissions

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 7/21/2010

Land Use	square feet (sf)	Electricity Use (kWh/sf-year)	Electricity Use (kWh/year)
All buildings	4658941	15.7	73145373.7
			0
			0
			0
Total (kWh/year)			**73145373.7**
Total (MWh/year)			**73145**

Greenhouse Gas	Emission Factor (pounds per MWh)	Emissions (pounds/year)	Emissions (tons/year)
Carbon dioxide	724.12	52,966,028	26,483
Methane	0.0302	2209	1.10
Nitrous oxide	0.0081	592	0.30

Emission factor source: California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009. Table C.2 www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Electricity generation is from the project EIR, the Public Services and Utilities section.

Water Conveyance, Treatment, Distribution

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 7/21/2010

	kWh per million gallons	
Electricity Requirements	**Northern California**	**Southern California**
Water Supply, Conveyance	2,117	9,727
Water Treatment	111	111
Water Distribution	1,272	1,272
Wastewater Treatment	1,911	1,911
Total	*5,411*	*13,021*

Project

Water Usage	249910	gallons per day
Water Usage	91.21715	million gallons per year
Energy Usage	1,187,739	kWh
Energy Usage	1,188	MWh

Greenhouse Gas	**Electricity Emission Factor (pounds per MWh)**	**Emissions (pounds/year)**	**Emissions (tons/year)**
Carbon dioxide	724.12	860,065	430
Methane	0.0302	35.87	0.018
Nitrous oxide	0.0081	9.62	0.005

Source for electricity emission factor:
California Climate Action Registry. General Reporting Protocol. Reporting Entity-Wide Greenhouse Gas Emissions. Version 3.1, January 2009. Table C.2.
www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Source for electricity requirements:
Navigant Consulting, Inc. 2006. Refining Estimates of Water-Related Energy Use in California. California Energy Commission, PIER Industrial/Agricultural/Water End Use Energy Efficiency Program. CEC-500-2006-118. www.energy.ca.gov/pier/project_reports/CEC-500-2006-118.html

Source of water demand: Project EIR, Public Services and Utilities, Section 3.11

Natural Gas Combustion

Northwest Airport Way Master Plan
Prepared by Michael Brandman Associates
7/21/2010

Gas	Square Feet	Natural Gas Usage Factor (cubic feet/square foot)	Annual Natural Gas Usage (cubic feet)	Natural Gas Usage for Project (MMBTU/year)	Emission Factor (kg/MMBTU)**	Emissions (kg/year)	Emissions (tons/year)	Emissions (MTCO2e/year)
Methane	4658941	58.3	271616260	344953	0.005	1724.8	1.897	36.14
Total Methane				*344953*		*1724.8*	*1.897*	*36.14*
Nitrous Oxide	4658941		271616260	344953	0.0001	34.5	0.0379	10.67
Total Nitrous Oxide				*344953*		*34.5*	*0.0379*	*10.67*

Greenhouse Gas	Global Warming Potentials
Methane	21
Nitrous Oxide	310

* Natural gas usage factor: From the project EIR, Public Services and Utilities section

** Emission factors: Table C.8 from California Climate Action Registry, General Reporting Protocol. Version 3.1, January 2009. www.climateregistry.org/tools/protocols/general-reporting-protocol.html

1 cubic foot of natual gas = 1027 BTU or 0.001027 MMBTU (www.eia.doe.gov/kids/energy.cfm?page=about_energy_conversion_calculator-basics#natgascalc)

Air Conditioning and Refrigeration Fugitive Emissions

Project: Northwest Airport Way Master Plan
Prepared on: 7/21/2010

Type of Unit	Units	Capacity of Unit (pounds)	Capacity of Unit (kg)	Annual Leak Rate in percent of capacity	Emissions (kg/year)	Emissions (tons/year)	Global Warming Potential	MTCO2e per year
Without Regulations								
Small Refrigeration Condensing Unit	20	122	55	14%	155	0.17	2065	319
Packaged chiller air conditioning (medium)	465.9	526	239	7%	7781	8.56	1513	11,748
Total						**8.73**		**12,068**
With Regulation and Mitigation								
Small Refrigeration Condensing Unit	20	122	55	5%	55	0.06	2065	114
Packaged chiller air conditioning (medium)	465.9	526	239	4%	3891	4.28	1513	5,874
Total						**4.34**		**5,988**

Reduction: 6,079
Percent Reduction: 50%

Sources:
- U.S. Environmental Protection Agency, Climate Leaders. May 2008. Direct HFC and PFC Emissions from Use of Refrigeration and Air Conditioning Equipment. EPA430-K-03-004. http://www.epa.gov/stateply/documents/resources/mfgrfg.pdf
- California Air Resources Board. Appendix B, California Facilities and Greenhouse Gas Emissions Inventory - High-Global Warming Potential Stationary Source Refrigerant Management Program. www.arb.ca.gov/cc/reftrack/APPENDIX_B_10_22_.pdf
- Global warming potential is an average of the refrigerants used. Source: Bay Area Air Quality Management District Greenhouse Gas Model, version 1.1.9 Beta.
- With regulation refers to a change in the annual leak rate pursuant to California Air Resources Board Stationary Equipment Refrigerant Management Program. http://www.arb.ca.gov/cc/reftrack/reftrack.htm
- Data regarding the amount of air conditioning to be used for the Master Plan is unknown at this time. Warehouses in Ontario, California were reviewed using Google Earth. In general, some warehouses do not have rooftop air conditioning units. Some warehouses only had rooftop units above what were likely the offices. Those with air conditioning units have around one unit per 5,000 to 10,000 square feet. Therefore, it is assumed for purposes of this analysis that there would be one air conditioning unit per 10,000 square feet.
- It is assumed that some of the retail buildings (i.e., restaurants) may have refrigerators. Some of the warehouses may have refrigerators as well.

Operational Waste: Buildout

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates

Waste (tons per year) **11187**

EPA Waste Reduction Model (WARM) Inputs

Material	% Generated	Tons Generated
Aluminum Cans	0.1%	11.2
Steel Cans	0.2%	22.4
Copper Wire		0.0
Glass	0.7%	78.3
HDPE		0.0
LDPE		0.0
PET		0.0
Corrugated Cardboard	9.7%	1085.1
Magazines/Third-class Mail	0.8%	89.5
Newspaper	0.9%	100.7
Office Paper		0.0
Phonebooks		0.0
Textbooks		0.0
Dimensional Lumber	30.5%	3412.0
Medium-density Fiberboard	2.9%	324.4
Food Scraps	2.7%	302.0
Yard Trimmings	0.8%	89.5
Grass		0.0
Leaves		0.0
Branches		0.0
Mixed Paper (general)	13.3%	1487.9
Mixed Paper (primarily residential)		0.0
Mixed Paper (primarily from offices)	1.6%	179.0
Mixed Metals	11.1%	1241.8
Mixed Plastics	9.9%	1107.5
Mixed Recyclables		0.0
Mixed Organics		0.0
Mixed MSW	13.0%	1454.3
Carpet	0.1%	11.2
Personal Computers		0.0
Clay Bricks		0.0
Concrete		0.0
Fly Ash	0.3%	33.6
Tires	1.8%	201.4
Total	100%	11,232

- WARM - U.S. Environmental Protection Agency. November 2009. Waste Reduction Model. www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html
- Waste generation from the project EIR, Public Services and Utilities, section 3.11
- Waste Generation Percentages: Project information and Table 6 (Durable Wholesale Distributors) from California Integrated Watse Management Board, prepared by Cascadia Consulting Group. Targeted Statewide Waste Characterization Study: Waste Disposal and Diversion Findings for Selected Industry Groups. June 2006. www.ciwmb.ca.gov/Publications/LocalAsst/Extracts/34106006/Tables.pdf
- The alternative management scenario accounts for recycling of waste pursuant to mitigation, and is assumed to be 25% of cardboard, magazines, newspaper, lumber, fiberboard, mixed paper, and mixed plastics.

Construction Waste

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates

Waste (tons) **17975**

EPA Waste Reduction Model (WARM) Inputs

Material	% Generated	Tons Generated
Aluminum Cans		0.0
Steel Cans		0.0
Copper Wire		0.0
Glass		0.0
HDPE		0.0
LDPE		0.0
PET		0.0
Corrugated Cardboard	5%	898.8
Magazines/Third-class Mail		0.0
Newspaper		0.0
Office Paper		0.0
Phonebooks		0.0
Textbooks		0.0
Dimensional Lumber	20%	3595.0
Medium-density Fiberboard	20%	3595.0
Food Scraps		0.0
Yard Trimmings	10%	1797.5
Grass		0.0
Leaves		0.0
Branches		0.0
Mixed Paper (general)		0.0
Mixed Paper (primarily residential)		0.0
Mixed Paper (primarily from offices)		0.0
Mixed Metals	5%	898.8
Mixed Plastics	5%	898.8
Mixed Recyclables		0.0
Mixed Organics		0.0
Mixed MSW	15%	2696.3
Carpet		0.0
Personal Computers		0.0
Clay Bricks		0.0
Concrete	20%	3595.0
Fly Ash		0.0
Tires		0.0
Total	100%	17,975

WARM - U.S. Environmental Protection Agency. November 2009. Waste Reduction Model. www.epa.gov/climatechange/wycd/waste/calculators/Warm_home.html

Waste generation from the project EIR, Public Services and Utilities, section 3.11

Waste Generation Percentages: Estimated using project information

For the alternative scenario in the WARM model, it was assumed that 50% of all categories of waste except for yard trimmings and municipal solid waste (MSW) would be recycled pursuant to mitigation.

Vehicle Fleet

Project: Northwest Airport Way Master Plan
Prepared by: Michael Brandman Associates
Prepared on: 7/22/2010

Vehicle Fleet

This summary is from information from the Health Risk Assesssment
prepared by Michael Brandman Associates, 2010
Estimates are for buildout (assumed to be year 2024)

CenterPoint Daily Trips

Vehicle Type	High Cube	Light Industrial	Combined Daily Trips	%
LDA (Passenger Car)	649	164	813	22.8
LDT1	185	47	232	6.5
LDT2	323	82	405	11.3
MDT	182	46	228	6.4
LHDT1 (2 axle truck)	331	63	394	11.0
LHDT2	331	63	394	11.0
MHDT (3 axle truck)	480	68	548	15.4
HHDT (4+ axle truck)	368	188	556	15.6
SubTotal	**2849**	**721**	**3570**	**100.0**

Remainder of Master Plan Daily Trips

Vehicle Type	Light Industrial	Auto/Truck Parts	Ind/Auto Combined	%	Retail	Retal %
LDA (Passenger Car)	272	381	653	30.0	4400	47.5
LDT1	77	108	185	8.5	1252	13.5
LDT2	135	189	324	14.9	2186	23.6
MDT	76	107	183	8.4	1234	13.3
LHDT1 (2 axle truck)	104	79	183	8.4	74	0.8
LHDT2	104	59	163	7.5	56	0.6
MHDT (3 axle truck)	113	39	152	7.0	37	0.4
HHDT (4+ axle truck)	312	20	332	15.3	19	0.2
SubTotal	**1193**	**982**	**2175**	**100**	**9258**	**100**

Weighted Average of Truck Miles

CenterPoint	Destination	Miles	% Trips	Miles * Trips
	Port of Oakland	65	40%	26
	Reno	175	10%	18
	I-40 border	500	10%	50
	Local	15	40%	6
	Total		100%	100

Other Master Plan	Destination	Miles	% Trips	Miles * Trips
Light Industrial, Auto Parts	Port of Oakland	65	6%	4
	Reno	175	2%	4
	I-40 border	500	2%	10
	Local	14	90%	13
	Total		100%	30

Retail: Uses URBEMIS Default trip lengths

Transportation

Baseline is Currently: OFF

Unmitigated Transportation	Target Year: 2025	2011	
	Project	Baseline	Project-Baseline
Operational Emissions from URBEMIS (CO2 tons/year)	108,838.81	0.00	
Metric Ton Adjustment (CO2 metric tons/year)	98,764.80	0.00	
Pavley Regulation Adjustment (CO2 metric tons/year):	79,444.89	0.00	
US EPA Adjustment (CO2e metric tons/year):	83,626.20	0.00	
Low Carbon Fuels Rule Adjustment (CO2e metric tons/year)	77,605.11	0.00	
Total (CO2e metric tons/year):			**77,605.11**

Mitigated Transportation	Target Year: 2025	2011	
	Project	Baseline	Project-Baseline
Operational Vehicles from URBEMIS (CO2 tons/year):	108,838.81	0.00	
Metric Ton Adjustment (CO2 metric tons/year):	98,764.80	0.00	
Pavley Regulation Adjustment (CO2 metric tons/year):	79,444.89	0.00	
US EPA Adjustment (CO2e metric tons/year):	83,626.20	0.00	
Low Carbon Fuels Adjustment (CO2e metric tons/year):	77,605.11	0.00	
Total (CO2e metric tons/year):			**77,605.11**

The BGM User's Manual describes in detail each step used to convert URBEMIS's transportation CO2 emissions to total CO2e.
These steps include converting from English to Metric units, adjusting for the Pavley Rule, converting CO2 to CO2e, and adjusting for the Low Carbon Fuels Rule.

Reference

U.S. EPA assumption that GHG emissions from other pollutants - CH4, N20, and hydrofluorcarbons (HFCs) from leaking air conditioners account for 5 percent of emissions from vehicles, after accounting for global warming potentail of each GHG.

Jump to the Following Transportation Related Tabs:
Transportation Detail for Operational Mitigation
Land Use Detail

	Don't Need to Adjust this amt	Unadjusted Amount Affected by Pavley	Adjusted	Adusted	Adusted	Adusted	Adjusted
	Not Affected by Pavley	LDA/ LDT1/ LDT2/ MDV	LDA	LDT1	LDT2	MDV	4 totaled
Pavley Calculations - Project Unmitigated	15,975.90	82,788.90	30,275.88	9,617.73	16,010.15	7,565.23	63,468.99
Pavley Calculations - Baseline Unmitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pavley Calculations - Project Mitigated	15,975.90	82,788.90	30,275.88	9,617.73	16,010.15	7,565.23	63,468.99
Pavley Calculations - Baseline Mitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pavley Adjustment

											12.00	13.00	14.00	15.00	16.00
Year	% LDA CO2 Emissions	% LDT1 CO2 Emissions	% LDT2 CO2 Emissions	% MDV CO2 Emissions	% LDA/LDT1/LDT2/MDV	% everything else	% CO2 Reduction - LDA	% CO2 Reduction - LDT1	% CO2 Reduction - LDT2	% CO2 Reduction MDV	LDA				
2009	41.59%	12.33%	19.61%	9.71%	83.26%	16.74%	0.00%	0.00%	0.07%	0.08%	0.0000	0.0000	0.0006	0.0007	0.0013
2010	41.72%	12.39%	19.54%	9.61%	83.26%	16.74%	0.35%	0.25%	0.45%	0.48%	0.0020	0.0022	0.0036	0.0044	0.0122
2011	41.83%	12.45%	19.50%	9.50%	83.27%	16.73%	1.75%	1.34%	1.31%	1.29%	0.0102	0.0117	0.0106	0.0117	0.0442
2012	41.89%	12.50%	19.47%	9.40%	83.27%	16.73%	4.07%	3.27%	2.60%	2.44%	0.0237	0.0286	0.0209	0.0221	0.0953
2013	41.94%	12.56%	19.46%	9.32%	83.28%	16.72%	6.31%	5.26%	3.88%	3.61%	0.0366	0.0460	0.0313	0.0328	0.1466
2014	41.98%	12.62%	19.46%	9.27%	83.33%	16.67%	8.48%	7.26%	5.17%	4.83%	0.0492	0.0634	0.0416	0.0438	0.1980
2015	42.00%	12.67%	19.47%	9.24%	83.38%	16.62%	10.74%	9.38%	6.54%	6.17%	0.0623	0.0819	0.0527	0.0560	0.2529
2016	42.05%	12.76%	19.50%	9.23%	83.54%	16.46%	12.96%	11.56%	7.94%	7.54%	0.0751	0.1008	0.0639	0.0684	0.3082
2017	42.02%	12.81%	19.51%	9.21%	83.55%	16.45%	15.03%	13.58%	9.27%	8.88%	0.0871	0.1184	0.0746	0.0806	0.3608
2018	41.98%	12.84%	19.52%	9.21%	83.55%	16.45%	16.94%	15.43%	10.54%	10.16%	0.0983	0.1345	0.0848	0.0923	0.4099
2019	41.95%	12.87%	19.53%	9.21%	83.57%	16.43%	18.72%	17.13%	11.74%	11.40%	0.1087	0.1492	0.0945	0.1035	0.4559
2020	41.92%	12.89%	19.55%	9.22%	83.59%	16.41%	20.37%	18.69%	12.89%	12.59%	0.1183	0.1628	0.1037	0.1143	0.4990
2025	41.92%	12.96%	19.67%	9.28%	83.82%	16.18%	26.87%	24.86%	17.60%	17.42%	0.1560	0.2164	0.1414	0.1581	0.6719
2030	42.15%	13.03%	19.76%	9.32%	84.26%	15.74%	30.60%	28.71%	20.63%	20.47%	0.1770	0.2497	0.1655	0.1856	0.7779
2035	42.21%	13.11%	19.80%	9.35%	84.47%	15.53%	32.38%	31.17%	22.43%	22.29%	0.1871	0.2708	0.1799	0.2021	0.8400
2040	42.24%	13.14%	19.90%	9.44%	84.72%	15.28%	33.27%	32.61%	23.60%	23.53%	0.1922	0.2832	0.1890	0.2131	0.8775

Low Carbon Fuels Standards

Year	% Reduction Gasoline and Diesel Fuel	% Reduction Tank to Wheels
2010	0.00	0.00
2011	0.25	0.18
2012	0.50	0.36
2013	1.00	0.72
2014	1.50	1.08
2015	2.50	1.80
2016	3.50	2.52
2017	5.00	3.60
2018	6.50	4.68
2019	8.00	5.76
2020	10.00	7.20
2021	10.00	7.20
2022	10.00	7.20
2023	10.00	7.20
2024	10.00	7.20
2025	10.00	7.20
2026	10.00	7.20
2027	10.00	7.20
2028	10.00	7.20
2029	10.00	7.20
2030	10.00	7.20
2031	10.00	7.20
2032	10.00	7.20
2033	10.00	7.20
2034	10.00	7.20
2035	10.00	7.20
2036	10.00	7.20
2037	10.00	7.20
2038	10.00	7.20
2039	10.00	7.20
2040	10.00	7.20

Source:
Final Regulation Order
Subchapter 10. Climate Change
Article 4. Regulations to Achieve Greenhouse Gas Reductions
Subarticle 7. Low Carbon Fuel Standard
Section 95482. Average Carbon Intensity Requirements for Gasoline and Diesel

Transportation

Baseline is Currently: OFF

Unmitigated Transportation	Target Year: 2025	2011	
	Project	Baseline	Project-Baseline
Operational Emissions from URBEMIS (CO2 tons/year)	31,469.43	0.00	
Metric Ton Adjustment (CO2 metric tons/year)	28,556.65	0.00	
Pavley Regulation Adjustment (CO2 metric tons/year):	22,970.53	0.00	
US EPA Adjustment (CO2e metric tons/year):	24,179.51	0.00	
Low Carbon Fuels Rule Adjustment (CO2e metric tons/year)	22,438.58	0.00	
Total (CO2e metric tons/year):			22,438.58

Mitigated Transportation	Target Year: 2025	2011	
	Project	Baseline	Project-Baseline
Operational Vehicles from URBEMIS (CO2 tons/year):	31,469.43	0.00	
Metric Ton Adjustment (CO2 metric tons/year):	28,556.65	0.00	
Pavley Regulation Adjustment (CO2 metric tons/year):	22,970.53	0.00	
US EPA Adjustment (CO2e metric tons/year):	24,179.51	0.00	
Low Carbon Fuels Adjustment (CO2e metric tons/year):	22,438.58	0.00	
Total (CO2e metric tons/year):			22,438.58

The BGM User's Manual describes in detail each step used to convert URBEMIS's transportation CO2 emissions to total CO2e.
These steps include converting from English to Metric units, adjusting for the Pavley Rule, converting CO2 to CO2e, and adjusting for the Low Carbon Fuels Rule.

Reference

U.S. EPA assumption that GHG emissions from other pollutants - CH4, N20, and hydrofluorcarbons (HFCs) from leaking air conditioners account for 5 percent of emissions from vehicles, after accounting for global warming potentail of each GHG.

Jump to the Following Transportation Related Tabs:
Transportation Detail for Operational Mitigation
Land Use Detail

	Don't Need to Adjust this amt	Unadjusted Amount Affected by Pavley	Adjusted	Adusted	Adusted	Adusted	Adjusted
	Not Affected by Pavley	LDA/ LDT1/ LDT2/ MDV	LDA	LDT1	LDT2	MDV	4 totaled
Pavley Calculations - Project Unmitigated	4,619.24	23,937.41	8,753.91	2,780.85	4,629.14	2,187.39	18,351.29
Pavley Calculations - Baseline Unmitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pavley Calculations - Project Mitigated	4,619.24	23,937.41	8,753.91	2,780.85	4,629.14	2,187.39	18,351.29
Pavley Calculations - Baseline Mitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pavley Adjustment

											12.00	13.00	14.00	15.00	16.00
Year	% LDA CO2 Emissions	% LDT1 CO2 Emissions	% LDT2 CO2 Emissions	% MDV CO2 Emissions	% LDA/LDT1/LDT2/MDV	% everything else	% CO2 Reduction - LDA	% CO2 Reduction - LDT1	% CO2 Reduction - LDT2	% CO2 Reduction MDV	LDA				
2009	41.59%	12.33%	19.61%	9.71%	83.26%	16.74%	0.00%	0.00%	0.07%	0.08%	0.0000	0.0000	0.0006	0.0007	0.0013
2010	41.72%	12.39%	19.54%	9.61%	83.26%	16.74%	0.35%	0.25%	0.45%	0.48%	0.0020	0.0022	0.0036	0.0044	0.0122
2011	41.83%	12.45%	19.50%	9.50%	83.27%	16.73%	1.75%	1.34%	1.31%	1.29%	0.0102	0.0117	0.0106	0.0117	0.0442
2012	41.89%	12.50%	19.47%	9.40%	83.27%	16.73%	4.07%	3.27%	2.60%	2.44%	0.0237	0.0286	0.0209	0.0221	0.0953
2013	41.94%	12.56%	19.46%	9.32%	83.28%	16.72%	6.31%	5.26%	3.88%	3.61%	0.0366	0.0460	0.0313	0.0328	0.1466
2014	41.98%	12.62%	19.46%	9.27%	83.33%	16.67%	8.48%	7.26%	5.17%	4.83%	0.0492	0.0634	0.0416	0.0438	0.1980
2015	42.00%	12.67%	19.47%	9.24%	83.38%	16.62%	10.74%	9.38%	6.54%	6.17%	0.0623	0.0819	0.0527	0.0560	0.2529
2016	42.05%	12.76%	19.50%	9.23%	83.54%	16.46%	12.96%	11.56%	7.94%	7.54%	0.0751	0.1008	0.0639	0.0684	0.3082
2017	42.02%	12.81%	19.51%	9.21%	83.55%	16.45%	15.03%	13.58%	9.27%	8.88%	0.0871	0.1184	0.0746	0.0806	0.3608
2018	41.98%	12.84%	19.52%	9.21%	83.55%	16.45%	16.94%	15.43%	10.54%	10.16%	0.0983	0.1345	0.0848	0.0923	0.4099
2019	41.95%	12.87%	19.53%	9.21%	83.57%	16.43%	18.72%	17.13%	11.74%	11.40%	0.1087	0.1492	0.0945	0.1035	0.4559
2020	41.92%	12.89%	19.55%	9.22%	83.59%	16.41%	20.37%	18.69%	12.89%	12.59%	0.1183	0.1628	0.1037	0.1143	0.4990
2025	41.92%	12.96%	19.67%	9.28%	83.82%	16.18%	26.87%	24.86%	17.60%	17.42%	0.1560	0.2164	0.1414	0.1581	0.6719
2030	42.15%	13.03%	19.76%	9.32%	84.26%	15.74%	30.60%	28.71%	20.63%	20.47%	0.1770	0.2497	0.1655	0.1856	0.7779
2035	42.21%	13.11%	19.80%	9.35%	84.47%	15.53%	32.38%	31.17%	22.43%	22.29%	0.1871	0.2708	0.1799	0.2021	0.8400
2040	42.24%	13.14%	19.90%	9.44%	84.72%	15.28%	33.27%	32.61%	23.60%	23.53%	0.1922	0.2832	0.1890	0.2131	0.8775

Low Carbon Fuels Standards

Year	% Reduction Gasoline and Diesel Fuel	% Reduction Tank to Wheels
2010	0.00	0.00
2011	0.25	0.18
2012	0.50	0.36
2013	1.00	0.72
2014	1.50	1.08
2015	2.50	1.80
2016	3.50	2.52
2017	5.00	3.60
2018	6.50	4.68
2019	8.00	5.76
2020	10.00	7.20
2021	10.00	7.20
2022	10.00	7.20
2023	10.00	7.20
2024	10.00	7.20
2025	10.00	7.20
2026	10.00	7.20
2027	10.00	7.20
2028	10.00	7.20
2029	10.00	7.20
2030	10.00	7.20
2031	10.00	7.20
2032	10.00	7.20
2033	10.00	7.20
2034	10.00	7.20
2035	10.00	7.20
2036	10.00	7.20
2037	10.00	7.20
2038	10.00	7.20
2039	10.00	7.20
2040	10.00	7.20

Source:
Final Regulation Order
Subchapter 10. Climate Change
Article 4. Regulations to Achieve Greenhouse Gas Reductions
Subarticle 7. Low Carbon Fuel Standard
Section 95482. Average Carbon Intensity Requirements for Gasoline and Diesel

Transportation

Baseline is Currently: OFF

Unmitigated Transportation	Target Year: 2025	2011	
	Project	Baseline	Project-Baseline
Operational Emissions from URBEMIS (CO2 tons/year)	7,600.03	0.00	
Metric Ton Adjustment (CO2 metric tons/year)	6,896.58	0.00	
Pavley Regulation Adjustment (CO2 metric tons/year):	5,547.50	0.00	
US EPA Adjustment (CO2e metric tons/year):	5,839.48	0.00	
Low Carbon Fuels Rule Adjustment (CO2e metric tons/year)	5,419.03	0.00	
Total (CO2e metric tons/year):			5,419.03

Mitigated Transportation	Target Year: 2025	2011	
	Project	Baseline	Project-Baseline
Operational Vehicles from URBEMIS (CO2 tons/year):	7,600.03	0.00	
Metric Ton Adjustment (CO2 metric tons/year):	6,896.58	0.00	
Pavley Regulation Adjustment (CO2 metric tons/year):	5,547.50	0.00	
US EPA Adjustment (CO2e metric tons/year):	5,839.48	0.00	
Low Carbon Fuels Adjustment (CO2e metric tons/year):	5,419.03	0.00	
Total (CO2e metric tons/year):			5,419.03

The BGM User's Manual describes in detail each step used to convert URBEMIS's transportation CO2 emissions to total CO2e.
These steps include converting from English to Metric units, adjusting for the Pavley Rule, converting CO2 to CO2e, and adjusting for the Low Carbon Fuels Rule.

Reference

U.S. EPA assumption that GHG emissions from other pollutants - CH4, N20, and hydrofluorcarbons (HFCs) from leaking air conditioners account for 5 percent of emissions from vehicles, after accounting for global warming potentail of each GHG.

Jump to the Following Transportation Related Tabs:
Transportation Detail for Operational Mitigation
Land Use Detail

	Don't Need to Adjust this amt	Unadjusted Amount Affected by Pavley	Adjusted	Adusted	Adusted	Adusted	Adjusted
	Not Affected by Pavley	LDA/ LDT1/ LDT2/ MDV	LDA	LDT1	LDT2	MDV	4 totaled
Pavley Calculations - Project Unmitigated	1,115.57	5,781.01	2,114.11	671.59	1,117.96	528.27	4,431.93
Pavley Calculations - Baseline Unmitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pavley Calculations - Project Mitigated	1,115.57	5,781.01	2,114.11	671.59	1,117.96	528.27	4,431.93
Pavley Calculations - Baseline Mitigated	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Pavley Adjustment

											12.00	13.00	14.00	15.00	16.00
Year	% LDA CO2 Emissions	% LDT1 CO2 Emissions	% LDT2 CO2 Emissions	% MDV CO2 Emissions	% LDA/LDT1/LDT2/MDV	% everything else	% CO2 Reduction - LDA	% CO2 Reduction - LDT1	% CO2 Reduction - LDT2	% CO2 Reduction MDV	LDA				
2009	41.59%	12.33%	19.61%	9.71%	83.26%	16.74%	0.00%	0.00%	0.07%	0.08%	0.0000	0.0000	0.0006	0.0007	0.0013
2010	41.72%	12.39%	19.54%	9.61%	83.26%	16.74%	0.35%	0.25%	0.45%	0.48%	0.0020	0.0022	0.0036	0.0044	0.0122
2011	41.83%	12.45%	19.50%	9.50%	83.27%	16.73%	1.75%	1.34%	1.31%	1.29%	0.0102	0.0117	0.0106	0.0117	0.0442
2012	41.89%	12.50%	19.47%	9.40%	83.27%	16.73%	4.07%	3.27%	2.60%	2.44%	0.0237	0.0286	0.0209	0.0221	0.0953
2013	41.94%	12.56%	19.46%	9.32%	83.28%	16.72%	6.31%	5.26%	3.88%	3.61%	0.0366	0.0460	0.0313	0.0328	0.1466
2014	41.98%	12.62%	19.46%	9.27%	83.33%	16.67%	8.48%	7.26%	5.17%	4.83%	0.0492	0.0634	0.0416	0.0438	0.1980
2015	42.00%	12.67%	19.47%	9.24%	83.38%	16.62%	10.74%	9.38%	6.54%	6.17%	0.0623	0.0819	0.0527	0.0560	0.2529
2016	42.05%	12.76%	19.50%	9.23%	83.54%	16.46%	12.96%	11.56%	7.94%	7.54%	0.0751	0.1008	0.0639	0.0684	0.3082
2017	42.02%	12.81%	19.51%	9.21%	83.55%	16.45%	15.03%	13.58%	9.27%	8.88%	0.0871	0.1184	0.0746	0.0806	0.3608
2018	41.98%	12.84%	19.52%	9.21%	83.55%	16.45%	16.94%	15.43%	10.54%	10.16%	0.0983	0.1345	0.0848	0.0923	0.4099
2019	41.95%	12.87%	19.53%	9.21%	83.57%	16.43%	18.72%	17.13%	11.74%	11.40%	0.1087	0.1492	0.0945	0.1035	0.4559
2020	41.92%	12.89%	19.55%	9.22%	83.59%	16.41%	20.37%	18.69%	12.89%	12.59%	0.1183	0.1628	0.1037	0.1143	0.4990
2025	41.92%	12.96%	19.67%	9.28%	83.82%	16.18%	26.87%	24.86%	17.60%	17.42%	0.1560	0.2164	0.1414	0.1581	0.6719
2030	42.15%	13.03%	19.76%	9.32%	84.26%	15.74%	30.60%	28.71%	20.63%	20.47%	0.1770	0.2497	0.1655	0.1856	0.7779
2035	42.21%	13.11%	19.80%	9.35%	84.47%	15.53%	32.38%	31.17%	22.43%	22.29%	0.1871	0.2708	0.1799	0.2021	0.8400
2040	42.24%	13.14%	19.90%	9.44%	84.72%	15.28%	33.27%	32.61%	23.60%	23.53%	0.1922	0.2832	0.1890	0.2131	0.8775

Low Carbon Fuels Standards

Year	% Reduction Gasoline and Diesel Fuel	% Reduction Tank to Wheels
2010	0.00	0.00
2011	0.25	0.18
2012	0.50	0.36
2013	1.00	0.72
2014	1.50	1.08
2015	2.50	1.80
2016	3.50	2.52
2017	5.00	3.60
2018	6.50	4.68
2019	8.00	5.76
2020	10.00	7.20
2021	10.00	7.20
2022	10.00	7.20
2023	10.00	7.20
2024	10.00	7.20
2025	10.00	7.20
2026	10.00	7.20
2027	10.00	7.20
2028	10.00	7.20
2029	10.00	7.20
2030	10.00	7.20
2031	10.00	7.20
2032	10.00	7.20
2033	10.00	7.20
2034	10.00	7.20
2035	10.00	7.20
2036	10.00	7.20
2037	10.00	7.20
2038	10.00	7.20
2039	10.00	7.20
2040	10.00	7.20

Source:
Final Regulation Order
Subchapter 10. Climate Change
Article 4. Regulations to Achieve Greenhouse Gas Reductions
Subarticle 7. Low Carbon Fuel Standard
Section 95482. Average Carbon Intensity Requirements for Gasoline and Diesel

GHG Emissions Analysis -- Summary Report

Version 10 (10/09)

GHG Emissions Waste Management Analysis for Northwest Airport Way Master Plan: Operation

Prepared by: Michael Brandman Associates

Project Period for this Analysis: 01/01/24 to 12/31/24

Note: If you wish to save these results, rename this file (e.g., WARM-MN1) and save it. Then the "Analysis Inputs" sheet of the "WARM" file will be blank when you are ready to make another model run.

GHG Emissions from Baseline Waste Management ($MTCO_2E$): 1,496

Commodity	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$
Aluminum Cans	-	11.2	-	NA	0
Steel Cans	-	22.4	-	NA	1
Glass	-	78.3	-	NA	3
Corrugated Cardboard	-	1,085.1	-	NA	417
Magazines/third-class mail	-	89.5	-	NA	(28)
Newspaper	-	100.7	-	NA	(88)
Dimensional Lumber	-	3,412.0	-	NA	(1691)
Medium Density Fiberboard	-	324.4	-	NA	(161)
Food Scraps	NA	302.0	-	-	215
Yard Trimmings	NA	89.5	-	-	(16)
Mixed Paper, Broad	-	1,487.9	-	NA	477
Mixed Paper, Office	-	179.0	-	NA	77
Mixed Metals	-	1,241.8	-	NA	48
Mixed Plastics	-	1,107.5	-	NA	43
Mixed MSW	NA	1,454.3	-	NA	2189
Carpet	-	11.2	-	NA	0
Fly Ash	-	33.6	NA	NA	1
Tires	-	201.4	-	NA	8
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0
					0

GHG Emissions from Alternative Waste Management Scenario ($MTCO_2E$): (3,422)

Commodity	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$	Change (Alt - Base) $MTCO_2E$
Aluminum Cans	0.0	0.0	11.2	0.0	NA	0	0
Steel Cans	0.0	0.0	22.4	0.0	NA	1	0
Glass	0.0	0.0	78.3	0.0	NA	3	0
Corrugated Cardboard	0.0	271.3	813.8	0.0	NA	(529)	(946)
Magazines/third-class mail	0.0	22.4	67.1	0.0	NA	(89)	(62)
Newspaper	0.0	25.2	75.5	0.0	NA	(136)	(48)
Dimensional Lumber	0.0	853.0	2559.0	0.0	NA	(3363)	(1672)
Medium Density Fiberboard	0.0	81.1	243.3	0.0	NA	(321)	(160)
Food Scraps	0.0	NA	302.0	0.0	0.0	215	0
Yard Trimmings	0.0	NA	89.5	0.0	0.0	(16)	0
Mixed Paper, Broad	NA	372.0	1115.9	0.0	NA	(946)	(1423)
Mixed Paper, Office	NA	44.8	134.3	0.0	NA	(95)	(172)
Mixed Metals	NA	0.0	1241.8	0.0	NA	48	0
Mixed Plastics	NA	276.9	830.6	0.0	NA	(391)	(434)
Mixed MSW	NA	NA	1454.3	0.0	NA	2189	0
Carpet	0.0	0.0	11.2	0.0	NA	0	0
Fly Ash	NA	0.0	33.6	NA	NA	1	0
Tires	0.0	0.0	201.4	0.0	NA	8	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
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						0	0
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						0	0
						0	0
						0	0
						0	0

Total Change in GHG Emissions: (4,918) $MTCO_2E$

Note: a negative value (i.e., a value in parentheses) indicates an emission reduction; a positive value indicates an emission increase.

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).
b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

This is equivalent to...

Removing	**901**	Passenger Cars from the Roadway Each Year
Conserving	**558,180**	Gallons of Gasoline
Conserving	**2,048,984**	Cylinders of Propane Used for Home Barbeques
Conserving	**26**	Railway Cars of Coal
	0.00026%	Annual CO_2 emissions from the U.S. transportation sector
	0.00021%	Annual CO_2 emissions from the U.S. electricity sector

GHG Emissions Analysis -- Summary Report

Version 10 (10/09)

GHG Emissions Waste Management Analysis for Northwest Airport Way Master Plan - Construction of all phases

Prepared by: Michael Brandman Associates

Project Period for this Analysis: 01/01/12 to 12/31/23

Note: If you wish to save these results, rename this file (e.g., WARM-MN1) and save it. Then the "Analysis Inputs" sheet of the "WARM" file will be blank when you are ready to make another model run.

GHG Emissions from Baseline Waste Management ($MTCO_2E$): 719

Commodity	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$
Corrugated Cardboard	-	898.8	-	NA	345
Dimensional Lumber	-	3,595.0	-	NA	(1782)
Medium Density Fiberboard	-	3,595.0	-	NA	(1782)
Yard Trimmings	NA	1,797.5	-	-	(329)
Mixed Metals	-	898.8	-	NA	35
Mixed Plastics	-	898.8	-	NA	35
Mixed MSW	NA	2,696.3	-	NA	4059
Concrete	-	3,595.0	NA	NA	138
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					0
					0
					0
					0

GHG Emissions from Alternative Waste Management Scenario ($MTCO_2E$): (11,158)

Commodity	Tons Source Reduced	Tons Recycled	Tons Landfilled	Tons Combusted	Tons Composted	Total $MTCO_2E$	Change (Alt - Base) $MTCO_2E$
Corrugated Cardboard	0.0	449.4	449.4	0.0	NA	(1222)	(1567)
Dimensional Lumber	0.0	1797.5	1797.5	0.0	NA	(5305)	(3523)
Medium Density Fiberboard	0.0	1797.5	1797.5	0.0	NA	(5333)	(3551)
Yard Trimmings	0.0	NA	1797.5	0.0	0.0	(329)	0
Mixed Metals	NA	449.4	449.4	0.0	NA	(2414)	(2448)
Mixed Plastics	NA	449.4	449.4	0.0	NA	(670)	(704)
Mixed MSW	NA	NA	2696.3	0.0	NA	4059	0
Concrete	NA	1797.5	1797.5	NA	NA	55	(83)
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
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						0	0
						0	0
						0	0
						0	0

Total Change in GHG Emissions: (11,877) $MTCO_2E$

Note: a negative value (i.e., a value in parentheses) indicates an emission reduction; a positive value indicates an emission increase.

a) For explanation of methodology, see the EPA report:
Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks (EPA530-R-06-004)
-- available on the Internet at http://epa.gov/climatechange/wycd/waste/downloads/fullreport.pdf (5.6 Mb PDF file).
b) Emissions estimates provided by this model are intended to support voluntary GHG measurement and reporting initiatives.

This is equivalent to...

Removing	**2,175**	Passenger Cars from the Roadway Each Year
Conserving	**1,348,089**	Gallons of Gasoline
Conserving	**4,948,609**	Cylinders of Propane Used for Home Barbeques
Conserving	**62**	Railway Cars of Coal
	0.00063%	Annual CO_2 emissions from the U.S. transportation sector
	0.00050%	Annual CO_2 emissions from the U.S. electricity sector

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

GHG Mitigation Measures

Project Name: NW Airport Way Master Plan

Result Table

Measures Category	Point Reduction	Count
Bicycle/Pedestrian/Transit	1.00	1
Building Component	0.00	0
Mixed -Use	0.00	0
Parking	0.50	1
Site Design	0.00	0
Totals	**1.50**	**2**

Selected	*MEASURE #*	*Measure Name*	*Commercial*	*Mixed-Use*	*Residential*	*Point Reduction*	*Measure Description*
X	**6**	**Pedestrian barriers minimized**	C	M	R	1.00	Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and non-residential uses that impede bicycle or pedestrian circulation are eliminated. Barriers to pedestrian access of neighboring facilities and sites are minimized. This measure is not meant to prevent the limited use of barriers to ensure public safety by prohibiting access to hazardous areas, etc..
X	**13**	**Pedestrian pathway through parking**	C	M	R	0.5	Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances. Pathway must connect to all transit facilities internal or adjacent to project site. Site plan should demonstrate how the pathways are clearly marked, shaded, and are placed between transit facilities and building entrances.

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

JOB: 2. Roth Rd. / I-5 SB Ramps
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	6	0	6	600	AG	0	3.6	.0	10.0
B. NB Approach	6	600	6	756	AG	0	6.7	.0	10.0
C. NB Depart	6	756	6	913	AG	0	6.7	.0	10.0
D. NB External	6	913	6	1513	AG	0	3.6	.0	10.0
E. NB Left	6	600	3	756	AG	0	6.7	.0	10.0
F. SB Left	0	913	3	756	AG	407	6.7	.0	10.0
G. SB External	0	1513	0	913	AG	537	3.6	.0	10.0
H. SB Approach	0	913	0	756	AG	130	6.7	.0	10.0
I. SB Depart	0	756	0	600	AG	464	6.7	.0	10.0
J. SB External	0	600	0	0	AG	464	3.6	.0	10.0
K. EB External	-750	750	-150	750	AG	530	3.6	.0	15.7
L. EB Approach	-150	750	3	750	AG	530	6.7	.0	15.7
M. EB Depart	3	750	156	750	AG	927	6.7	.0	15.7
N. EB External	156	750	756	750	AG	927	3.6	.0	15.7
O. WB External	756	763	156	763	AG	474	3.6	.0	15.7
P. WB Approach	156	763	3	763	AG	30	6.7	.0	15.7
Q. WB Depart	3	763	-150	763	AG	150	6.7	.0	15.7
R. WB External	-150	763	-750	763	AG	150	3.6	.0	15.7
S. EB Left	-150	750	3	756	AG	0	6.7	.0	15.7
T. WB Left	156	763	3	756	AG	444	6.7	.0	15.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-6	741	2.0
2. Receptor	12	741	2.0
3. Receptor	12	772	2.0
4. Receptor	-6	772	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	.8	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	83.	.7	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	187.	.4	.0	.0	.0	.0	.0	.0	.0	.0
4. Receptor	100.	.5	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.1	.0	.0	.0	.5	.0	.0	.0	.0	.0	.0	.1
2. Receptor	.0	.0	.0	.0	.5	.0	.0	.0	.0	.0	.0	.0
3. Receptor	.2	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.2

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

             JOB: 3. Roth Rd. / I-5 NB Ramps
             RUN: Hour 1           (WORST CASE ANGLE)
      POLLUTANT: Carbon Monoxide
```

I. SITE VARIABLES

```
       U=   1.0 M/S            Z0= 100. CM            ALT=     9. (M)
     BRG= WORST CASE           VD=   .0 CM/S
    CLAS=     7 (G)            VS=   .0 CM/S
    MIXH= 1000. M              AMB=   .0 PPM
   SIGTH=    5. DEGREES       TEMP=  2.8 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	*	10	0	10	600	* AG	334	3.6	.0	12.9
B. NB Approach	*	10	600	10	756	* AG	314	6.7	.0	12.9
C. NB Depart	*	10	756	10	913	* AG	1006	6.7	.0	12.9
D. NB External	*	10	913	10	1513	* AG	1006	3.6	.0	12.9
E. NB Left	*	10	600	5	756	* AG	20	6.7	.0	12.9
F. SB Left	*	0	913	5	756	* AG	0	6.7	.0	12.9
G. SB External	*	0	1513	0	913	* AG	0	3.6	.0	12.9
H. SB Approach	*	0	913	0	756	* AG	0	6.7	.0	12.9
I. SB Depart	*	0	756	0	600	* AG	0	6.7	.0	12.9
J. SB External	*	0	600	0	0	* AG	0	3.6	.0	12.9
K. EB External	*	-750	750	-150	750	* AG	927	3.6	.0	15.7
L. EB Approach	*	-150	750	5	750	* AG	457	6.7	.0	15.7
M. EB Depart	*	5	750	160	750	* AG	761	6.7	.0	15.7
N. EB External	*	160	750	760	750	* AG	761	3.6	.0	15.7
O. WB External	*	760	763	160	763	* AG	980	3.6	.0	15.7
P. WB Approach	*	160	763	5	763	* AG	980	6.7	.0	15.7
Q. WB Depart	*	5	763	-150	763	* AG	474	6.7	.0	15.7
R. WB External	*	-150	763	-750	763	* AG	474	3.6	.0	15.7
S. EB Left	*	-150	750	5	756	* AG	470	6.7	.0	15.7
T. WB Left	*	160	763	5	756	* AG	0	6.7	.0	15.7

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Receptor	*	-8	741	2.0
2. Receptor	*	18	741	2.0
3. Receptor	*	18	772	2.0
4. Receptor	*	-8	772	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	* 84.	* .8	*	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	* 355.	* .9	*	.0	.0	.5	.0	.0	.0	.0	.0
3. Receptor	* 260.	* .9	*	.0	.0	.2	.0	.0	.0	.0	.0
4. Receptor	* 96.	* .9	*	.0	.0	.2	.0	.0	.0	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	*	.0	.0	.0	.0	.4	.0	.1	.1	.0	.0	.0	.0
2. Receptor	*	.0	.0	.0	.0	.2	.0	.0	.1	.0	.0	.0	.0
3. Receptor	*	.0	.0	.0	.1	.0	.0	.0	.0	.3	.0	.2	.0
4. Receptor	*	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.0	.0

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

JOB: 4. Roth Rd. / Harlan Rd.
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	9	0	9	600	AG	170	3.6	.0	12.2
B. NB Approach	9	600	9	755	AG	90	6.7	.0	12.2
C. NB Depart	9	755	9	909	AG	160	6.7	.0	12.2
D. NB External	9	909	9	1509	AG	160	3.6	.0	12.2
E. NB Left	9	600	5	755	AG	80	6.7	.0	12.2
F. SB Left	0	909	5	755	AG	30	6.7	.0	12.2
G. SB External	0	1509	0	909	AG	150	3.6	.0	12.2
H. SB Approach	0	909	0	755	AG	120	6.7	.0	12.2
I. SB Depart	0	755	0	600	AG	170	6.7	.0	12.2
J. SB External	0	600	0	0	AG	170	3.6	.0	12.2
K. EB External	-750	750	-150	750	AG	761	3.6	.0	12.2
L. EB Approach	-150	750	5	750	AG	681	6.7	.0	12.2
M. EB Depart	5	750	159	750	AG	691	6.7	.0	12.2
N. EB External	159	750	759	750	AG	691	3.6	.0	12.2
O. WB External	759	759	159	759	AG	920	3.6	.0	12.2
P. WB Approach	159	759	5	759	AG	850	6.7	.0	12.2
Q. WB Depart	5	759	-150	759	AG	980	6.7	.0	12.2
R. WB External	-150	759	-750	759	AG	980	3.6	.0	12.2
S. EB Left	-150	750	5	755	AG	80	6.7	.0	12.2
T. WB Left	159	759	5	755	AG	70	6.7	.0	12.2

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-8	742	2.0
2. Receptor	17	742	2.0
3. Receptor	17	767	2.0
4. Receptor	-8	767	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	82.	.8	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	277.	.8	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	263.	.9	.0	.0	.0	.0	.0	.0	.0	.0
4. Receptor	96.	.8	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.0	.0	.0	.0	.4	.0	.0	.2	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.4	.0	.0	.0	.0	.2	.0	.0	.0
3. Receptor	.0	.0	.0	.2	.0	.0	.0	.0	.5	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.1	.0	.0	.5	.0	.0	.0	.0

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

JOB: 7. Daisywood Dr. / Airport Way
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	4	0	4	600	AG	1218	3.6	.0	10.0
B. NB Approach	4	600	4	752	AG	1083	6.7	.0	10.0
C. NB Depart	4	752	4	904	AG	1013	6.7	.0	10.0
D. NB External	4	904	4	1504	AG	1013	3.6	.0	10.0
E. NB Left	4	600	2	752	AG	135	6.7	.0	10.0
F. SB Left	0	904	2	752	AG	160	6.7	.0	10.0
G. SB External	0	1504	0	904	AG	1340	3.6	.0	10.0
H. SB Approach	0	904	0	752	AG	1180	6.7	.0	10.0
I. SB Depart	0	752	0	600	AG	1398	6.7	.0	10.0
J. SB External	0	600	0	0	AG	1398	3.6	.0	10.0
K. EB External	-750	750	-150	750	AG	300	3.6	.0	10.0
L. EB Approach	-150	750	2	750	AG	180	6.7	.0	10.0
M. EB Depart	2	750	154	750	AG	407	6.7	.0	10.0
N. EB External	154	750	754	750	AG	407	3.6	.0	10.0
O. WB External	754	754	154	754	AG	203	3.6	.0	10.0
P. WB Approach	154	754	2	754	AG	53	6.7	.0	10.0
Q. WB Depart	2	754	-150	754	AG	243	6.7	.0	10.0
R. WB External	-150	754	-750	754	AG	243	3.6	.0	10.0
S. EB Left	-150	750	2	752	AG	120	6.7	.0	10.0
T. WB Left	154	754	2	752	AG	150	6.7	.0	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-5	745	2.0
2. Receptor	8	745	2.0
3. Receptor	8	758	2.0
4. Receptor	-5	758	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	175.	1.8	.1	.4	.0	.0	.0	.0	.0	.0
2. Receptor	356.	1.9	.0	.2	.8	.0	.0	.1	.1	.5
3. Receptor	184.	2.0	.0	.9	.1	.0	.1	.0	.0	.0
4. Receptor	175.	1.9	.0	.4	.0	.0	.0	.0	.0	.1

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	1.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	.5	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. Receptor	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: 8. Lathrop Rd. / I-5 SB Ramps
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	5	0	5	600	AG	0	3.6	.0	10.0
B. NB Approach	5	600	5	753	AG	0	6.7	.0	10.0
C. NB Depart	5	753	5	907	AG	0	6.7	.0	10.0
D. NB External	5	907	5	1507	AG	0	3.6	.0	10.0
E. NB Left	5	600	2	753	AG	0	6.7	.0	10.0
F. SB Left	0	907	2	753	AG	530	6.7	.0	10.0
G. SB External	0	1507	0	907	AG	1290	3.6	.0	10.0
H. SB Approach	0	907	0	753	AG	760	6.7	.0	10.0
I. SB Depart	0	753	0	600	AG	1380	6.7	.0	10.0
J. SB External	0	600	0	0	AG	1380	3.6	.0	10.0
K. EB External	-750	750	-150	750	AG	2607	3.6	.0	10.0
L. EB Approach	-150	750	2	750	AG	2607	6.7	.0	10.0
M. EB Depart	2	750	155	750	AG	2147	6.7	.0	10.0
N. EB External	155	750	755	750	AG	2147	3.6	.0	10.0
O. WB External	755	757	155	757	AG	1549	3.6	.0	10.0
P. WB Approach	155	757	2	757	AG	1169	6.7	.0	10.0
Q. WB Depart	2	757	-150	757	AG	1919	6.7	.0	10.0
R. WB External	-150	757	-750	757	AG	1919	3.6	.0	10.0
S. EB Left	-150	750	2	753	AG	0	6.7	.0	10.0
T. WB Left	155	757	2	753	AG	380	6.7	.0	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-5	744	2.0
2. Receptor	10	744	2.0
3. Receptor	10	763	2.0
4. Receptor	-5	763	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	2.2	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	277.	2.3	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	263.	2.1	.0	.0	.0	.0	.0	.1	.0	.1
4. Receptor	97.	1.9	.0	.0	.0	.0	.0	.1	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.3	.0	.0	.0	1.2	.0	.0	.3	.0	.0	.0	.2
2. Receptor	.3	.0	.0	1.4	.0	.0	.0	.0	.5	.0	.0	.0
3. Receptor	.0	.0	.0	.6	.0	.0	.0	.0	1.1	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.5	.0	.0	.8	.0	.0	.0	.2

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

JOB: 9. Lathrop Road / I-5 NB Ramps
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	5	0	5	600	AG	1267	3.6	.0	10.0
B. NB Approach	5	600	5	754	AG	727	6.7	.0	10.0
C. NB Depart	5	754	5	908	AG	1246	6.7	.0	10.0
D. NB External	5	908	5	1508	AG	1246	3.6	.0	10.0
E. NB Left	5	600	2	754	AG	540	6.7	.0	10.0
F. SB Left	0	908	2	754	AG	0	6.7	.0	10.0
G. SB External	0	1508	0	908	AG	0	3.6	.0	10.0
H. SB Approach	0	908	0	754	AG	0	6.7	.0	10.0
I. SB Depart	0	754	0	600	AG	0	6.7	.0	10.0
J. SB External	0	600	0	0	AG	0	3.6	.0	10.0
K. EB External	-750	750	-150	750	AG	2147	3.6	.0	10.6
L. EB Approach	-150	750	2	750	AG	1297	6.7	.0	10.6
M. EB Depart	2	750	155	750	AG	2014	6.7	.0	10.6
N. EB External	155	750	755	750	AG	2014	3.6	.0	10.6
O. WB External	755	758	155	758	AG	1395	3.6	.0	10.6
P. WB Approach	155	758	2	758	AG	1395	6.7	.0	10.6
Q. WB Depart	2	758	-150	758	AG	1549	6.7	.0	10.6
R. WB External	-150	758	-750	758	AG	1549	3.6	.0	10.6
S. EB Left	-150	750	2	754	AG	850	6.7	.0	10.6
T. WB Left	155	758	2	754	AG	0	6.7	.0	10.6

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-5	743	2.0
2. Receptor	10	743	2.0
3. Receptor	10	764	2.0
4. Receptor	-5	764	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	1.7	.0	.1	.0	.0	.1	.0	.0	.0
2. Receptor	277.	1.8	.0	.2	.0	.0	.1	.0	.0	.0
3. Receptor	263.	2.1	.0	.0	.3	.0	.0	.0	.0	.0
4. Receptor	262.	1.8	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.0	.0	.0	.0	1.1	.0	.0	.3	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.7	.0	.0	.0	.0	.3	.0	.3	.0
3. Receptor	.0	.0	.0	.3	.0	.0	.0	.0	1.0	.0	.3	.0
4. Receptor	.0	.0	.0	.3	.0	.0	.0	.0	1.0	.0	.3	.0

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

JOB: 10. Lathrop Rd/Harlan Rd
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	14	0	14	600	AG	330	3.6	.0	16.7
B. NB Approach	14	600	14	755	AG	100	6.7	.0	16.7
C. NB Depart	14	755	14	911	AG	213	6.7	.0	16.7
D. NB External	14	911	14	1511	AG	213	3.6	.0	16.7
E. NB Left	14	600	7	755	AG	230	6.7	.0	16.7
F. SB Left	0	911	7	755	AG	65	6.7	.0	16.7
G. SB External	0	1511	0	911	AG	205	3.6	.0	16.7
H. SB Approach	0	911	0	755	AG	140	6.7	.0	16.7
I. SB Depart	0	755	0	600	AG	205	6.7	.0	16.7
J. SB External	0	600	0	0	AG	205	3.6	.0	16.7
K. EB External	-750	750	-150	750	AG	1116	3.6	.0	13.7
L. EB Approach	-150	750	7	750	AG	1006	6.7	.0	13.7
M. EB Depart	7	750	164	750	AG	1031	6.7	.0	13.7
N. EB External	164	750	764	750	AG	1031	3.6	.0	13.7
O. WB External	764	761	164	761	AG	1707	3.6	.0	13.7
P. WB Approach	164	761	7	761	AG	1642	6.7	.0	13.7
Q. WB Depart	7	761	-150	761	AG	1909	6.7	.0	13.7
R. WB External	-150	761	-750	761	AG	1909	3.6	.0	13.7
S. EB Left	-150	750	7	755	AG	110	6.7	.0	13.7
T. WB Left	164	761	7	755	AG	65	6.7	.0	13.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	742	2.0
2. Receptor	24	742	2.0
3. Receptor	24	769	2.0
4. Receptor	-10	769	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	82.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	278.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	263.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
4. Receptor	97.	1.5	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.0	.0	.0	.1	.5	.0	.0	.3	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.5	.1	.0	.0	.0	.4	.0	.0	.0
3. Receptor	.0	.0	.0	.2	.0	.0	.0	.2	.9	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.2	.0	.0	.8	.2	.0	.0	.0

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

JOB: 13. Lathrop Rd/Airport Way
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	12	0	12	600	AG	911	3.6	.0	15.2
B. NB Approach	12	600	12	755	AG	795	6.7	.0	15.2
C. NB Depart	12	755	12	909	AG	1259	6.7	.0	15.2
D. NB External	12	909	12	1509	AG	1259	3.6	.0	15.2
E. NB Left	12	600	6	755	AG	116	6.7	.0	15.2
F. SB Left	0	909	6	755	AG	342	6.7	.0	15.2
G. SB External	0	1509	0	909	AG	1339	3.6	.0	15.2
H. SB Approach	0	909	0	755	AG	997	6.7	.0	15.2
I. SB Depart	0	755	0	600	AG	1004	6.7	.0	15.2
J. SB External	0	600	0	0	AG	1004	3.6	.0	15.2
K. EB External	-750	750	-150	750	AG	1556	3.6	.0	12.2
L. EB Approach	-150	750	6	750	AG	1063	6.7	.0	12.2
M. EB Depart	6	750	162	750	AG	1369	6.7	.0	12.2
N. EB External	162	750	762	750	AG	1369	3.6	.0	12.2
O. WB External	762	759	162	759	AG	810	3.6	.0	12.2
P. WB Approach	162	759	6	759	AG	690	6.7	.0	12.2
Q. WB Depart	6	759	-150	759	AG	984	6.7	.0	12.2
R. WB External	-150	759	-750	759	AG	984	3.6	.0	12.2
S. EB Left	-150	750	6	755	AG	493	6.7	.0	12.2
T. WB Left	162	759	6	755	AG	120	6.7	.0	12.2

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-9	742	2.0
2. Receptor	21	742	2.0
3. Receptor	21	767	2.0
4. Receptor	-9	767	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	8.	1.5	.0	.0	.2	.0	.0	.1	.0	.5
2. Receptor	352.	1.5	.0	.0	.7	.0	.0	.1	.0	.2
3. Receptor	262.	1.6	.0	.0	.3	.0	.0	.0	.0	.1
4. Receptor	99.	1.3	.0	.0	.2	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.0	.0	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0
2. Receptor	.0	.0	.0	.0	.3	.0	.0	.1	.0	.0	.0	.0
3. Receptor	.0	.0	.0	.3	.0	.0	.0	.0	.5	.0	.2	.0
4. Receptor	.0	.0	.0	.0	.3	.0	.0	.4	.0	.0	.0	.0

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

              JOB: 19.  Hastings Dr/Airport Way
              RUN: Hour 1           (WORST CASE ANGLE)
       POLLUTANT: Carbon Monoxide
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I. SITE VARIABLES

```
       U=   1.0 M/S            Z0= 100. CM            ALT=     9. (M)
     BRG= WORST CASE           VD=   .0 CM/S
    CLAS=     7 (G)            VS=   .0 CM/S
    MIXH= 1000. M              AMB=   .0 PPM
   SIGTH=    5. DEGREES       TEMP=  2.8 DEGREE (C)
```

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	*	8	0	8	600	* AG	954	3.6	.0	11.4
B. NB Approach	*	8	600	8	755	* AG	954	6.7	.0	11.4
C. NB Depart	*	8	755	8	909	* AG	911	6.7	.0	11.4
D. NB External	*	8	909	8	1509	* AG	911	3.6	.0	11.4
E. NB Left	*	8	600	4	755	* AG	0	6.7	.0	11.4
F. SB Left	*	0	909	4	755	* AG	39	6.7	.0	11.4
G. SB External	*	0	1509	0	909	* AG	1004	3.6	.0	11.4
H. SB Approach	*	0	909	0	755	* AG	965	6.7	.0	11.4
I. SB Depart	*	0	755	0	600	* AG	995	6.7	.0	11.4
J. SB External	*	0	600	0	0	* AG	995	3.6	.0	11.4
K. EB External	*	-750	750	-150	750	* AG	0	3.6	.0	12.2
L. EB Approach	*	-150	750	4	750	* AG	0	6.7	.0	12.2
M. EB Depart	*	4	750	158	750	* AG	109	6.7	.0	12.2
N. EB External	*	158	750	758	750	* AG	109	3.6	.0	12.2
O. WB External	*	758	759	158	759	* AG	57	3.6	.0	12.2
P. WB Approach	*	158	759	4	759	* AG	27	6.7	.0	12.2
Q. WB Depart	*	4	759	-150	759	* AG	0	6.7	.0	12.2
R. WB External	*	-150	759	-750	759	* AG	0	3.6	.0	12.2
S. EB Left	*	-150	750	4	755	* AG	0	6.7	.0	12.2
T. WB Left	*	158	759	4	755	* AG	30	6.7	.0	12.2

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M) X	Y	Z
1. Receptor	*	-7	742	2.0
2. Receptor	*	16	742	2.0
3. Receptor	*	16	767	2.0
4. Receptor	*	-7	767	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	*	BRG (DEG)	*	PRED CONC (PPM)	*	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	*	7.	*	1.0	*	.0	.0	.2	.0	.0	.0	.0	.6
2. Receptor	*	353.	*	.9	*	.0	.0	.5	.0	.0	.0	.0	.2
3. Receptor	*	187.	*	.9	*	.0	.5	.0	.0	.0	.0	.0	.0
4. Receptor	*	173.	*	1.0	*	.0	.2	.0	.0	.0	.0	.0	.0

RECEPTOR	*	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	*	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. Receptor	*	.6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: 20. Louise Ave/Airport Way
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	9. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	2.8 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	4	0	4	600	AG	1114	3.6	.0	10.0
B. NB Approach	4	600	4	752	AG	934	6.7	.0	10.0
C. NB Depart	4	752	4	903	AG	937	6.7	.0	10.0
D. NB External	4	903	4	1503	AG	937	3.6	.0	10.0
E. NB Left	4	600	2	752	AG	180	6.7	.0	10.0
F. SB Left	0	903	2	752	AG	236	6.7	.0	10.0
G. SB External	0	1503	0	903	AG	1087	3.6	.0	10.0
H. SB Approach	0	903	0	752	AG	851	6.7	.0	10.0
I. SB Depart	0	752	0	600	AG	1054	6.7	.0	10.0
J. SB External	0	600	0	0	AG	1054	3.6	.0	10.0
K. EB External	-750	750	-150	750	AG	1123	3.6	.0	10.0
L. EB Approach	-150	750	2	750	AG	980	6.7	.0	10.0
M. EB Depart	2	750	154	750	AG	1256	6.7	.0	10.0
N. EB External	154	750	754	750	AG	1256	3.6	.0	10.0
O. WB External	754	753	154	753	AG	710	3.6	.0	10.0
P. WB Approach	154	753	2	753	AG	590	6.7	.0	10.0
Q. WB Depart	2	753	-150	753	AG	787	6.7	.0	10.0
R. WB External	-150	753	-750	753	AG	787	3.6	.0	10.0
S. EB Left	-150	750	2	752	AG	143	6.7	.0	10.0
T. WB Left	154	753	2	752	AG	120	6.7	.0	10.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-5	745	2.0
2. Receptor	9	745	2.0
3. Receptor	9	758	2.0
4. Receptor	-5	758	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	86.	2.0	.0	.2	.0	.0	.0	.0	.0	.0
2. Receptor	274.	1.9	.0	.2	.0	.0	.0	.0	.0	.0
3. Receptor	185.	1.9	.0	.7	.0	.0	.1	.0	.0	.0
4. Receptor	175.	1.9	.0	.4	.0	.0	.1	.0	.0	.0

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.2	.0	.0	.1	.9	.0	.0	.3	.0	.0	.0	.0
2. Receptor	.2	.0	.0	.7	.1	.0	.0	.0	.3	.0	.0	.0
3. Receptor	.4	.0	.0	.0	.3	.0	.0	.1	.0	.0	.0	.0
4. Receptor	.8	.0	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0