

Appendix F

Air Quality Modeling Output

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\Trails Construction Model.urb924

Project Name: Trails Construction Model

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2012 TOTALS (lbs/day unmitigated)	4.78	21.04	11.00	0.01	20.04	0.92	20.97	4.19	0.85	5.04	2,576.44

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\Appendix\Trails Construction Model.urb924

Project Name: Trails Construction Model

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
Time Slice 2/1/2012-2/28/2012 Active Days: 20	1.82	15.03	9.28	0.00	20.00	0.69	20.70	4.18	0.64	4.82	1,579.05
Fine Grading 02/01/2012-03/14/2012	1.82	15.03	9.28	0.00	20.00	0.69	20.70	4.18	0.64	4.82	1,579.05
Fine Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Fine Grading Off Road Diesel	1.79	14.85	8.63	0.00	0.00	0.69	0.69	0.00	0.63	0.63	1,481.28
Fine Grading On Road Diesel	0.01	0.15	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.17
Fine Grading Worker Trips	0.02	0.04	0.61	0.00	0.00	0.00	0.01	0.00	0.00	0.00	73.60
Time Slice 2/29/2012-3/14/2012 Active Days: 11	4.78	21.04	11.00	0.01	20.04	0.92	20.97	4.19	0.85	5.04	2,576.44
Asphalt 02/29/2012-03/14/2012	2.96	6.01	1.73	0.01	0.04	0.23	0.27	0.01	0.21	0.22	997.39
Paving Off-Gas	2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving On Road Diesel	0.34	6.01	1.73	0.01	0.04	0.23	0.27	0.01	0.21	0.22	997.39
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading 02/01/2012-03/14/2012	1.82	15.03	9.28	0.00	20.00	0.69	20.70	4.18	0.64	4.82	1,579.05
Fine Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Fine Grading Off Road Diesel	1.79	14.85	8.63	0.00	0.00	0.69	0.69	0.00	0.63	0.63	1,481.28
Fine Grading On Road Diesel	0.01	0.15	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.17
Fine Grading Worker Trips	0.02	0.04	0.61	0.00	0.00	0.00	0.01	0.00	0.00	0.00	73.60

Phase Assumptions

Phase: Fine Grading 2/1/2012 - 3/14/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 6.45

Off-Road Equipment:

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

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

Phase: Paving 2/29/2012 - 3/14/2012 - Default Paving Description

Acres to be Paved: 11

Off-Road Equipment:

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\CSP Trails Paving Model.urb924

Project Name: Trails Construction Model

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2012 TOTALS (lbs/day unmitigated)	5.25	20.04	11.37	0.01	20.05	1.41	21.46	4.19	1.30	5.49	2,437.08

Phase Assumptions

Phase: Fine Grading 2/1/2012 - 3/14/2012 - Default Fine Site Grading Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 1

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 6.45

Off-Road Equipment:

Phase: Paving 2/29/2012 - 3/14/2012 - Default Paving Description

Acres to be Paved: 11

Off-Road Equipment:

1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

1 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 6 hours per day

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

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\Appendix\Worker Trips.urb924

Project Name: Trip Rate

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.73	3.45	29.21	0.03	6.18	1.18	3,341.24

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.73	3.45	29.21	0.03	6.18	1.18	3,341.24

Urbemis 2007 Version 9.2.4

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

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\Appendix\Worker Trips.urb924

Project Name: Trip Rate

Project Location: California State-wide

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)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
Blank (Edit this description)	0.48	0.73	5.40	0.01	1.13	0.21	580.75
TOTALS (tons/year, unmitigated)	0.48	0.73	5.40	0.01	1.13	0.21	580.75

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 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
Blank (Edit this description)		1.20	acres	100.00	120.00	3,600.00
					120.00	3,600.00

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.5	0.6	99.2	0.2

11/16/2011 1:52:07 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.9	0.5	99.5	0.0
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	54.3	45.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	30.0	30.0	30.0	30.0	30.0	30.0
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
Blank (Edit this description)				2.0	1.0	97.0

Operational Changes to Defaults

- The urban/rural selection has been changed from Urban to Rural
- Home-based work average speed changed from 35 mph to 45 mph
- Home-based work rural trip length changed from 16.8 miles to 30 miles
- Home-based shop average speed changed from 35 mph to 45 mph
- Home-based shop rural trip length changed from 7.1 miles to 30 miles
- Home-based other average speed changed from 35 mph to 45 mph
- Home-based other rural trip length changed from 7.9 miles to 30 miles
- Commercial-based commute average speed changed from 35 mph to 45 mph
- Commercial-based commute rural trip length changed from 14.7 miles to 30 miles
- Commercial-based non-work average speed changed from 35 mph to 45 mph
- Commercial-based non-work rural trip length changed from 6.6 miles to 30 miles
- Commercial-based customer average speed changed from 35 mph to 45 mph
- Commercial-based customer rural trip length changed from 6.6 miles to 30 miles

Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\Appendix\Operational Trips.urb924

Project Name: Operational Trips-Trails

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	13.40	23.35	207.18	0.24	43.09	8.31	24,605.30

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	13.40	23.35	207.18	0.24	43.09	8.31	24,605.30

Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: P:\Projects\2010\10010034.03 - CA State Parks-Roads-Trails-PEIR\4_Deliverables in progress\Admin Draft PEIR\01_ Prepared by authors\Air\Appendix\Operational Trips.urb924

Project Name: Operational Trips-Trails

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

<u>Source</u>	ROG	NOX	CO	SO2	PM10	PM25	CO2
TRAIL CIU	13.40	23.35	207.18	0.24	43.09	8.31	24,605.30
TOTALS (lbs/day, unmitigated)	13.40	23.35	207.18	0.24	43.09	8.31	24,605.30

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Temperature (F): 85 Season: Summer

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
TRAIL CIU		500.00	acres	1.00	500.00	25,000.00
					500.00	25,000.00

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.5	0.6	99.2	0.2

11/17/2011 12:09:20 PM

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.9	0.5	99.5	0.0
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	54.3	45.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	50.0	50.0	50.0	50.0	50.0	50.0
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Travel Conditions

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

Operational Changes to Defaults

- The urban/rural selection has been changed from Urban to Rural
- Home-based work rural trip length changed from 16.8 miles to 50 miles
- Home-based shop rural trip length changed from 7.1 miles to 50 miles
- Home-based other rural trip length changed from 7.9 miles to 50 miles
- Commercial-based commute rural trip length changed from 14.7 miles to 50 miles
- Commercial-based non-work rural trip length changed from 6.6 miles to 50 miles
- Commercial-based customer rural trip length changed from 6.6 miles to 50 miles